THE EXCHANGE: A BOURDIEUIAN CASE STUDY OF A PROJECT-BASED LEARNING

CLASSROOM TO HEIGHTEN STUDENTS' HIGHER-ORDER LITERACY SKILLS

by

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(Under the Direction of Donna E. Alvermann)

ABSTRACT

This case study used in-depth student interviews and observations to investigate a project-based learning classroom in a public high school. Student perceptions of their higher-order literacy skills were explored within the participatory classroom and through collaborative student projects. These higher-order literacy standards were outlined by the anchor standards of Common Core State Standards. Over a seven-month period, the author conducted seven one-on-one, in-depth student interviews and observed daily classroom interactions as well as project presentations. Bourdieu's concepts of capital, field, and habitus informed the thematic analysis of the data. These concepts, in addition to codes related to higher-order literacy, revealed students' perceptions of higher-order literacy within a cross-curricular project-based learning classroom. Additionally, codes related to participatory culture led to identifying student perceptions of classroom structure and relationships. Student voice predominated the presentation of findings for this study.

INDEX WORDS: Project-based learning, Common core state standards, Higher-order literacy, Participatory culture, Bourdieu, Case study, High school, Cultural capital, Social capital, Habitus, Field, Literacy, Cross-curricular

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DEDICATION

This study is dedicated to the students and teachers of The Exchange for their willingness to share their learning community, experiences, and time with me. Because of their passion for PBL, I have gained a new perspective on what school can be.

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CHAPTER ONE

INTRODUCTION

"After all, perfecting the horse wagon won't get us to the moon. We need to build an entirely different vehicle" (Zhao, 2012, p. 162).

When I left business to become an English teacher, I thought I left behind my life in business. Although I became a teacher at the young age of 25, I began my time in the corporate world at the even younger age of 14. Between the ages of 14 and 19, I worked seasonally for a national above-ground swimming pool company. I worked my way up from being an office aid to running my own department at the age of 19. These experiences led to a college internship and, eventually, my first job out of college, where I was recruited for a highly competitive manager trainee program for an international swimming pool parts distributor. However, once in a full-time corporate setting, I began to realize the corporate world was not where I wanted to be: I wanted to teach. So, I moved home, worked for our family business during the day and attended graduate school in the evening. Although I knew my former business-minded self would never leave, I was surprised by how much of those influences resurfaced in education. I was excited to become a teacher and start a job where mundane work days seldom occurred and each year was a fresh new start. I continue to find excitement at the beginning of each school year, and even with 10 years in the profession, my students still amaze me. However, I cannot deny that still lurking in the shadows is my business self; she never left. My business self was even influential in my teaching and learning philosophy: to think critically and independently, to seek for an answer before asking for it, and to always question norms. My time in business

taught me that accolades and education did not always make lasting impressions, but initiative and innovation did. Reflecting on my time in the corporate world ultimately led to my interest in project-based learning.

Ironically enough, the particular impetus for my interest in project-based learning was skepticism about a cross-curricular project-based learning class at the school where I teach. The new project-based learning classroom became an investment; administration even went as far as literally knocking down a wall between two classrooms to build a project-based learning wing. I, along with staff and community members, offered both praise and criticism for this new non-traditional education option. Local public opinions were split between those who were supportive of the non-traditional classroom offering and those who were opposed to it.

During the same school year, I took a class on popular culture as part of my doctoral studies and was introduced to the work of Henry Jenkins and his ideas on participatory culture. Project-based learning is participatory in nature, so the consonance in timing between my own education and the changes in education at my school were quite serendipitous. Slowly I volunteered to sit in on collaborative meetings between the project-based learning teachers at the feeder middle school and the project-based learning teachers at my home high school. I began to register for project-based learning professional development. However, the idea of giving students freedom to create projects on their own and to teach themselves along the way seemed like an education pipe dream, and after each meeting and each professional development in-service, I put my resources away and went back to teaching in the same traditional manner by which I was once taught. I was on the fence. Project-based learning seemed like a great idea in other people's classrooms but not realistic in my own. There was no way that projects could supplement the rigor of my carefully-planned lectures, not in honors and AP level classes. My

own ideas of what created a rigorous classroom was indeed leading to some skepticism about project-based learning. It was not until one of the founding teachers of the project-based learning class became part of my professional learning team that I became more receptive of project-based learning.

Amid all these changes at my school and in my own education, larger changes were happening at the federal level: the introduction of Common Core State Standards (2010). When the Common Core State Standards made their first appearance, teachers, politicians, and the public questioned what this curriculum change meant for teachers and classrooms. The classrooms that teachers fought so hard to make multicultural and technologically driven could be in danger. I too worried at the idea of a new mandated curriculum. A nationalized curriculum sounded synonymous with a homogenous curriculum. As a grade level chair, I was responsible for managing and leading curricular changes that reflected the new standards. However, what realized, while collaborating with a project-based learning colleague who was a member of my grade level team, was Common Core could provide a unique opportunity in education to create even more multicultural, technologically driven, and student-led classrooms. Teacher could implement the standards with the intent to provide a more open-structured and student-personalized curriculum (Zhao, 2009 & 2012). If implemented in an innovative classroom structure, such as project-based learning, the Common Core State Standards (2010) could be one of the tools necessary to help students gain the necessary analytical reasoning and literacy skills necessary to be successful at the collegiate level and in the work place. These standards could help students develop the skills needed to be successful in a world where literacy means more than just being able to read.

The CCSS (2010) contains broad and unrestrictive content standards, which not only allow for more creativity on part of teachers but also, as Catherine Maderazo (2013) emphasized, provide a time for teachers and students to rethink literacy education. In today's 21st century world, literacy is more than just understanding and analyzing text; it includes "making sense of everything in our world, whether it is the images displayed on computer screens and televisions, the ethical questions embedded in stem-cell research, or the impact of global warming" (National School Boards Association, 2006, p. 24). We must teach students how to find and analyze data, as well as how to make sound decisions on text authority; however, we must teach them how to collaborate with people of differing backgrounds and cultures (National School Boards Association, 2006). The standards that I feared would strip our classrooms of diversity could be the answer to creating a more innovative classroom where students learn to think independently while collaborating with others. Common Core Standards were aligning with my own teaching and learning philosophy−rigorous classrooms that promote independent thinkers−as well as with the structure of project-based learning.

Therefore, it only seemed natural to take advice from my own learning philosophy and research what I knew little about: project-based learning. I decided to make project-based learning the focus of my doctoral studies. The more I learned about the student-centered, teacher-facilitated classroom structure, the more I began to see its possible value at a public high school. And the more time I spent with students in the project-based learning cohort at my school, the more I began to see the possibilities that came from instilling a research-based, higher level literacy education in a project-based learning classroom. This classroom and these students were slowly melting away my scepticism of project-based learning. It became my hope that through my research, I could show what we might learn from students in this project-based learning

classroom. We would see what literacy looks like when teachers take a step back and let students lead.

Statement of the Problem

To best understand my research objective, it is necessary to take a journey back to a time of curricular transition, the transition from No Child Left Behind to Common Core State Standards. In 2010, Common Core State Standards were introduced across the nation, as well as monetary incentives through Race to the Top. Most states adopted the standards in 2012, and in 2013, educators and administrators became aware of the reality of implementing such standards and reformatting curriculum. As the standards trickled into local government, states adopted and implemented the standards one content area at a time; one of the first content areas to undergo the transformation was English/Language Arts. Much as the public's opinions were split regarding project-based learning at my home school, the American public's opinions were split regarding the Common Core. I myself was a bit unsure about the mandated 70%/30% text split between informational and fictional texts. As a Language Arts teacher, I abhorred the idea of informational texts taking over the canon. However, my initial response was one of naiveté and misinformation. Once I studied the standards, it became clear that diminishing literature was not the goal; instead, the aim was to focus on literacy across all content areas.

Although No Child Left Behind placed a strong emphasis on reading and math, it was the CCSS (2010) that specifically emphasized a common skill set across content areas. However, the Common Core's prescribed 70/30 split of informational versus fictional text brought questions regarding curricular changes and test preparation. Many of these questions stemmed from changes brought on by NCLB (now replaced by ESSA), particularly how its "rigid curriculum

objectives and mechanistic preparation for high-stakes testing took precedent over cultural diversity and pedagogical exploration and flexibility" (Zhao, 2012, p. 40). As a classroom teacher working through these curricular changes, I experienced firsthand confusion as to how I should implement the 70/30 split and what exactly constituted as informational text. Many English/Language Arts teachers feared the art of language, reading, and writing was being replaced with high stakes test preparation and an emphasis on math and science literacy. What many educators, including myself, soon understood was that the 70/30 split was not specifically intended for the content area of Language Arts. Rather, the 70% of informational text came from all content areas, leaving the 30% split for literary works. Literacy was becoming every teacher's responsibility and not just that of English/Language Arts teachers. Cross-curricular, project-based learning classrooms could present an opportunity to address literacy across content areas, as well as to allow students to take ownership of their literacy education.

The past ten years have been a time of profound curricular change. Other explicit standardized education movements, such as No Child Left Behind, led to monotonous and remote learning (Zhao 2009, 2012). Although NCLB was replaced by ESSA, standardized testing remained the essential means to measure student success. ESSA does, however, provide more funding for innovative programs and STEM teacher training, making the newer education policy more aligned with the idea of potential project-based learning classrooms. Even with the Common Core State Standards (2010) enforcing standardized testing and benchmarks, it called for more freedom in regard to content standards, allowing for more innovative, cross-curricular classrooms. The student-centered nature of project-based learning provides not only a classroom structure that allows for literacy focused instruction but also a breaking down of the teacher/student binary, which encourages students to take control of their literacy education.

Though there is research on project-based classrooms, not many studies focus on the context I hoped to explore: literacy within a participatory, project-based learning classroom. To meet this gap in the literature, I explored this topic using a Bourdieuian theoretical frame, specifically focusing on students' habitus and cultural capital. Currently, much of the research regarding PBL is either focused on grade levels other than high school (Faris, 2008); content areas such as mathematics (Chapman & Heater, 2010), science (Claussen & Osborne, 2012) or technology (Putnam, 2001); or studies more suitable for after school programs (Justice, Rice, Roy, Hudspith & Jenkins, 2009; Morrell, 2009). However, there is research surfacing that implements a Bourdieuian frame in content area literacy research (Alvermann, Friese, Bechmann & Rezak, 2011). My research interest, therefore, was to explore the possibility PBL has as an alternative secondary classroom model with the means of providing students with a non-traditional learning experience, a learning experience that specifically allows students to rely on their habitus and capitals as a means of exploring their higher-level literacy selves. In turn, PBL, when understood this way, can help redefine our understanding of literacy. By taking advantage of the unrestricting curricular standards of the CCSS, along with the student-centered structure of PBL, I intend to show that students may be able to foster their habitus and capitals within the larger malleable field of education to explore higher level literacy and what we as educators define as literacy education.

Background and Rationale

I am a first generation American on my mother's side and a third generation American on my father's side. My mother was born of Italian immigrant parents in Rio de Janeiro, Brazil, and spent the majority of her life in Connecticut. My mother's side of the family is what one would call "blue collar." My father was born in New York but spent most his adolescent life in

Portugal; he is said to be born with a silver spoon in his mouth. I was born in Connecticut but spent most of my adolescent and young adult life in Georgia. I believe I am a conglomeration of my parents. It is because of their contrasting upbringings, and the effects those contrasts have had on my rearing, that I attributed to my understanding of Bourdieu's sociological stance.

After I completed my undergraduate degree at The University of Florida with a BA in English and an AA in Business Administration, I moved to south Florida to begin my first career in a manager trainee program for a large international distribution company. From the time I was fourteen, I worked in a business setting; it seemed logical to continue that career path after college. A manager trainee program is not as glamorous as one may think, especially when working in a distribution warehouse. I was quickly put in a position where my college degree meant nothing and my hard work and obedience meant everything. I believe that my experience in business has led to my understanding of my theoretical frame. My first full-time experience in business quickly became my last, and I found myself moving back home to Georgia to pursue my masters in teaching.

The school where I currently teach is the school where I got my first teaching job. I began my first teaching experience as a sophomore college preparatory and honors Language Arts teacher. During my third year, I became the 10th grade course team lead and applied to UGA's Specialist program. My fourth year of teaching, I added my first AP Literature course and changed my degree from Specialist to PhD. At the time of the study, I was the AP Literature course team lead and a member of the senior Language Arts team. Throughout my time in education, all while at the same school, I joined school-wide literacy initiatives, attended project-based learning training, joined county-directed assessment teams, revamped the 10th grade curriculum, revamped the AP curriculum, and helped write a department-wide grammar

program. I found my love in education and cannot see myself in any other field. However, I am vocal that there is room for improvement. I feel there is a disconnect between classroom, college, and work-force expectations. I think my time in business, observing as well as experiencing, firsthand, the disconnect between education and industry has led to my research topic.

During my first year as a doctorate student, I was introduced to Henry Jenkins and his definition of participatory culture. I was also introduced to the research of Ernest Morrell (2008 & 2009). Jenkins' (2009) definition of participatory culture became one of the driving forces of my own research, as well as my own teaching strategies. Ernest Morrell's research in creating a more socially just pedagogy helped me view literacy education in a new light. By heavily referencing Jenkins' (2009) and Morrell's (2008 & 2009) ideas in relation to literacy education and classroom structures, I published my first article, entitled "A look at problem-based learning in a high school classroom to promote student activism," (2011) and so began my research interest in project-based learning. Although I did not teach in a project-based setting, I made my classroom more student-driven. I gave them more freedom to explore topics of interest in research and tried to lesson mandated research questions. I quickly began to find that by giving them more freedom and allowing their interests to drive their research, they became more invested in their own learning. I also began to observe students truly learning! Their opinions and views began to change; their struggle with uncertainty and seeking answers became more evident. I was in awe of the transformation I was seeing when I stepped back and let the students explore on their own. I began to see what Jenkins and Morrell were saying the whole time: give students a choice and let them work together and see the results. The dreaded question from students, "when will I need this?" was no longer asked in my classroom.

Statement of Purpose

The purpose of this study was to explore how project-based learning classrooms heighten students' participatory culture through their student-centered structure, as well as how they heighten students' higher order literacy skills as outlined by the Common Core State Standards (2010). I do so by referencing Bourdieu's ideas of habitus, field and cultural capital, as well as Jenkins' ideas of participatory culture.

Research Questions

The following research questions guided my exploration of literacy within a project-based learning classroom:

1. How are students applying higher-order literacy skills within their participatory projects?
2. How are student projects a projection of their identities?
3. How can students provide their own opportunities for social mobility through their participatory projects?

Definition of Terms

Higher-order literacy:

Higher-order literacy develops from the term "higher-order thinking," which is an educational reform concept that stems from Blooms taxonomy. What identifies certain kinds of thinking as higher-order is that they require additional cognitive steps beyond memorizing information. There are six levels in the cognitive domain of Bloom's taxonomy, and higher-order thinking is the highest. It includes skills such as: appraising, assessing, criticizing, defending, evaluating,

justifying, and supporting; these skills can be applied to reading, writing, and research. Higher-order literacy refers to the highest level of text consumption and production. The term became part of teacher vernacular within some public school districts during the implementation of Common Core.

PBL:

PBL, or project-based learning, is the weaving together of two components of experimental learning. The first component stems from John Dewey's ideas about the learning sequence: identifying a problem, observing variables associated with the problem, developing a plan to solve that problem, and then testing the plan against reality to find a solution. The second component focuses on the setting of learning, recognizing that learning is something that occurs both inside and outside a traditional classroom setting (Wurdinger, 2005). "PBL weaves these two views of experiential learning together, allowing students to develop problem-solving skills while completing their projects and activities outside the four walls of a classroom. Students develop plans, address questions and problems that arise, and test their ideas in real-world situations, which is similar to Dewey's previously mentioned learning sequence" (Wurdinger, 2005, p. 75). Additionally, although projects are controlled by the teacher, the student role continuously evolves, and "lifelong learning skills are attained by full involvement and shared responsibility" (Lewicki, 2005, p. 99).

Participatory culture:

In the collaborative report *Confronting the challenges of participatory culture: Media education for the 21st century*, Jenkins, Purushotma, Weigel, Clinton and Robison (2009) provided an explicit definition of participatory culture as one

- With relatively low barriers to artistic expression and civic engagement

- With strong support for creating and sharing one's creations with others

- With some type of informed mentorship whereby what is known by the most experienced members is passed along to novices

- Where participants believe that their contributions matter

- Where members feel some degree of social connection with one another (at least they care what other people think about what they have created). (p. 7)

In short, human interaction is a part of participatory culture. Jenkins et al. (2009) outline new literacy skills. These skills include: play, performance, simulation, appropriation, multi-tasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking, and negotiation. Participatory culture shifts the focus of literacy from the individual expression to community involvement.

Habitus:

Habitus includes the subjective end of the subjective/objective binary. Habitus considers past experiences and how those experiences affect a person's perception, thoughts, ideas and eventual actions. A person's habitus comes from his or her total experiences and influences: upbringing, familial expectations, race, religion, social class, etc. An individual's habitus is like Russian nesting dolls full of generative practices and expectations of social conditions. According to Bourdieu, "...in each of us, in varying proportions, there is part of yesterday's man; it is yesterday's man who inevitably predominates in us..." (Bourdieu, 1977, p. 79).

Field:

Field is the objective end of the subjective/objective binary. It is a network of relationships that creates a grouping of occupants or agents. Within a field there are positions of power, which create subordinate/dominant relationships between agents within the particular field. Bourdieu's idea of

field is one of a network or configuration of occupants, agents or institutions and the existence and worth of those occupants, agents or institutions as defined by the hierarchies within that particular field and the capital associated with being associated with that particular field (Grenfell & James, 1998). Capital often dictates one's place within a given field, and institutions often create fields and positions of power within a particular field (Grenfell & James, 1998). Therefore, a field is a "structured system of social relations at a micro and macro level" (Grenfell & James, 1998, p. 16).

Capital:

Pierre Bourdieu's root as a Marxist sociologist is best seen through his ideas on capital. Bourdieu (1977,1986) outlined three forms of capital: economic, cultural and social capitals. It is necessary to have an understanding of habitus and field in order to understand all which encompasses Bourdieu's economic, cultural and social capitals. Prasad (2005) explained Bourdieu's conception of capital as that in which "individuals and groups draw upon a variety of economic, social, and cultural resources in order to improve, maintain, or strengthen their positions in the social order" (p. 199).

Economic capital:

When Bourdieu's senses of capital are listed, economic capital is always mentioned first, undoubtedly because it holds the most clout in the eyes of society. Economic capital refers to material assets of monetary value, such as property and investments, and can be "immediately and directly convertible into money and may be institutionalized in the forms of property rights" (Bourdieu, Forms of Capital section, 1986, para. 4).

Cultural capital:

Cultural capital is less concrete than economic capital; it includes objects that carry a cultural value, such as rare book collections or antiques. Cultural capitals exist in three states: the

embodied, the objectified and the institutionalized. The embodied state is "in the form of long-lasting dispositions of the mind and body"" (Bourdieu, 1986, Cultural Capital section, para. 1); the objectified state appears in the form of cultural goods, such as heirlooms, antiques or other goods of significant cultural value (rare books, instruments, pictures, etc.); lastly, the institutionalized state refers to degrees, certificates and other educational qualifications.

Social capital:

Social capital is social relationships and provides a gateway to privileged opportunities. This includes having relationships with those in power or those deemed important in society, or membership in a particular group "which provides each of its members with the backing of the collectivity-owned capital" (Bourdieu, 1986, Social Capital section, para. 1).

Theoretical Framework

"...when given a choice, relationships with students became better because the old antagonisms began to disintegrate" (Newell, 2005, p. 21)

From the time we take our firsts steps, we are preprogrammed to imitate; therefore, it is no surprise that teachers reinforce in their own classrooms the same power structures they too experienced during their time as students. The same can be said about how we learn. Bourdieu (1977) extensively explains how children do not model when learning but rather imitate. However, students cannot progress into being successful adults through imitation alone; a strong foundation as a literate adult promotes the possibility of educative, social, and possibly even economic progression. Literacy education is the area where schools have the most influence in supporting students' habitus and cultural capital to develop and change in the educational field.

Therefore, my study implemented a Bourdieuian theoretical framework with references to Bourdieu's ideas of habitus, field and cultural capital. James Albright (2008), in his chapter "Problematics and generative possibilities," explained the possibilities of applying Bourdieuian principals in literacy education. His article outlined examples of research that have "appropriated piecemeal, selected concepts; for example, taking up notions of capital and ignoring habitus and field" (Albright, 2008, p. 11). Similar to Albright's research, I too will situate aspects of Bourdieu's sociological ideas in relation to literacy education in a project-based classroom, focusing particularly on how the flourishing of students' cultural capital within the field of a PBL classroom may create a literacy pedagogy that allows students to realize the relationship between literacy and social power (Luke, 1996). Therefore, by deploying Bourdieu's ideas of habitus, field and cultural capital, I will explore the connection between students' participatory culture and reading analysis skills in a project-based learning classroom.

However, before providing background on Bourdieu's ideas, I will first present Henry Jenkins' idea of participatory culture. Formally defined, participatory culture is what creates learning communities, the formal or informal exchange and sharing of ideas and creative expression. However, the exchange of ideas does not just stop at a simple exchange; it includes mentorship and social connection. Ideas are shared, learned, taught and appreciated (Jenkins et al., 2009). In relation to literacy, Jenkins and his co-authors explained how "participatory culture shifts the focus on literacy from one of individual expression to community involvement," which provides students with the experience to shape the way they think about themselves as contributors, as well as the way they think about the contributions of others (p. 7).

It is appropriate to begin discussing Bourdieu's principles with the explanation of one's habitus. Habitus by its very definition has its place in the participatory culture discussion.

Habitus considers past experiences and how those experiences affect a person's perception, thoughts, ideas and eventual actions. A person's habitus comes from his or her total experiences and influences: upbringing, familial expectations, race, religion, social class, etc. It directly correlates to the aforementioned Bourdieuian (1977) idea of learning as imitation. With habitus including innate aspects of an individual's persona, it is clear that habitus has a deep effect on social interactions and learning. To ignore habitus in regards to literacy education is to ignore social and historical practices, as well rituals and relationships between different people. Understanding individuals' habitus in the context of education is necessary in the dialogue of both participatory culture and cultural capital because it is the foundation of understanding what students produce.

Students' habitus within a classroom function in their own unique way because each individual habitus is affected by the different environments in which it participates or resides; Bourdieu referred to such environments as fields. The importance of habitus and field is to be found in their mutually-constituting relationship, meaning that the ideas are based on identical principals, and the field can construct the knowledge and build habitus as much as the habitus constitutes the field. In an analogical sense, a field can be seen as any network or affiliation, as a type of membership. Although not concrete in structure, fields distribute and hold just as much symbolism and power as the symbolism found in cultural artifacts and political buildings.

Within my study, the field is the PBL classroom. Although a classroom is usually conceptualized as a contained area where learning takes place, in a PBL setting the classroom is malleable: learning occurs within the classroom and learning occurs outside the classroom and in the community. Much like Bourdieu (1977) uses the analogy of individual habitus being like Russian nesting dolls, I too believe fields share a similar encompassing idea. For example,

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government agencies, which dictate educational standards, such as Common Core State Standards (2010), create a larger field in which local education agencies reside. The PBL classroom is the smallest doll which lies within federal government agencies, state and local school agencies, the school itself and, not to mention, all the other fields which have connections with education, such as the surrounding community. However, the PBL classroom is a field with flexible boundaries because its learning reaches beyond the classroom and into the community; its innovative projects even allow the classrooms' boundaries to overlap with the boundaries of other fields. However, this study's observations were conducted within the field of the PBL classroom. This field includes the physical walls of the PBL classroom, as well as the project presentations that occurred outside the classroom walls, and at times, outside the school hours. The students, however, reference their learning and project time both during class hours and outside the classroom.

Once a field is defined, and habitus is situated within a given context, Bourdieu's ideas of capitals can be addressed in relation to the defined field and situated habitus. Social, cultural, and economic capitals are defined by their tangible and intangible associations. Although cultural capital is the least clear and concrete of the forms, it is often referenced in education research. Prasad (2005) quoted Norton saying that cultural capital is the "linchpin of a system of distinction in which cultural hierarchies correspond to social ones, and people's tastes are predominantly a marker for class" (p. 199). Luke (1996) referenced the three states of cultural capital (embodied, objective, and institutionalized) as outlined by Bourdieu and Passeron in their study of the French education system. He specifically used the three states to easily reference the possible transference of capital within and among individuals. Bourdieu (1991) also explained the possible transference of capital. He admitted economic capital was the easiest of the three for

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possible transference; however, Kramsch (2008) explained Bourdieu's belief in the "power of literacy to automatically increase the chances of upward mobility" (p. 45). Although using literacy as a catalyst for social mobility does come with a risk of illuminating "the invisible institutionalized obstacles and ideological barriers" which prevent such social mobility, the reward of breaking down these boundaries, allowing educators to better understand student successes and failure far outweighs the risks (Kramsch, 2008, p. 45). Therefore, there is a chance for cultural capital to flourish within a PBL classroom, particularly through its literacy education.

However, there are limitations with the possibilities of capital transference. Cultural capital and its mentioned states must be recognized as a possibility of advancing individuals from initial birth; otherwise, the exchange values between capitals are limited. If the states of cultural capital are not recognized, then the influence cultural capital has of advancing one's place, particularly one's economic capital, is lessened. Luke (1996) again referenced Bourdieu in his explanation of another possible limitation: "ultimately capital is only capital if it is recognized as such; that is, if it is granted legitimacy, symbolic capital, within a larger social and cultural field" (as cited in Luke, 1996, p. 319). In other words, individuals−those involved in the exchange of goods−must recognize cultural worth, both innately and in others, in order to truly recognize authority and symbolic power in the social universe. Again, it is the dominating powers of the social universe who will regard the value of cultural capital. These limitations become all the more relevant in governing bodies such as schools because boundaries are ever-present, whether socioeconomically, racially or through media-created structures like school rankings.

PBL classrooms may be the answer to Luke's (1996) pedagogical issue. After all, "cultural capital is the product of education, which Bourdieu refers to as an 'academic market'"

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(Grenfell & James, 1998, p. 21). Therefore, educational entities greatly influence students'

cultural capital, making it is hard to distinguish what could be original to the student and what is

created by schooling. If education entities have such influence on cultural capital, as Grenfell and

James explained, then it becomes hard to distinguish what of a students' habitus is innate and

what is influenced by schooling. It is for this reason that I believe most students' cultural capital,

regardless of race or culture, does not coincide with the valued cultural capital of schools. With

student-centered and student-derived instruction, PBL asks for students to rely on their own

experiences, as well as the experiences their classmates bring to the classroom. The participatory

nature of a PBL classroom, provides a field where students face the challenges of working

alongside people who are different, racially, socially, and economically. Through these

differences, students can organically experience socially just classrooms, instead of the teacher

forcing conversations on social justice. PBL could be the classroom environment that promotes a

more democratic classroom.

I have chosen to relate Henry Jenkins' (2009) ideas of participatory culture with Pierre

Bourdieu's (1977, 1986) ideas of habitus, field, and cultural capital. Jenkins focused on the

social interactions of humans as a way to break through power relations and provide more of a

mentor/mentored relationship and an open sharing of ideas. Bourdieu's ideas of habitus and

cultural capital break down the inherent qualities of an individual and how those qualities dictate

his or her place in society or a given field. In order to understand students' interactions within a

classroom, it is necessary to first understand how society has dictated individuals' worth and

placement, and how the "placing" of individuals by society affects social interactions. Therefore,

by applying Bourdieu's principles of habitus, field and cultural capital to a PBL classroom, I will

explore students' perceptions of their social interactions between and among one another in order

to better understand how students' cultural capital may be heightened within the field of a PBL classroom, specifically through its participatory, literacy focused projects.

Summary

The past fifteen years has brought vast changes in educational policy and curriculum revamping. NCLB (2002) began a new millennial era in education and accountability. ESSA (2005) followed suit, refining NCLB's existing policies and emphasizing more focus on STEM and innovative classrooms. Further curricular changes began in 2010, with the CCSS calling for more standardized, skill-based and literacy-focused education. With another change in political party, there is reason to wonder if even more changes could be in the future. However, regardless of previous changes and the potential of future changes in policy and curriculum, the new SAT and ACT tests confirm a remaining importance in literacy education.

A literacy focused education system is good news for PBL. PBL's student-centered learning has the potential to provide students with a learning avenue that helps respond to students' individual literacy needs. Literacy education is the medium for potential capital transference. As such, PBL provides possibilities for capital transference by combining an open-structured learning environment where hierarchies may potentially disintegrate with a standardized curriculum that allows for loose content standards. PBL has the potential to implement more cross-curricular classrooms where students can connect learning across curriculums, as well as foster out of school interests and literacies. By breaking down the borders between curricula, across classrooms, and within students, PBL could be the answer for more socially just and equal classrooms; a calling that has been the driving force behind many of the educational changes in the past decades.

With both private and public education implementing more PBL based classrooms and schools, now seems like the perfect time to look closely at the innovative classroom structure as a site for improving students' cultural capital through collaboration and personalized learning. In support of my interest to explore project-based learning as a potential avenue in public education, this study looked at the presence of higher-order literacy skills as outlined by the CCSS (2010) in a public education PBL classroom. Using a Bourdieuian lens, specifically focusing on cultural capital in a PBL classroom field, the interest of this study was to explore the possible transference of capitals. In this chapter, I presented the background of educational changes, specifically with the implementation of the Common Core State Standards (2010), provided information on project-based learning (PBL) and its structure, as well as Bourdieuian principles, and outlined the significance of exploring the conjunction of these three related yet divergent ideas. The following chapter includes a review of relevant literature significant to the study of student perceptions on literacy education in a PBL classroom.

CHAPTER TWO

REVIEW OF RELEVANT LITERATURE

"...when given a choice, relationships with students became better because the old antagonisms

began to disintegrate" (Newell, 2005, p. 21)

Ron Newell, one of the founders of the Minnesota New Country School, explained best

in the quote above the impact PBL can have on fostering a democratic dialogue among and

between students and teachers. The Minnesota New Country School was founded in 1994, and it

still remains one of the best examples of PBL. Although PBL is currently making its way into

many education discussions, it remains in an educational niche. This niche is reserved mostly for

STEM and charter education, schools located in rural or urban areas, and K–8 classrooms. PBL

is not necessarily for all learners as some students learn better with direct instruction; however,

technological advancements and accessibility to information have altered the way students find

and receive information. Today's students are more collaborative by nature and understand

technology better than most adults. The availability to technology and social media has made

consuming and producing ideas second nature and research has become an everyday,

subconscious practice. Still, even with the world advancing at exponential speeds, the traditional

classroom model, created during the Industrial Revolution, is referenced in educational research

more often than non-traditional classroom models. Research and practice is falling behind

technological and pedagogical advances. The following section, which contains a review of

literature pertinent to an explanation and understanding of PBL in relation to participatory

culture and Bourdieuian principles, heavily references *"The coolest school in America": How small learning communities are changing everything* (2005) as an anchor text. I chose to anchor the literature review with this text as it provided an example of a PBL driven high school in a public school district in the United States. Through the example of the Minnesota Country School, the authors explained the process of creating a PBL focused school while referencing student examples.

The following literature review will be organized around three concepts: the literacy skills outlined by the CCSS, an explanation and overview of PBL, and the connections between Bourdieuian concepts, literacy education and PBL. The first concept, Common Core literacy standards, will specifically focus on the 6–12 College and Career Readiness Anchor Standards for Reading, as these were specifically referenced in my analysis. This first section of the literature review also includes research related to reading skills outlined by the CCSS, as well as research explaining why the Common Core provides a pivotal opportunity to look at literacy differently. The next section of the literature review includes research that explains PBL, citing examples of PBL implemented at varying grade and content levels. This second section of the literature review then subdivides to include research that specifically focuses on PBL and Bourdieu, explaining the significance of using such a theoretical frame in relation to PBL research. The literature review's concluding section focuses on the connections among literacy skills as defined by the CCSS, Bourdieu's notions of literacy education, and PBL as a tool for reconceptualizing literacy education. This final section segues into my own research, explaining how and why these related yet disparate ideas are helpful to education research today.

Literacy Skills as Outlined by the CCSS

Since the CCSS reading standards anchored the literacy portion of this study, it is important to understand the reasoning behind its creation and implementation. CCSS began with the higher education's discontent with high school graduates, as well as industry's discontent with secondary graduates' readiness for the work force. Students must be prepared for what is to come once they step out of high school, as 63% of all post-high school jobs require some post-secondary education and 90% of jobs with high wages require post-secondary training (Hein, Smerdon, Lebow & Agus, 2012). These statistics influenced the coined term "college and career readiness"; this term is regularly mentioned throughout the Common Core State Standards.

With its different pathways for each content area, CCSS is "exercised through three interconnected measures: (1) the identification of core subjects, (2) the development of centralized curriculum standards, and (3) the use of high stakes testing to enforce standards of core academic subjects" (Zhao, 2012, p. 27). The CCSS are "evidence based and informed by internationally competitive benchmarks in academic achievement with the goal of ensuring high school graduates are prepared to compete in a globalized economy"; therefore, the parties involved in creating the standards, which included educational entities like College Board, are fully confident of its potential success (Hein et al., p. 3). By focusing on "fewer, more explicit and coherent expectations with specific and achievable goals for all students," these standards level the playing while still increasing rigor and raising graduation requirements (Hein et al., p. 3). The Common Core standards hoped to achieve this by focusing on skills rather than content.

CCSS has been implemented in all grade levels and content areas; however, this study solely referenced the 6 – 12 English Language Arts reading skills portion of the CCSS. The 6–12

English Language College and Career Readiness Anchor Standards for Reading are broken down into four major categories that differ in rigor between grade levels: key ideas and details, craft and structure, integration of knowledge and ideas, and range of reading and level of text complexity. Below are the 10 anchor reading standards as listed and stated in the official Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects (2010):

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical references from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.

5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.

6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words

8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasons as well as the relevance of sufficiency of the evidence.

9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Although I only referenced the English Language Arts reading standards throughout my study, the CCSS places strong emphasis on content area literacies, which is why the standards suggest a 70/30 split of informational versus fictional texts. Because textual literacy is emphasized throughout the CCSS, reading analysis skills are assumed for all content areas and not just English language arts. Furthermore, the 70/30 split (informational versus fictional text) of texts must be interpreted correctly; otherwise, other important values, such as those encouraged by years of implementing cultural diversity in classroom curricula, particularly within English language arts classrooms, could be lost. One way these values can be preserved is by teachers carefully selecting texts and thinking seriously about cross-curricular opportunities.

By requiring all content area teachers to take responsibility over students' ability to read complex text, the CCSS has the potential to ensure students' foundational reading skills, such as fluency, and inference are being developed and challenged. Implementing both non-fiction and

fiction texts across content areas ensures these literacy needs are met while promoting text diversity and content specific reading. Inference is a necessary "21st century skill for all students to use and develop across the curriculum" (Bintz, Moran, Berndt, Ritz, Skilton & Bircher, 2012, p. 16); therefore, educators should develop the belief that "developing and implementing integrative curriculum is important at all grade levels" (Bintz, et al., 2012, p. 16). This belief ensures that inference skills are heightened, which aids in students' increased reading analysis skills across all content areas. Not only is implementing fiction texts across content areas, particularly in grades 9 – 12, a way to reach students with varying interests, but it will also increase cultural diversity in the classroom. Incorporating fiction texts in different content areas, will increases the chances of reaching the reluctant reader; the student interested in science but never has a chance to read a science driven novel in a language arts class.

Strong reading skills include reading fluency. Past studies have demonstrated a lack of fluency in high school students. Fluency is most commonly assessed in beginning readers and is too often misinterpreted as speed-reading; however, "fluency is automatic word recognition that is most often measured through reading speed" (Paige, Rasinksi & Magpuri-Lavell, 2012, p. 68). It consists of expressiveness in text reading and "prosodic reading that reflects textual meaning" (Paige et al., 2012, p. 68). Although fluency is more commonly studied as a primary grade phenomenon, "research has shown that automaticity in the word-recognition component of fluency, as measured by reading rate, is strongly associated with good comprehension in the secondary grades" (Paige et al., 2012, p. 68). Unfortunately, many high school students are falling short in the fluency department. In a study of 108 9th grade students with scores in the bottom five percent of high schools in the state, those students with the lowest fluency scores had

the lowest reading comprehension scores, demonstrating how the "students' level of prosody in reading affects their reading comprehension" (Paige et al., 2012, p. 71).

Mark Sulzer's (2014) article, "The common core state standards and the 'basalisation' of youth," focused on reading, specifically as outlined by the CCSS 9th English/Language Arts Standards. Sulzer clarified what the CCSS intended as reading and who the CCSS regarded as the reader. His understanding of Common Core reading standards matches what I presented earlier. It is Sulzer's presentation of how we should understand the reader, however, that provided a clear definition of the Common Core's intent to develop college and career ready readers. He explained how "the implication is that young readers who do not perform the reading habits the CCSS promotes have not yet arrived; they are still going through the training, still learning to think" (Sulzer, 2014, p. 145). College and career readiness reading standards take students on an investigative journey; they teach students to take a detective's approach to reading. The expectation is not that the student arrives at the result quickly, but rather that the student learns the process of reading through an investigative journey. This journey, Sulzer explained, is "reinforced by the rhetorical groundwork from the CCSS's inception: that the standards prepare students for a future time in their college or career" (p. 145).

To better explain this relationship, Sulzer referenced a metaphor from his focal text *Literature (Common Core Edition),* written by Carol Jago. In her introductory remarks, Jago described students are travelers and the Common Core is like a GPS device; teachers are the guiding voice to help with wrong turns and rerouting. Although students may take the road less traveled or make a wrong turn, the end destination, which is students' academic success and a deep level of literacy, does not change. Jago's description of this metaphorical relationship

identifies the tone of the intent of the Common Core to provide standards to best prepare college and career ready readers:

> The Common Core State Standards make clear where students are going. They describe what today's children need to know and be able to do to thrive in post-secondary education and the workplace. By focusing on results—the destination—rather than on how—the means of transportation—the Common Core allows for a variety of teaching methods and many different classroom approaches. The challenge for teachers is to turn the daily journey towards this destination into an intellectual adventure. (Cited in Sulzer, 2014, p. 145)

Jago's quote and Sulzer's interpretation of the Common Core college and career reading standards, provided a metaphorical and literal interpretation of the standards, as well as the role of teacher in helping students navigate through the skill set outlined by the Common Core. As Jago mentioned, it is not so much the means of transportation as much as the common destination among all students, regardless of background. With different classroom approaches, all students should be able to reach the level of deep literacy understanding intended by the Common Core. Such classroom approaches could include PBL. To come back to Zhao's (2012) quotation in this study's introduction, "After all, perfecting the horse wagon won't get us to the moon. We need to build a whole new vehicle" (p. 162). If the destination matters more than the journey, then PBL should be considered as a vehicle option to bring students to their final destination, a deep level of literacy.

The CCSS focuses on reading comprehension skills in all content standards, so it is imperative that work is done to improve students' prosody. Without this, they will be unable to

reach the necessary comprehension level appropriate for a strong reading foundation. Analysis, fluency, comprehension and text selection are the main points listed in the anchor standards of English language arts. All of the aforementioned skills are imperative for successful reading and understanding of complex texts, but the emphasis on reading in the CCSS is not just about a change in how our students learn to read. Additionally, implementation of the Common Core State Standards "presents a timely opportunity for teachers to rethink not just reading but the larger purpose of literacy education" (Maderazo, 2013, p. 1). The CCSS has provided an opportunity for all content areas finally to be on the same page and to share a skill set absolutely imperative for our students' success in the 21st century. Simultaneously, teachers have a unique opportunity to help students realize their literacy identities (Maderazo, 2013). Teachers have an opportunity to come together and change their classrooms to be more like the environments in which our students will spend the rest of their lives. Danielle Filipiak (2014), in her chapter "Shared purpose leads to civic action," explained how the PBL model provides a realistic environment where product-focused learning and collaborative learning are at the core of the students' educational experience. The cross-curricular nature of PBL classrooms allows for cross-curricular literacy to be central to the classroom reading curriculum.

Explanation and Overview of PBL

The acronym PBL translates to both "project-based learning" and "problem-based learning." Both types of PBL are learning avenues under the umbrella term of inquiry-based learning. For the purpose of this study, I focused on project-based learning because I spent almost an entire school year observing a designated project-based learning classroom. For the purpose of this study, PBL stands for "project-based learning."

PBL is an instructional, student-centered method, which focuses on the learner and allows educators to go beyond traditional teaching methods while promoting and practicing new learning habits, as well as introducing students to an in-depth investigation of topics relevant to society and to students' lives. PBL is a type of inquiry focused instruction, which develops critical research and critical thinking skills by challenging students to learn to learn (Faris, 2008; Garcia Ed., 2014; Johnson et al., 2009; Koszalka et al., 2001; Ngeow et al., 2001; Thomas, Enloe & Newell Eds., 2005). PBL scaffolds the necessary skills required for successful problem solving. Projects are oftentimes the means for solving larger problems, such as a town water crisis or plans to offer more public transportation (Faris, 2008). While developing their projects, students develop critical thinking abilities and learn to question and analyze texts (both print and non-print) and, in doing so, find themselves questioning authors' purposes and making personal connections to the text (Ngeow et al., 2001). The project focused, cross-curricular structure of PBL promotes a critical research model where students reach a deep level of text analysis.

A PBL classroom is a collaborative exchange community where students share ideas and work together on large scale projects. Such a classroom allows educators to go beyond traditional teaching methods while promoting and practicing new learning habits, as well as introducing students to an in-depth investigation of topics relevant to society and to students' lives (Garcia, 2014; Johnson, Smith, Smythe, Varon, & New Media Consortium, 2009; Koszalka, Song & Grabowski, 2001; Lewicki, 2005; Ngeow, Kong & ERIC Clearinghouse on Reading, 2001). PBL provides interdisciplinary learning, in which students apply knowledge across curriculum continua to produce a solution to a real world issue or to create a product that aligns with a project purpose (Garcia, 2014; Putnam, 2001). This aspect of PBL is what defined it as an innovative cross-curricular classroom model. PBL provides an environment where

students work towards a larger learning goal while simultaneously using critical thinking, reading and research skills. Learning is acquired rather than forced, and student work stations mirror real-world collaborative working environments (Newell, 2005). Therefore, cross-curricular connections are an innate part of the PBL curriculum, and students make critical thematic connections among mediums—a necessary literacy skill outlined by the CCSS.

PBL and Bourdieu

Many students enter school at a disadvantage. If students' cultural capital does not align with a school's valued cultural capital, then students are already "at-risk" before ever being labeled (Obidah & Marsh, 2006). Although this idea is mostly referenced in a racial context, I believe most students' cultural capital does not coincide with the cultural capital deemed important by educational entities, which can vary depending on social and political factors. After all, "cultural capital is the product of education, which Bourdieu refers to as an 'academic market'" (Grenfell & James, 1998, p. 21). Therefore, educational entities so greatly influence students' cultural capital, it is hard to distinguish what is original of the student and what is created by schooling. For this reason, I believe that most students' cultural capital, regardless of race or culture, does not coincide with the valued cultural capital of schools, especially since the cultural capital of school can vary at such a vast degree depending on its surrounding influences, political, social or public. However, PBL could provide students with an opportunity to develop their cultural capital more organically without so many hierarchical influences. With its student-centered structure and loosening of the mentor/mentored binary, PBL provides an environment where students are free to be themselves and are not forced to fit a stereotype (Newell, 2005). The student-directed structure brings student choice at the core of its foundation (Thomas, 2005).

In doing so, the relationships between teachers and students become better "because the old antagonisms [begin] to disintegrate" (Newell, 2005, p. 21).

Claire Kramsch (2008), in her biographical memoir included in James Albright and Allen Luke's (2008) *Pierre Bourdieu and Literacy Education*, provided a detailed and enlightening account of the importance of considering students' habitus and cultural capitals in education. She referenced her own habitus, capitals and educational field in order to recount her adolescent schooling experiences and the institution's influence, particularly on her written expression and how it was "invariably criticized as 'pedantic', 'heavy', 'unclear'—adjectives that, as Bourdieu observed, subtly passed judgment not only on how we wrote but on who we were" (Kramsch, 2008, p. 34). The personal guilt to meet school expectations is what Bourdieu explained as the interest of the institutions "to conceal the symbolic power they wield to reproduce the social hierarchies" (Kramsch, 2008, p. 35).

Kramsch (2008) never questioned her habitus as it is what she saw as her natural self and her way of meeting the expected social norms; it who she was and how she acted: "I did not have to think, rationally, of how to behave or what to say. My body knew. My habitus was in my body, and my body was part of the objective world" (Kramsch, 2008, p. 37). It was because of this bodily reaction to society that Kramsch's (2008) habitus reproduced the very structure which influenced her and placed her in the educational social hierarchy. However, it was not until she was situated in the educational field that she realized inconsistencies between her familial field and her academic field. She came to the educational field with conflicting cultural capitals: the bourgeois influence from her father and the hard-working immigrant influence from her mother (Kramsch, 2008).

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It was Kramch's (2008) concept—"enhancement of one's symbolic position within a field"—which allowed her to recognize her bourgeois self from her hard-working self and make cultural adjustments as necessary (p. 40). The same cultural distinctions Kramsch (2008) strived for is what many students find themselves striving for in a classroom: acceptance and success. However, the current school structure, with its hierarchies, does not allow for easy enhancement of one's symbolic power. Instead, social intuitions such as schools reinforce the binaries of power, gender, and race, which separate our identities and force us to choose one side over another. Schools can change the reproduction of social hierarchies and the devaluing of student identity by allowing students' habitus to adapt and enrich in a given field (Kramsch, 2008).

Literacy education is where schools have the most influence in allowing students' habitus and cultural capital to develop and change. Referencing Bourdieu's ideas of using literacy as a springboard for capital transference shows that the inclusion of the Common Core State Standards (2010) provides a pivotal opportunity for educators to rethink classrooms, student identity in classrooms and student identity within literacy education. With its enforcement of critical reading and analysis skills, as well as an emphasis on creating for real audiences, the CCSS opens doors for educators to implement innovative classroom structures that promote participatory culture. Luke (1996) posed a question regarding our current classroom model and its ritualistic manner of reinforcing power structures and teacher/student binaries. What PBL provides is a complete opposition to the age old traditional classroom model of teacher-centered direct instruction. However, in order to implement PBL effectively, it takes a shift in both teacher and student thinking, as well as in the thinking of administrators (Thomas, 2005). This shift in thinking is necessary in order to understand the potential such an innovative classroom

model has to capitalize on students' habitus and cultural capital, and in doing so, allow students to explore their identities and identities with text.

PBL is the epitome of looking at literacy differently while providing a more socially just pedagogy (Duncan-Andrade & Morrell, 2008; Luke, 1996; Maderazo, 2013). With student choice, collaboration and production at its core, PBL encompasses all that is participatory culture (Thomas, 2005; Jenkins et al., 2009). These characteristics could be the building blocks that function as a catalyst to change students' perceptions of school (Newell, 2005). A change in students' perception of school is through their text production and consumption. When students consume and produce text within a PBL classroom their identities are evident because they are learning within a self-created learning community. Jennifer Rowsell and Katie Pahl's (2007) research on sedimented identities in text looked through a Bourdieuian lens to analyze children's text production within their homes. They used the metaphor, sedimented identities, to describe text identity as a process, sometimes a slow process. Rowsell and Pahl argued how "texts can be seen as traces of social practices, and their materiality is important in revealing those traces" (p. 388). Where Rowsell and Pahl's ideas are most relevant to PBL and students' participatory culture is in their potential to help students conceptualize classroom identities. As PBL classroom activities promote student production, traces of student identities and social practices become more evident. These sedimented identities stem from students' habitus and can manifest through text selection and text production. Allowing student choice to be at the forefront of student learning, PBL promotes sedimented identities in text

Rowsell and Pahl (2007) outlined two studies where habitus directly affected and related to the texts students chose, produced and consumed. Through their research, Rowsell and Pahl illuminated the clout habitus has in text selection and production, because "it is through our

continual interactions with meaning making events that we come to solidify identities in practice." Educators can draw on these identities for further practice, including by utilizing "familial literacy patterns" and "crossgenerational literacy habits" (p. 401). Traditional classrooms do not always capitalize on such habitus assets; however, in PBL classrooms, students are producing solutions and projects for real (local, regional, state or even national) issues. Therefore, students' habitus and what they bring to the classroom—familial literacy patterns and cross-generational literacy habits—is not only present in the students' solutions to their problems, but also is present in the entire structure of the classroom.

PBL, when implemented correctly, has the potential to allow students to flourish fully, not only in an academic sense, but also in psychological and emotional senses. Although Common Core identified strong literacy skills as the common thread among its content standards, it references the importance of soft skills, such as independent learning skills and self-advocacy skills. Therefore, it is important for educators to not forget the role student perceptions and confidence plays in schooling, especially literacy. As students improve literacy skills and become independent learners, their confidence level increases. This relationship between confidence and literacy leads to a strong understanding of content and analysis, skills rarely seen in traditional classrooms (Johnson, Lonnquist & Enloe, 2005). Because of the student-centered and student-directed structure of PBL, students become independent learners who begin to advocate for their own learning, understanding the benefit of learning for one's own personal advancement.

With students' ideas and learning at the PBL classroom's forefront, PBL provides an environment where students are at ease, and when students are comfortable, their guards drop and their true identities are revealed. Rowsell and Pahl conducted much of their research

regarding sedimented identities in text at students' homes, because true familial practice and habitus were more likely to appear. When classrooms are created in an environment where students feel at ease to be themselves, then their classrooms have the potential to illuminate students' identities through text consumption and production. Their identities become infused in the environment rather than the environment infusing their identity (Rowsell & Pahl, 2007). It is important that our students' identities are present in the classroom because educators and researchers learn from students' production, such as students lived realities and community lives (Rowsell & Pahl, 2007). So PBL provides an environment where students can share ideas freely and produce with limited constraint on their habitus, but it provides a great environment for researchers and teachers to learn more about students' lives, particularly their literacy lives.

Making the Connection

There is no better way to understand the true potential PBL has to affect students' literacy identities positively than to explore the examples of Minnesota New County School and Paideia School. First and foremost, the PBL structure at MNCS relies on student derived projects, which breaks the traditional teacher/student binary. Its advisor program breaks through the submission and oppression of traditional classroom relationships and, rather, creates a mutually constituting relationship between adults and students. The reliance on learning communities at both MNCS and Paideia School provide an environment with no structure, and, therefore, little hierarchy.

The idea of a learning community is by no means novel and can be traced back to Jean Piaget's "The Right to Education in the Present World" (Enloe, 2005). Learning communities are all around us. Teachers work in professional learning communities, and industry leaders work on teams, so it would only make sense for our students to learn in a collaborative setting as well. A

learning community is based on six conditions: building community, constructing knowledge, supporting learners, assessing expectations, documenting reflection and changing culture (Enloe, 2005). By its very nature, PBL is a learning community which embraces participatory culture. The PBL environment at MNCS has no grade levels, no set ages per grade level and no class times; the loose structure mimics a true learning community or team found outside of schools, the type of environment in which students will soon find themselves. Without prior exposure or practice, students may not be prepared to handle these environments when they come to them. The loose structure of MNCS may seem extreme, but extremes may be what education needs in order to ensure a "pedagogy which goes far beyond the transmission of genres, and offers social and cultural strategies for analyzing and engaging with the conversion of capital in various cultural fields" (Luke, 1996, p. 320). To reiterate Enloe's (2005) criteria for learning communities, these areas have the potential to change a culture and innately embrace students' habitus, fostering an environment in which cultural capital is recognized and promoted.

Enloe (2005) referenced the educator Joseph Schwab, who explained how functioning in a community can be taught. There is a certain skill set necessary to function successfully in a learning community, including soft skills such as habits and attitudes, which PBL classrooms, like those found at MNCS, reinforce every day (unlike what happens in many traditional classrooms). Zhao (2009, 2012) explained how most employers complain about the lack of communication and collaboration skills students have coming into the workforce. In other words, these students lack participatory culture. At MNCS, students become accustomed to the structure of the work force because they embrace participatory culture in everyday lessons. One student attributed MNCS for her involvement in local politics and her plan to run for office. Another student recounted the many times her advisor brought her to state capital meetings where she

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was exposed to the intricate workings of the government system (Johnson et al., 2005). The learning communities at MNCS embrace the soft skills of participatory culture through their collaborative construction of knowledge and support system for learners. MNCS advisors provide the mentor relationships described by Jenkins (2009), and because all members work together and support one another, sharing of students' and advisors' habitus is innately part of the school's workings. In learning communities, students rely on each other's experiences and backgrounds (habitus), and, in doing so, promote a positive reflexivity of habitus within an educational field.

Although learning communities promote soft skills, they also promote many communicative arts skills outlined by the CCSS. All projects in PBL classrooms require reading, analyzing and synthesizing multiple types of texts, both print and non-print, as well as across differing contents (Newell, 2005). Students are not just reading books or articles from the internet; they are working through legal documents because they are creating a business or writing petitions to stand up against inequalities in their community (Johnson et al., 2005; Maloney, 2010). The student-centered quality of PBL allows students to provide a purpose to their education, a real purpose that encourages investigation and places them in positions to interact with people of power. No longer are community leaders and policymakers dictating what students are learning; the students are working alongside these people to create important projects that leave lasting impressions on both the individual students and their communities.

At MNCS, student projects ranged from opening and running businesses to preparing oneself for end of course examinations. There is probably no better success story than the story of a young man who transferred from a local public school to MNCS for his senior year. He transferred because although he held a B average at his previous school, he could not read. The

student made learning to read and passing the Minnesota Basic Skills Test his senior project. In 688 hours, the student taught himself to read and passed the Basic Skills Test with a score of 94 out of 100 (Thomas, 2005). This young man's story exemplified the potential of PBL. Specifically, it shows the potential PBL has in literacy education. It is difficult not to think that Rowsell and Pahl's (2007) theories of identities in text consumption and production were at work. The young man was given the freedom for his habitus to participate in his learning to read—an opportunity he seemed not to receive in a traditional high school setting. The freedom fostered in the student-centered classroom provided him with the opportunity to self-identify and nurture his habitus by exploring his familiar literacy patterns, bringing his home learned experiences to his senior capstone project (Rowsell & Pahl, 2007). This is a clear exemplification of Bourdieu's belief in the "power of literacy to automatically increase the changes of upward mobility" at its best (as cited in Kramsch, 2008, p. 45). The young man headed to college as a proficient reader with an above average success rate on the state mandated graduation test; his position may not have been as successful had he stayed at his previous school.

PBL learning communities are successful because they are founded on core beliefs that promote equality and accessibility. Enloe (2005) referenced Paideia School as one such PBL school that promotes social citizenship and equality. Taken from the Greek work paideia, the school was built on a foundation of the definition. Used to create the origin of the school and continues to drive the school philosophy, the school's definition of paideia is "the conscious pursuit of a series of educational goals by a community. It conveys the concept of a child's total education: intellectual, artistic, and social" (Enloe, 2005, pp. 43). The school's core belief is the recognition of "excellence and hard work, attitudes towards learning, respect for diversity, social responsibility, egalitarianism, empathy, development of an ethical self, commitment to an

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environment view and appreciation of the importance of the present" (Enloe, 2005, pp. 45-46). Paideia's core beliefs align with Luke's (1996) cry for more socially just schools, especially with its stated values of "respect for diversity" and "social responsibility" (Enloe, 2005, pp. 4-5). These core beliefs demonstrate the potential that classrooms have to break down the binaries and hierarchies found in other forms of education and to use schooling as a way for students to explore their own habitus and identities openly rather than pigeonholing themselves into the identity that fits best with the school structure. The guiding values of PBL-based schools, such as MNCS and Paideia, embrace a participatory culture in which students are accepted and celebrated for who they are and what they bring to the classroom.

Summary

In this section, I surveyed the available research pertaining to literacy education in PBL classrooms while referencing Bourdieuian principles. In addressing each of these ideas separately, I was able to provide a background on the college and career reading standards as outlined by the Common Core, as well as to provide background information regarding reading skills at the secondary level. The background information, as well as the survey of PBL literature, provided the necessary understanding of PBL classrooms, as well as examples of implementing such a learning option in schools. Lastly, I provided literacy literature that exemplifies Bourdieuian ideas. In the following section, I discuss the chosen methods for my study, specifically focusing on the purpose of choosing a case study design, as well as my data collection process. I also provide rich description of my research site, participants, and data analysis process.

CHAPTER THREE

METHODOLOGY

Introduction to My Experience with PBL

To help readers understand my role as researcher in this study, it is necessary to include how my interest in project-based learning began; therefore, I am starting this chapter with an explanation of my association with PBL and The Exchange. As an English teacher with a background in business, I always knew I had a bit of a different perspective in education. I did not leave the corporate world because I could not "make it" or because I did not enjoy it. I left because I realized it was not what I felt I was intended to do with my life. My desire to be a teacher came about not only due to my love for literature but also because I wanted to prepare students for their futures. My business side was evident in my teaching style and how I approached my teaching career. I joined many literacy initiatives at my school, and I signed up for any leadership opportunity that came my way.

I quickly became the 10th Language Arts course team lead, part of the literacy team, and a member of the grammar initiative team. During that time, I became close with one of the original PBL teachers. He and I shared many of the same concerns about education, predominately that pre-packaged education was not realistic to what students would find in their lives after high school graduation. The more he spoke to me about PBL, the more I researched the classroom model, and the more I included it in my own studies during my Specialist degree and eventually my PhD. The more I researched, the more I realized elements of the PBL classroom model coincided with my business and teaching philosophies. Learning about the ideas of people like

Henry Jenkins and Ernest Morrell only strengthened my beliefs in the possibilities of project-based learning at the high school level. My experience in the corporate world, my experience as an English teacher, and my experience as a researcher combine to make me particularly attuned to PBL's possibilities.

My teaching philosophy heavily reflects my broad experiential background. Firstly, I think schooling should most importantly prepare students for the realities of life, not just the realities of college. Students should be able to think independently and at a high level. They should self-advocate, accept personal responsibility, and collaborate with others of differing backgrounds and experiences. My experience in business taught me the importance of understanding these concepts prior to entering the work force. Unfortunately, these skills can oftentimes be hard to implement and teach in a traditional classroom. Secondly, students should be able to read, write, and think at high levels. A strong sense of literary identity is important for students to think differently about texts, media, and society. As an English teacher, I believe in pushing students to be literate adults. Being literate does not mean just being able to read and write. I believe being literate means being able to comprehend words, whether written or spoken; being able to internalize the information; and, lastly, being able to produce a personal and independent response to that information. It is the conglomeration of these identities that drive my teaching, as well as my own research.

As a teacher, this philosophy motivates my classroom activity. However, I am not a PBL teacher. Ironically, I teach AP Literature, a nationalized, heavily structured course that oftentimes relies on direct instruction due to the amount of information and test preparation necessary. Over the past years, however, as I have become the course team lead for AP Literature, my colleague and I have collaborated to infuse more research-based, independent

assignments. Although nowhere near project-based learning, our small changes rely heavily on a Socratic style of teaching, which, much like project-based learning, is student-directed and teacher facilitated. Much of the catalyst that led to these changes is my own research during my doctoral studies, specifically Dana Maloney's article "Solving Problems that Count," which I reference in this study, where she implements a PBL style in her AP course.

Although I am passionate about PBL, I am not naïve to the reservations others have about implementing such a loose structure classroom in a public high school, or at the high school level at all. I too was skeptical about the structure. I did not believe it could work at the high school level, when students are taking multiple high stakes tests each year. However, as a colleague who was involved with PBL invited me to participate as a judge during project expos and to sit in on meetings or in his class, I began to see what many outside observers perceived as students sitting around doing nothing was truly students collaborating and creating innovative projects. Not all teachers, specifically for grades 9 – 12, will accept my views on implementing PBL in high school classrooms. However, with my research, I hoped to provide students' perceptions from one specific PBL classroom. And, in doing so, describe PBL as one option for learning, not an absolute.

Introduction to Chapter

This chapter begins with an overview of North Lake High School (all names of places and participants are pseudonyms). A description of the surrounding community is included as community perception and support is often an element in the structure of project-based learning classrooms (Thomas, Enloe, and Newell, 2005). Following is a description of The Exchange, the project-based learning cohort within North Lake High School, and the site for this case study of a

single PBL classroom. Following the school description is an in-depth description of The Exchange with a specific demographic breakdown of the class, a description of the seven student participants, and a description of the classrooms and other areas of the school used for project presentations. Included in the overview of The Exchange is a brief description of the PBL teachers. I will then include a detailed description of the data collection methods used in this case study, including participant interviews and site observations. Finally, I will include an in-depth description of the data analysis process that resulted in the rich vignette descriptions of the participants' experiences.

The purpose of this study was to explore how project-based learning classrooms heighten students' participatory culture through their student-centered structure, as well as how they heighten students' higher order literacy skills, as outlined by the Common Core State Standards (2010). In addition to exploring higher-order literacy skills within a PBL classroom, I explored students' participatory culture and cultural capital. The following research questions guided the observations and interviews.

Research Questions

The following research questions guided my exploration of literacy within a project-based learning classroom:

4. How are students applying higher-order literacy skills within their participatory projects?
5. How are student projects a projection of their identities?
6. How can students provide their own opportunities for social mobility through their participatory projects?

Research Design: Case Study

I chose to frame this study using Stake's (2010) case study approach. The case is defined as The Exchange, a single PBL class, and the 7 students who participated in the study. I chose a case study approach to provide a voice for the students in a PBL classroom in a public high school. In a research study titled "No need to wait for superman: A case study of one unique high school," Ratcliff, Jones, et al. challenged a methodological assumption on which their research was derived. This assumption stems from Schlecty's conception of a "classroom as a small group society where teachers lead students in the accomplishment of educational goals" (as cited in Ratcliff et al, 2012, p. 392). Therefore, a case study of a classroom is like a study of a small community in which members are given a voice and the environment is illuminated and deemed important. For this reason, I found a case study methodology to be best suited for researching The Exchange. In implementing such a method, I wanted to illuminate The Exchange PBL classroom's possibilities for capitalizing on students' participatory culture because a PBL collaborative style classroom mimics a small society where all members work together and contribute to a common goal.

Roulston (2010) informed the interview process, including the writing of the interview questions and the reflexive interview process's developments. Roulston's (2010) understanding of open questions were the base of the interview script, and frequent probes were asked during the interview process. Van Manen's (1990) thematic analysis was applied when analyzing interview transcriptions and observation fieldnotes. Saldaña's (2013) cycle coding was used during the thematic analysis process. However, analysis through writing was applied. Polkinghorne (2007) explained how narration can "serve to issue knowledge about neglected, but significant areas, of the human realm" (p. 472). These stories may consist of short vignettes or

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longer, more complex narratives; however, regardless of their length, research stories are always at least a bit autobiographical, as they are told from the point-of-view of the researcher. These stories are not necessarily continuous but rather episodic, linked together by an idea (Stake, 2010). A case-study makes use of subjectivity, narration, and episodes to illuminate a situation. With a qualitative case study approach, new questions rather than new answers often arise. Although qualitative methods are sometimes heavily criticized for being too subjective, it is this subjectivity that is essential for understanding human activity (Stake, 2010). These subjectivities, those of the researcher and those of the participants, create the narrative in research. It is for these reasons I chose to use a case study methodology and then to present my data in narrative vignettes.

Research Site

The description of the research site is separated into two parts. The first and smaller section is a brief description of the community and North Lake High School. The second part is a description of The Exchange. The description of The Exchange begins with a history of the program, including how it began and what teachers have been involved in the program over the years. The description then focuses on The Exchange during the time of the study.

The Community and North Lake High School

North Lake High School is in a middle to upper-middle class suburb northeast of a major metropolitan city. The suburb is community orientated, and there is strong community involvement in the surrounding schools. The schools in the cluster often collaborate in fundraisers and community wide initiatives. At one point, the community was named by a national magazine one of the best places to live in the U.S. It is a highly desirable area, and many

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of the community members state the schools as one of the main reasons people choose to live in this suburb.

North Lake High School is this suburb's high school. It was my resident school during the data collection period. The site was chosen because of its convenience and because of its established PBL program. North Lake High School is consistently one of the top performing high schools in the district, achieving high scores on county and state exams, as well as having a 98% graduation rate. There is a culture of excellence and success. Many students complete one or more AP classes before graduating. The student population at the time of the study was approximately 2,584 students. The school's racial demographics were 54% White, 21% Asian, 12% African American, 9% Hispanic, and 4 % Multi-Racial. These percentages reflected a consistent account of the racial dynamics of the school over the past 10 years with a shift in the decrease of Hispanic students (down 7%) and an increase in Asian students (up 6%). Approximately 13% of the population received free or reduced lunch. The high school demographics reflected that of an average suburban high school with a predominately white population in a middle to upper-middle class socioeconomic area.

I chose to include a brief description of the surrounding community and of North Lake High School because of the influence both environments have on the defined field of my study. In Chapter 1, I referenced Bourdieu's (1977) analogy of one's habitus being like Russian nesting dolls. I explained that a field works in the same manner. Although the defined field of my study is The Exchange and the participants of the study, the PBL class within North Lake High School, the community of the school, the district in which North Lake High School belongs, and even the national standards of the CCSS are all larger fields that encompass The Exchange. Both outside environments directly affected and related to my field longitudinally and latitudinally, as these

outside forces had influence over the curricular standards and scheduling of the program. The Exchange was created under North Lake High School's curriculum and scheduling. The high school was the controlling agent of the program. The community environment had a similar influence. With parent involvement being common in the community, parents and community members alike influenced the program. Through word-of-mouth and communication among parents, opinions could influence the program and its success. Below is a graph that illustrates the Russian nesting doll concept of the field.

Figure 1 The Fields of the Study
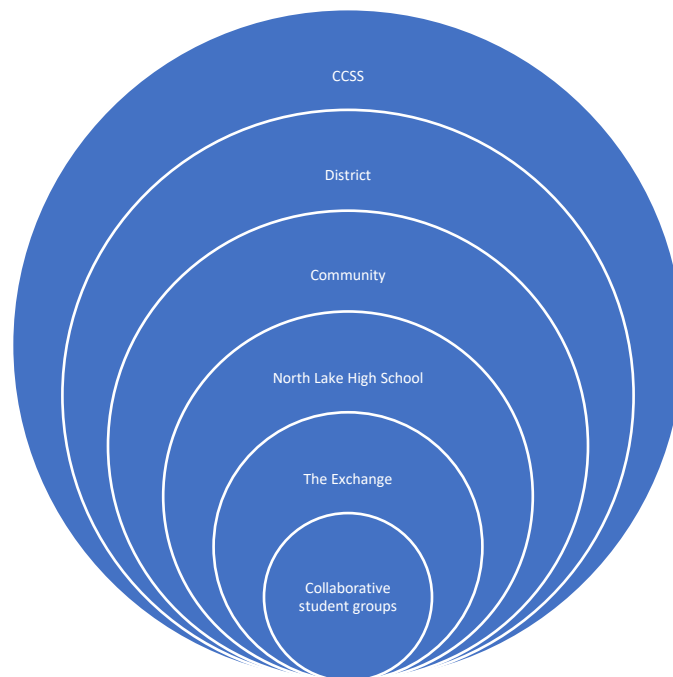
The Exchange

History and overview. Although North Lake High School was the high school in which this study took place, the true research site was The Exchange, the PBL classroom within the walls of North Lake High School. The Exchange program at North Lake High School started in

2010. At the same time, the feeder middle school started its PBL program. The intent for both the high school and middle school to start PBL programs was to create a non-traditional learning route for students in the cluster. The administrators and teachers of the two schools collaborated to create The Exchange.

During the four years of its existence, The Exchange passed through many hands. Three teachers—a Computer Science teacher, a Language Arts teacher, and an AP Human Geography teacher—were the brains of the program. They brought the idea for a PBL classroom to their then-principal. However, before The Exchange began, the computer science teacher was offered an opportunity to begin a PBL program at a nearby school, which he accepted. The Language Arts teacher and the Human Geography teacher, who was also certified in computer science, followed through with the idea and in 2011, The Exchange began. In its first year, the program was offered to the upcoming freshman class. Simultaneously, the middle school started its 6th grade cohort. The next year, The Exchange grew. In 2012, the 9th grade cohort moved on to 10th grade, and the upcoming freshman class was once again offered the PBL option; the two current teachers taught the 9th and 10th grade Exchange classes. In 2013, during its third year, the program continued to grow and was offered to 9th, 10th, and 11th grade students. An AP Language teacher joined The Exchange teachers and taught the Language Arts course to 11th grade students.

In 2014, The Exchange began its fourth year. This was the year in which I collected my data. It was the year the original middle school cohort entered their sophomore year. During its fourth year, The Exchange underwent changes. The original Language Arts teacher accepted a lead position at a PBL focused school; this was the same school where the original Computer Science teacher taught. The current history teacher, who served as the computer science teacher,

became the technology coordinator at North Lake High School; however, he continued as the Computer Science teacher for The Exchange. Simultaneously, another STEM focused PBL course began at North Lake High School. This course combined Science, Language Arts, and Art and was offered to upcoming 9th graders. A new AP World History teacher joined The Exchange, and the previous AP Language teacher remained with the program to teach the Language Arts course. Essentially, the computer science teacher remained, but his only teaching responsibility was to serve as technology mentor to the class. The existing Language Arts teacher remained, and a new history teacher joined The Exchange. There was only one 10th grade class offered that year. The students took honors Language Art, AP World History, and received a technology credit. This year would mark the last year of The Exchange. The STEM focused PBL, however, would remain.

Physical classrooms. When the program first started, the principal at the time knocked down an adjoining wall to create one large area between two different classrooms. The Language Arts teacher facilitated one side of the room, and the History teacher facilitated the room's other side. The computer lab across the hall was used for the technology portion of the class and is where the students congregated during project time. During the last year of The Exchange, the location of the class changed. It was moved down the hall to classrooms at an intersection between two hallways. The Language Arts teacher had her own room, and the History teacher had his own classroom. Across the hall, at the corner of the intersecting hallway, was the computer lab for technology access and project work. The prior PBL area no longer existed. A new wall was built and the large area was once again two separate classrooms. It was almost as if moving The Exchange and rebuilding the wall foreshadowed the end of the program.

The AP World History teacher's room changed desk arrangement often, depending on whether he was lecturing for the day. His room included traditional desks. However, he allowed students to move desks and sit as they wanted during lecture. Some students sat in traditional rows, others grouped desks, some camped on the floor or sat on the desk tops. Although his room at times could reflect a traditional classroom, his lectures were anything but traditional. His booming voice and his students' laughter was heard yards from his room. His lectures were theatrical, with large hand motions, voices, stories, tangents, and rich information that resonated with the students. The dry erase board was consistently covered with an array of drawings, phrases, and maps that were more a reflection of geographical artwork than lecture notes. Sometimes you could even hear Reggaetón music blaring from his room as he paid homage to his Miami roots.

Figure 2 AP World History Classroom

The Language Arts teacher's room was permanently arranged to reflect a collaborative work environment. She had tables instead of desks. Every inch of the walls was covered with pictures, artwork, and inspirational quotes. The Language Arts teacher completed her Ed.D. the year prior, and her dissertation was a quantitative study on PBL, so collaborative learning was something

that resonated with her. She created an environment that promoted creativity, housed students'

artwork, and included photographs from previous year students. The Language Arts teacher was

the one who went over project requirements with students. Much like the history teacher's room

during lectures, when it came to a day when she introduced a project, you could find students

grouped at tables, lying on the floor, sitting on tables, or even standing against the wall.

Figure 3 Honors Language Arts Classroom

The last room used by the program was the computer lab, a room used by other classes

during the day. Because of its use by many classes and for testing, the PBL teachers were not

able to adopt it as their own classroom; therefore, it looked like a traditional high school

computer lab.

Figure 4 Computer Lab

Cross-curricular class. PBL classes are structured as student-directed and teacher-facilitated learning environments. This style eliminates teacher-directed instruction or lecture-based instruction. The two original teachers implemented a more traditional PBL style with little direct instruction. The two current teachers incorporated a blended style. The blended style provided an option for lecture and direct instruction when needed. The Exchange included three courses taught in a 2-hour block. Therefore, students received 3 Carnegie units in two hours, 2 core classes, and 1 elective course. The courses included 10th grade Honors Language Arts, AP World History, and Computer Technology. North Lake High School operated on a seven-period day. The school has an open enrolment policy for honors and AP level courses, and The Exchange functioned on the same moto. Any student interested in PBL could sign up for course. The Exchange was first and second periods. The bells that indicated the end of first period and the beginning of second period did not function as usual for The Exchange students; the first two periods of their day were combined as a block class.

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The two class periods functioned differently depending on the day. If the AP World History teacher needed first period to lecture, then the students reported to his class for the first half of the block. If the Language Arts teacher needed time for direct instruction, then the Exchange students reported to her class for the first hour. The second hour was always reserved for project collaboration. Sometimes both hours were used for project collaboration and student-directed learning. During project collaboration, students roamed between the three classrooms.

As PBL classes are cross-curricular, the projects in The Exchange were cross-curricular. Students completed these projects in groups. These groups were sometimes assigned and other times students chose their groupmates. Students were required to combine content knowledge from the AP World History course, literacy skills from both the Language Arts and AP World History course, and technology to create a project. Their projects were sometimes actual products, such as board or video games. Oftentimes, the products were conceptual, such as scientific advancement ideas or business plans. The groups presented their projects for their classmates. The presentations were given a summative grade. Throughout the project timeline, students completed checkpoints. These checkpoints were primarily writing assignments, such as annotated bibliographies and research proposals. Figure 4 is an example of one of the project guidelines the students received. They received a project description for each project they completed during the school year.

The Exchange II Project Guidelines & Requirements

Project 1: Religious Beliefs

This project asks students to explore the impact of religious belief systems on society. You will be asked to focus on one of the following major religions—Christianity, Islam, Hinduism, Buddhism, or Judaism—but you may not choose your own religion. Please see more specific guidelines below.

AP World Guidelines:

1. Incorporate knowledge about the religious beliefs discussed in class in your product.
2. Create a research document that shows a comprehensive understanding of the religion you are exploring (use the AP World standards to help guide you).
3. Visit a religious institution to gain first-hand knowledge of the religion you are studying and document your experience through video.

Language Arts Guidelines:

1. Your project should follow MLA format and should include diverse sources to help you learn as much as possible about your religion. You will be required to have the following:
    a. Annotated bibliographies for each source you read
    b. A works cited page with all resources used
2. You must use correct grammatical conventions and an advanced vocabulary in all writing and speaking.
3. Throughout the duration of the project you will be asked to submit a group calendar as well as reports on your group's progress. These forms are available on eClass, and all due dates are on the class calendar.
4. You will also be required to do a final evaluation and assessment of your project which will be due the day after a project is due.

Product Guidelines:

1. Your product can be whatever you want it to be, but it must be something that appeals to an audience for a reason, and you must show that there is a need for what you have created.
2. The product you create should address the question "Where are we now?"
    a. How has the world/society been impacted by the religion?
    b. What is happening in the 21st century in regards to this religion's beliefs?
    c. Why does this matter?

Presentation Guidelines:

1. Present your project like you are selling your religion to a group of people trying to learn about others beliefs.
2. Presentation must be 10 minutes long and should include some sort of visual aid (powerpoint, guest speaker, video, etc.).

Resources:

10th LA Standards

AP World Standards-

Purdue Owl (MLA formatting)- https://owl.english.purdue.edu/owl/resource/747/01/

Figure 5. Example of a project guidelines and requirements handout

Project Presentations: Projects were presented after each project period. Project periods aligned with the unit of study and usually lasted weeks. Students presented their projects at the end of the unit or project period. The presentations were formal and held in the school collaborative learning center (CLC). Students were expected to dress professionally and present their ideas clearly and cohesively. The expectations for the projects were high, and students planned accordingly. Below is a picture of the CLC, where students presented their projects.

Figure 6 Collaborative Learning Center (CLC)

At the end of each semester, students presented their final semester project at a project Expo. These Expos were held after school hours and were open to the public. Parents, classmates, and teachers attended the project Expos to support The Exchange students and to see their project presentations. The project Expos were held in the school's theater. The Language

Arts teacher acted as MC, and the AP World History teacher and Computer Science teacher managed the lights and sound. Below is a picture of the theater where the semester-end project Expo was held. There was one project Expo per semester.

Figure 7 Theater where semester-end project Expo took place

Participants

The Exchange included a total of 40 students. The class roster was split into two separate class periods. The first period roster listed the students labelled as non-gifted and consisted of 22 students, and the second period roster listed the students labelled as gifted, the other 18 students. The demographic of The Exchange program was 60% White, 13 % Black, 10% Asian, 7% Hispanic, and 5% Multi-Racial. The gender split of the class was 50/50, with 20 female students and 20 male students.

At the beginning of fall semester, all 40 students received the recruitment script (see Appendix A) explaining my purpose for being in their class during fall semester. Along with listening to a recruitment pitch, a letter was sent home to the parents outlining the purpose of the

study (see Appendix B). The study was eventually extended through spring semester, and students and parents received a letter home stating the purpose of extending the study (see Appendix C). The appropriate minor consent forms were sent home (see Appendix D), and all but one student was permitted by their parents or guardians to participate. The students were then asked to volunteer for interviews if interested. I did not go into the study with preconceived requirements of the type of students I wanted to interview; I wanted my participant selection to be as random as it could be. I felt that a more randomized participant selection was better suited for my theory. If my participants varied in gender, race, gifted/non-gifted status, and years in the program, then my analysis of possible capital transference within The Exchange would be more organic and honest. The purpose of the study was to analyze students' cultural capital within the field of The Exchange, specifically by observing the participatory nature of the course and students' participatory projects.

A total of fourteen students volunteered and signed up for interviews, and seven students participated in interviews. Scheduling interviews proved to be a challenge as extra-curricular activities and transportation conflicts made scheduling before and after school interviews difficult. Eventually, the students, The Exchange teachers, and I decided it best to conduct the interviews during the PBL block. The Exchange teachers and I ensured the interviews would not disrupt valuable project time. Therefore, the interviews took place at students' convenience. Availability dictated the 7 eventual participants.

Of the seven participants I interviewed, five students had been in the program since 6th grade, one participant joined in 9th grade, and one participant joined in 10th grade (during the current school year). The seven students included five female students and two male students. Below is a table including the name of the participants (pseudonyms were chosen by the

participants), ethnicity, gender, gifted/non-gifted, and years in The Exchange. Any student in their 5th year in the program had been in since its origination. I included whether the participants were tested as gifted or non-gifted as student perceptions of academic opportunities within The Exchange were of interest to the study. These possible opportunities included students taking AP courses who may not have taken AP level courses had they not been in The Exchange PBL program. Opportunities The Exchange provided students was of primary interest when analyzing the possible transference of student capital within the field of The Exchange. The Exchange program included AP World History as the social studies portion of the cross-curricular course; therefore, any student who signed up for the program was expected to take AP World History. My interviews included questions on whether The Exchange provided opportunities to take more rigorous coursework, not only because The Exchange course included an AP level course, but also if the experience of taking an AP class in a PBL setting promoted a desire to take more AP level courses.

Table 1 List of 10th grade participating students

Student Participant	Ethnicity and Gender	Tested Gifted/Non-Gifted	Years in The Exchange
Ava	Asian, Female	Non-gifted	2nd year
Carol	White, Female	Non-gifted	5th year
Carson	White, Female	Gifted	5th year

Francesca	Multi-racial, female	Gifted	5th year
Michael	Black, Male	Gifted	5th year
Murdoc	White, Male	Gifted	5th year
Tiffany	Black, Female	Gifted	1st year

The following is a brief description of the seven participants. Included in the description is their ethnicity, why they joined the program, and their involvement in the school.

Ava. Ava identified as an Asian female of Indian decent. She had an older brother who was a 12th grader and one of the students in my 1st period AP Literature class. Her brother went through the PBL program from his freshman through his junior years. She joined The Exchange because her brother was in the program, and she thought it might be something different and interesting. She, like her brother, did not join The Exchange until her freshman year of high school. Her open flannel shirt, graphic tee, ripped skinny jeans, and vans high-tops mimicked her more alternative personality. Ava considered herself an average student, and before joining The Exchange, she did not foresee herself taking many AP courses in high school.

Carol. Carol identified as a White female. She joined The Exchange in middle school and was part of the original cohort. However, she made it clear in interviews that she was not a member of the "chosen" group. The PBL cohort at the middle school consisted of two different classes. One class consisted of students hand-picked by teachers and administrators to join. The second class consisted of students who were either late applicants, such as Carol, or students who volunteered to participate. According to Carol, most of the students in the second class were non-

gifted. She alluded to differences in how the classes were treated; one class was favored over the other. She did not, however, elaborate on how they were favored. I did not ask. Outside of class time, Carol was a member of North Lake's ROTC program, a member of the American Heritage Girls, and an active participant in her church.

Carson. Carson identified as a White female. She had been in the program since 6th grade. She admitted that she joined the program because her mother wanted her to join. Carson is the one participant who I was somewhat familiar with outside of school. Carson was a cheerleader, and I was the Assistant Director of the cheerleading program; however, I never coached Carson. Like Ava, she had an older brother who I taught as a sophomore. Her mother was prominent in the community and an advocate for PBL. Her mother once had her speak at a board meeting on behalf of the program. Outside of school, Carson was involved in extra-curricular activities. She participated in cheerleading and had been in the community's cheerleading program since a young age. She was actively involved in student council, DECA, and had plans to apply for an exclusive school-wide leadership program. She worked closely with North Lake's special needs students.

Francesca Sims. Francesca Sims identified as a multi-racial female and a member of the original cohort. She described herself as shy, especially in class. Her choice to join The Exchange was a want to try something different and because she wanted to push herself to be in a classroom setting where she could learn to be more vocal. Hands-on learning was not new for Francesca Sims, however. She had previous experience with hands-on learning from elementary school, and she explained how that experience helped her realize she preferred hands-on learning more than the traditional lecture style. Francesca Sims spoke about her interest in engineering and her desire to pursue a career in nanoengineering. Although Francesca Sims did not speak

much about her extra-curricular involvement, she did speak about her engineering interests, as well as her research of the field outside of class. She came upon the field of nanoengineering as a child, and she has researched it on her own since.

Michael. Michael identified as an African-American male whose parents emigrated from Africa. He, too, is part of the original cohort. He admitted to joining the program because he heard there would be a lot of fieldtrips. He chuckled at his own naiveté for choosing to join because of that reason. He described himself as not fitting the typical Black male stereotype and found it important not to fulfil those stereotypes when deciding how to pursue his high school career. He did not participate in sports, but rather was extremely involved in leadership organizations; he applies to almost all leadership opportunities presented to him. He has a "why not?" approach to joining organizations. Michael is poised and driven. At the time of the study, he demonstrated an interest in interviewing for school-wide and county-wide leadership organization. He attended Blacks At Microsoft, and he was a member of the youth leadership city council. Michael admitted that his time in The Exchange had an influence on his participation with so many organizations.

Murdoc. Murdoc identified as a White male. He too has been part of the program since middle school. Murdoc joined the cohort because his sister was one of the original members of the high school program. He said he was "good" at it (PBL). He works well with others and has a strong set of verbal presentation skills. He enjoyed working on large group projects and thought he was successful with group projects. Murdoc, like Michael, participated in many prestigious leadership organizations both at school and within the community. At the age of 6, Murdoc began karate and took a leadership class once a week as part of this program. He attributed those classes as an influence on his leadership skills, specifically with his success in group projects.

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Murdoc saw an improvement in his leadership skills during his time in the program. He explained that the program has been "profitable," that it had provided him with a skill set and experiences that would aid in future leadership opportunities.

Tiffany. Tiffany, a Black female, was a cheerleader for the school. Like Carson, I never coached Tiffany. The school year in which I collected my data was Tiffany's first year in The Exchange. At the time of her interview, she had only been in the program for a few months. She said she did not like the program at first. She joined because she wanted one of the teachers as her AP World teacher and knew joining the program would guarantee that. Her dislike for the program initially came from being the new girl. All the other students knew each other from previous years. She explained feeling like the lone man out. Her ideas were not received well at first, but when she finally proved herself, she became part of the group. She explained this experience as being difficult at first, but when she realized the dynamics of the class, she understood how she had to prove herself to others first—it was the same kind of experience all the other members went through in middle school.

Role of Researcher

As Robert Stake (1995) explained in his text, *The Art of Case Study Research*, "subjectivity is not seen as a failing needing to be eliminated but as an essential element of understanding" (p. 45). Qualitative research is subjective; therefore, being clear about one's subjectivity is not only essential for the context and validity of the research, but it is also essential for a thorough understanding of the research. Therefore, outlining my own role in my research is essential to understanding the purpose behind my chosen research topic, as well as my chosen theoretical lens.

I am close with my research site in every sense of the word. I am close in physical proximity, as I am collecting data at the school where I teach. However, I am friends with the two PBL teachers; I have acted as a chaperone, twice, on the yearly student summer trip to Europe with the AP World History teacher, and I coached alongside the Language Arts teacher for seven years. I was also the course team lead over the 10th Language Arts teacher for several years. I am not, however, close with any of the students. At the time of the study, I was teaching AP Literature to seniors, so I had to build a rapport with the students as they were sophomores. I was some-what familiar with three of the female participants: the two cheerleaders and the young woman whose brother I taught. Although I was not close with any of the students, they were aware of my position as a teacher who worked at the school; therefore, I was not a stranger to them. It was important that I kept an ethical and reflective stance while collecting data, as I did not want to take advantage of my accessibility or familiarity.

I assumed the role as observer, listener, and learner for three to five days a week during a 45 – 50-minute time frame. The time frame was during the second half of the two period-block reserved for the PBL class. The 2nd period of the block was used for project collaboration. However, it was used for testing, so my attendance varied depending on the class schedule for the week. I began attending the class as an observer in September of the school year. At first, I merely walked between the three classrooms, observing students from a distance. However, they quickly began to include me in their projects, describing what they were doing and asking for my opinion. I engaged in conversations with the students while keeping my role as observer. I ensured my presence was not disruptive to the students. They became familiar with my presence and often greeted me when I arrived or asked if I wanted to "see something cool." Outside personnel often observed the class, so the students were accustomed to having visitors.

My role as interviewer-learner began in October of that school year with my first two interviews. I then reassumed that role during the 2nd semester, in February. My role as interviewer was to listen. However, I was aware students might say what they thought I wanted to hear. To avoid this, I made sure to assume the role of learner as well, so they understood I was there to learn from them. Much like how the students were not threatened or bothered by my presence observing, the students were open and receptive during the interviews. They openly engaged in conversation and became excited talking about their projects. It was easy for me to assume the role as learner, as they were eager to share their experiences.

Although my presence did not seem to disrupt the students, I was aware of its influence. Even though I was not their teacher, I was still an adult in the room. As I rotated between the three classrooms, the PBL teachers did the same, so it became common for students to stop me and ask to use the restroom or to go to their locker. When those moments happened, I directed them to their teacher. With so much movement between the classes, there were times the students were alone. Like any high school student probably would, some off-task behavior would ensue during this independent time. The redirection of attention once I entered the room to observe was obvious, so it became evident that the students noticed my presence as an adult in the classroom. I made sure to enter and leave as stealthily as possible in order not to disrupt the organic interaction between students. I was aware of my positioning within the classroom as a white, middle-class, female educator. I embodied my role as a single young woman, coach, educator, researcher, observer, and learner throughout my data collection process.

Data Collection

Data sources included interview transcriptions from semi-structured in-depth interviews, field notes from classroom and project observations, and artifacts in the form of students' project production. I requested my planning period to coincide with the project period of The Exchange so I could observe the students during their project collaborations period and so I could attend their in-class project presentations.

Table 2 Data Sources

Month	Observation	Interviews
September	Classroom observations	Informal conversations
October	Classroom observations 3 to 4 days a week	Informal conversations Francesca Sims' interview
November		In-depth student interviews
December	Project Presentation Fall semester project expo	Informal conversations
January	Classroom observations 3 to 4 days a week	Informal conversations
February	Project Presentation observation Social Experiment	Carol's interview

March	Classroom observations 3 to 4 days a week	Ava's interview
		Carson's interview
	Capstone project expo	Michael's interview
		Murdoc's interview
		Tiffany Roxanne's interview

Interviews

The purpose of my research was to explore students within the PBL field; therefore, I conducted a single in-depth interview with seven different participants; the participants and I engaged in informal conversations occurring during class time. The first two participant interviews occurred after school in my classroom. These were the two interviews conducted in October of the fall semester. The remaining five interviews were conducted throughout spring semester, in February and March. By conducting interviews throughout the entire school year, I could record students' thoughts and ideas at different moments throughout the course of the class. These interview moments would eventually create the voices of my student vignettes, and these vignettes would eventually create the story of The Exchange.

My choice of in-depth qualitative student interviews allowed me to conceptualize myself as both active and reflexive during my interviews. My intent was to examine while interviewing, keeping a reflexive and rather than to be what Mason (2002) calls a "neutral data collector" (p. 66). Although staying neutral is an aspiration of most qualitative researchers, there is much that can be revealed when analyzing one's role within the research process.

The goal with this study was to understand students within the PBL class, specifically students' perceptions of their learning and experiences within the class; therefore, in-depth interviews was the most logical data collection method (Roulston, 2010). With my use of open questions, I could speak freely on the proposed topic without researcher interference; however, I utilized probing questions, building off of the interviewee's responses to allow for further description and for more narrative responses (Roulston, 2010). As I mentioned to my participants before starting our interviews, my goal was to learn from them, so I wanted them to talk freely and to allow their ideas to drive the research. I created my interview questions with my research questions in mind. But as my interviewees did not share my research background, referring to my theory in layman terms was important. I could not use words such as "cultural capital" or "habitus" and expect my teenage participants to understand what I was saying. Instead, I asked them to describe their experiences within the class and of working alongside classmates. I probed their responses, asking them to include both successful and challenging experiences. I told them that comparing PBL to their traditional classes when needed was acceptable. These broader questions provided more opportunities for my participants to elaborate on the participatory nature of the projects and their social interactions within the class. Their descriptions of their social interactions and their perceptions of these experiences allowed opportunities to explore Bourdieu's cultural capital. It allowed for opportunities to define and analyze the field of The Exchange. The table below outlines the research questions.

Table 3 Interview questions

Interview Questions:

THE CLASS IN GENERAL
Why did you decide to take The Exchange?
How long have you been in The Exchange?
What do you like most about The Exchange?
Do you enjoy the freedom of The Exchange?
Has this freedom changed over the years?
Do you like the changes to your freedom?
How is reading different in The Exchange?
What type of freedom is it that you have? You can compare this class to other traditional classes if that helps.

READING/ANALYSTICAL SKILLS IN THE CLASS:
Are you reading texts you consider texts you wouldn't normally read in The Exchange?
Are the texts more difficult or easier?
What about the analytical skills you use in the class. can you describe how you are using these skills?
Do you feel like you are preparing yourself more for college by being in The Exchange? in what way? reading? analyzing?

THE PROJECTS:
How did you decide on your group?
Who decided on the first project?
Did you like the project idea?
What say did you have in the project idea?
What was your role?

FUTURE - CAREER/COLLEGE
Did the project open any doors for the future? Skills wise? Something you're interested in as a possible future career?
How do you think The Exchange is preparing you for college? What about for a career?
Do you think this class has put you in a better position for the future? How? Explain?

I began attending the PBL class in September but did not conduct my first interview until mid-November. This delay allowed me to build rapport with the students. We casually conversed

as I would ask them questions about their progress and they would invite me into their discussions and project planning. I did not consider these casual conversations as part of the interviews but rather included these ideas in my field notes. Due to timing and testing, there was a large lapse of time between the first two interviews and the remaining five. The month of December in high school is dedicated to testing and final exams. I was unable to conduct interviews or observe the class during this time both due to the students' testing schedule as well as my own students' testing.

I resumed interviews in February of the following semester. This allowed the month of January to reestablish relationships with students, and, more importantly, to allow them to get settled back into their PBL setting. I wanted the students to have time to transition back from winter break before resuming with my interviews. This allowed me to re-establish my presence within the PBL classroom as well.

On average, the interviews lasted 40 - 45 minutes. Some lasted longer, but this was the average time. All interviews were recorded using my iPad's AudioMemos application. Of the seven interviews, I transcribed three of them; I contracted out the other 5 transcriptions to save time. The transcriptions and audio recordings were saved in multiple locations, including in the application, on Google Drive, on my PC, and on my laptop. All files were saved under the students' chosen pseudonyms. Once all research is finalized, the files will be destroyed. I implemented semi-structured, in-depth interview that were focused around open questions. Frequent probing questions were used to generate additional questions based off student responses. Although an interview script was followed, I allowed student responses to guide my conversations. However, I was sure to cover all the topics aligned with my research questions. How we got to those ideas, though, was based off student responses.

Observations Fieldnotes

I conducted observations for three different areas of The Exchange. Classroom observations were conducted three to four times a week during the months of September, October, November, January, February, and March. I observed two project presentations. The classroom observations provided an opportunity to observe and analyze the participatory nature of the course, as well as the social interactions between students. It was through these observations that I could begin to understand the field of The Exchange. It provided opportunities to observe the students within a defined learning environment. It was within this defined learning area that I could begin to analyze cultural capital through social interactions and collaboration.

The first project presentation was in October and the second project presentation was in February. The 2nd semester project included a social experiment. One group invited me to attend the social experiment they were holding after school. The experiment invited all students from North Lake to attend if interested in participating. I accepted the invitation and observed the afterschool social experiment. This was held in February. A final project expo was held as a capstone for both the year and the program since The Exchange was dissolved after that school year. I attended the project expo, which was held after school hours in March. The project expo was open to the public. Parents and friends of the students attended the program. The project presentations were an opportunity to observe the participatory projects. These projects not only demonstrated the students' learned knowledge in relation to Common Core literacy standards, but it provided an opportunity to observe student choice and motive in creating the project. Analysis of student choice and motive was a way to study student identity within the projects:

essentially, student cultural capital and habitus. The table below organizes the observation event, date, and duration of the observation.

Event	Date	Duration
Classroom Observations	September - March	45 - 50 minutes 3 – 4 times a week
Fall project presentation	October	90 – 100 minutes
Spring project presentation	February	90 – 100 minutes
Social experiment project	February	60 minutes
Capstone project expo	March	120 minutes

Table 4 Observations

The study's artifacts included the student projects. I included artifacts along with observations since I observed the student projects. These projects are not hardcopy; therefore, I did not include them as documents. Although students were required to turn in project calendars and research document with each project, the capstone grade for the projects were their project presentations. The presentations were held during the class hours in the media center. Students dressed professionally and presented their projects with the use of a visual aid. These visual aids were in the form of a PowerPoint presentation. At times videos were included, depending on whether they were appropriate for the product created for that project. Some of the projects were even multi-media creations, such as an online computer game. Field notes were used for classroom observations, as well as project presentations. The project presentations and the

project expo were video recorded. I then watched and analyzed recordings. Like the audio recordings of the interviews, all video recordings were saved in multiple locations: uploaded to Google Drive, saved in a file on my PC, and copied to a zip drive. Video files were named to ensure security and anonymity.

Organization of Data

The collected data consisted of fieldnotes, observation videos, interview recordings, and interview transcriptions. The large amount of data required adequate organization. I began by making folders on my computer labelled by data type. These folders housed my transcriptions, fieldnotes, and videos. I backed up my folder in numerous locations to ensure no information would get lost or compromised. These other locations included a zip drive, my laptop, my PC, and Google Drive. Audio recordings were stored in AudioMemos application on my iPad, and backed up on Dropbox. Both applications were password protected, as were all computers. Written notes were stored in a carry file folder. These written documents included field notes and transcription annotations.

Data were saved between three folders. One folder was labelled "Videos" and contained all videos of project presentation videos. These folders were named for the video type they stored. The videos were not a data source and were only stored for reference if needed. It ended up that I did not need to consult the videos during my data analysis. The second folder stored interview transcriptions and was labelled "Transcriptions." This folder contained sub-folders labelled by the pseudonym of each participant. The participant folders stored interview transcriptions, on-line coding and memo-writing, as well as the list of themes and quotes for each

participant. The third folder was labelled "PBL Documents." This folder saved demographic information and project guidelines.

Data Analysis

Stake (1995) described the timing of data analysis as having no clear starting moment when analysis begins; it begins at the first impressions. My data analysis began before I ever stepped foot in the PBL classroom, with my assumptions and presumptions of the class. I was familiar with The Exchange: I knew the teachers, had been in the classroom numerous times, and was familiar with the type of work they did. As such, I began to analyze the course before ever observing a class or speaking with a student. This analytical mindset was the drive in my dissertation. As Stake's (1995) mentioned analysis is a type of dissection where we take parts and evaluate them separately. We relate those parts to one another, and then relate these parts to other parts. This dissection is something that comes to us "automatically, without conscious protocol" (p. 72). Therefore, this innate personality trait only surfaced more when I began collecting my data.

My first impressions from both my time in the PBL classroom, as well as my time conducting student interviews, created some of the parts of my data. Stake (1995) explained that there is no true beginning or end to the analytical process, only parts that would be analyzed, positioned, and posited. As the students spoke, their responses raised new ideas, which led to unscripted probing and additional research questions. I used this same process during my observations, as field notes reflected my analysis of student interactions and project presentations. The questions that arose during observations created deeper observation notations or even created future interview topics. This type of thematic analysis approach, what I refer to

as "speaking with my data," continued while I analyzed and re-analyzed transcriptions and observations.

I began analyzing data by individual student. This first step of analysis included annotating the transcriptions with codes. I created a methodology chart to organize my data collections methods during my prospectus. I kept this chart as a guide during the first stages of analysis (see Appendix E). Once I analyzed each transcription, I began listing quotes from the students on a separate document. I named the document "BIG INTERVIEW IDEAS." In the document, each student was listed and under his or her name, I collected quotes, list of thematic ideas, and any ideas the students brought up on their own. My overall data analysis process was holistic, with constant revisiting of my data on a weekly and, eventually, daily basis. With each new read, I annotated the data further, ensuring my codes and memos became increasingly analytic (Saldaña, 2013).

Data source triangulation was used to ensure validity (Stake, 1995). As my analysis spoke and evolved, I cross-referenced these ideas between my data sources: interview transcriptions, classroom field notes, and project observations. I describe my analytical approach as layering. Not only do I layer the approaches, but I borrow from both case study approaches and phenomenological approaches. My codes, memos, and annotations contained layers of interpretation. Similarly, my analytical assumptions served as an initial layer of my analysis, which was then layered over by my analysis during observations and interviews, and was then layered, again, when I read over my transcriptions and field notes. Data source triangulation ensured these layers were evident among all data sources

As I collected data and conducted interviews and observations, I kept in mind Van Manen's (1990) ideas on thematic analysis, along with Roulston's (2010) explanation of reflexive interviewing. However, it was Johnny Saldaña's (2013) coding manual that most heavily influenced my data analysis process. As I conversed with my interview transcriptions, I applied codes and memo-writing; these codes and memos were organized into themes, and as new questions or ideas arose throughout the process, I continuously applied the process of coding, memo-writing, and theme identification. My conversations with the data led to my choice for presenting my data, which was to bring the students' words to life through vignettes (Stake, 2010). These vignettes became the patches of the story within my single case study.

Reflexive and Thematic Approach

I borrow my analytical approach heavily from Roulston's (2010) explanation of analyzing interview data, as well as Van Manen's (1990) ideas on thematic analysis in phenomenological studies. Roulston's (2010) approaches provided me with more of a "how to" guide for reducing data through coding and thematic groupings; however, it is Van Manen's (1990) clarification of themes as more than just groupings that most influences my analysis because, as Van Manen (1990) explained, human science research is most concerned with finding meaning and attempting to describe lived experiences. This understanding of data is useful for my objective, to describe my participants' experiences within The Exchange. However, it is important for me to point out that this study is not defined as a phenomenological study; I simply implement the same thematic analysis process to my study as Van Manen recommends for phenomenological studies. With Roulston's (2010) and Van Manen's (1990) ideas in mind, I applied Saldaña's (2013) coding process to interpret my findings and analyze my data.

Step 1. Descriptive and in vivo coding. The first phase of my analysis was to code my

data. I used a series of first cycle and second cycle coding. Implementing the different cycles of

codes aligns with the different conversations I had with my data. In these conversations with the

data, I tried to listen to the data rather than to code for themes. As Saldaña (2013) described, a

theme is an outcome from coding; one does not necessarily code for themes.

During the first cycle of coding, I employed both in vivo and descriptive coding (Saldaña,

2013). The descriptive coding was used more often and during the pre-coding as it created my

initial key ideas that aligned with my research questions. During these first conversations with

my data, I used distinct code jotting, such as capitalized wording (Saldaña, 2013). As soon as I

transcribed an interview, I went through the Word document and inserted comments on the right-

hand margin. I highlighted portions of the transcription and labeled the highlights with key

words derived from my research questions. I typed the words in all caps to use a distinct jotting

method. These words included: "CCSS" and "CULTURAL CAPITAL." These labels were the

results of coding for patterns within and between my data sets (Saldaña, 2013). Once I pre-coded

the data for patterns, I refined these areas by breaking down the categories even more. The pre-

coded term "CCSS" broke down into more definitive codes, such as "research," "difficult texts,"

and "great research example." Likewise, the "CULTURAL CAPITAL" pre-code became more

definitive; however, because the concept of cultural capital is so large, I began writing

descriptions rather than resorting to labels and words. I followed these steps with all my

interview transcriptions and field notes. The more I visited my data, the more focused the

conversations with my data became. Eventually, the data were speaking more to me than I was

asking it questions. The in vivo coding was used to collect quotes I thought to be important. As

Saldaña (2013) explained, in vivo coding works well when interviewing a marginalized

population. Since my study analyzes students' cultural capital, I looked for words that aligned with my theory. In vivo coding aided in finding the quotes and excerpts I would reference in my student vignettes.

Although my research was not intended to construct grounded theory, build on previous researcher's work, or explore longitudinal change, I still found it useful to implement a Second Cycle coding (Saldaña, 2013). Perceiving my analysis experience as conversing with my data, I saw second cycle coding as the opportunity where my data could raise questions and engage in deeper conversation. My primary goal during second cycle coding was to develop a sense of thematic organization from my First Cycle coding. Therefore, I resorted to Focused Coding to categorize my data based on thematic similarities (Saldaña, 2013). I realized my codes were too aligned with my research questions. Although keeping the research questions in mind ensured I was staying organized with my thoughts, I realized it was keeping my data analysis one dimensional. Although my questions were a guide during my data analysis, I did not want my data to only answer my research questions. I wanted my data to explore the ideas of my research questions through the eyes of my participants.

Step 2. Creating "BIG IDEAS" through memo-writing. Once the interview transcriptions were coded, I began memo-writing. Memo writing allowed me to reflect on my coding process (Saldaña, 2013). I began by pre-writing memos directly into my interview transcriptions and observation notes. Additionally, I kept open an additional word document. This document, saved under the name "BIG INTERVIEW IDEAS" (as mentioned earlier), compiled quotes from the participants' interviews; these were the quotes highlighted when using in vivo coding. The big ideas were not necessarily new ideas; they reflected the initial coding labels; however, within this document I elaborated on the memos I wrote within the interview

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transcriptions and observation field notes. These memos included any new student perceptions brought up from the participants. It was during this time I realized the students were perceiving literacy and cultural capital differently than my preconceived ideas of how literacy and cultural capital functioned in The Exchange; therefore, I included how the students were referring to or speaking about these ideas and not just what the students were saying.

Step 3. Reflection and refraction. Saldaña (2013) explained that a process of memo-writing requires reflection and refraction. Considering both reflection and refraction allows us as researchers to posit ourselves. It makes us aware that our ideas are not a mirrored reflection of our participants' ideas. During reflection and refraction of my memos, I began to code and organize my memos. I did this primarily by free-writing summaries of my memos for each participant. My first step was to take the "BIG INTERVIEW IDEAS" document and create individual word documents for each participant. In this document, I organized students' quotes under each of the "BIG INTERVIEW IDEAS." These ideas derived from my research questions and were divided by their correlation to the Common Core State Standards and Bourdieuian theory:

1. How are students applying higher-order literacy skills within their participatory projects?
2. How are student projects a projection of their identities?
3. How can students provide their own opportunities for social mobility through their participatory projects?

Referencing students' ideas and quotes, I compiled a summary of each student's responses. The main ideas of the summary were separated and organized in a chart. The tables below are

examples of a participant's summary, as well as the chart organizing the main ideas in terms of

Bourdieuian theory and Common Core State Standards.

Table 5 Example of participant's summary

CARSON:

Carson takes initiative to supplement learning from other teacher's resources—one of the reason she decided to partner up with Alex on the peer tutoring project. These kids seem much more communal than students in the past—is this a change in their personalities and learning??? Students should have open access—THEY SEE OPEN ACCESS AS OBVIOUS!!! Leaving a legacy is important to Carson.

Carson—refers to the class as a gift. Allows her to explore her love for civic leadership. She sees the class as an opportunity to get into the community and make a difference—leaving a legacy is very important to her (Bourdieu). She mentions how the time they spend communicating is detrimental to the success of their project, that the brainstorming is how they get most ideas developed (connects to CCSS). She brings up how the other classes don't allow them to talk—a lot of the students mention how the open communication and collaboration is what they like most about the PBL classroom and what they dislike the most about their traditional classes (Jenkins). Carson sees the value in collaboration and students learning from one another (Bourdieu). There shouldn't be a need for kids to struggle just because they don't understand their teacher. Carson refers to research and literacy education (CCSS) a good bit. She talks about making connections and learning how to relate ideas (CCSS) because of the free reign their given - the sort of sink or swim aspect of PBL is her mind can be seen as beneficial. She also mentions learning to evaluate sources. Research is a bit watered down in traditional classes when compared to the research process in PBL—it is much more independent; students are a bit "thrown into it" but Carson sees the value in learning that way—actually says, I mean it's hard because they just let us go, but that's how you learn, I think. Talks about how The Exchange has not provided her the opportunity to go into the community but it has given her the skills to know what to do once she gets there (CCSS)—couldn't this be seen as almost the same thing?? You need the confidence and skills to present yourself. Maybe access isn't the key but knowing what to do when you get that access?? "People say we're not learning, but it's harder than a lot of my other classes I think, just because we take three classes in two periods. So we still have regular AP World we still have regular Language Arts, like the content, and then we have to apply that and make it something bigger, so it's like so much more." (CCSS). Students are researching such higher-level ideas—psychological aspects of learning, etc.

Table 6 Examples of organization of codes

Theory	CCSS
• **open access** • **collaboration** • **learning from one another** • **being like a family**	• **communicating** • **being able to talk out ideas** • **planning stages** • **amount of research** • **thoroughness of research** • **being thrown into it** • **applicable topics** • **cross-curricular**

This step not only allowed me to begin writing my participants' prose, but more importantly, it is the step that helped me to create the main theme of each vignette. Through free-writing, I connected with the students' stories. Compiling the quotes and organizing their ideas by Bourdieuian theory and CCSS ensured my reflections aligned with my research questions. I was then able to read through my reflections and each student's quotes to find the main theme of their interview, essentially, their point of view of The Exchange. The process of refraction allowed for deeper reflection, particularly with any blurry moments where the data did not align perfectly with my research questions or moments where my codes did not seem to quite fit with what the students were saying. Analysis through refraction provided opportunities for deeper understanding of the social world of The Exchange. It allowed a time to vent any frustrations of the longitudinal and latitudinal relationships of the fields around and within The Exchange. It was during the refraction process that I began to see how the students were defining The Exchange as its own social field.

Step 4. Analyzing through writing. The next step of my analytical process led to how I decided to present my data. It was important to me to write with the words of my participants. I decided to write up my data in a vignette style. However, my definition of vignette style is taken from the literary field, where it is understood as a series of short stories that provides differing points of view on the same story. Vignette style of writing can be found in novels, such as Amy Tan's *The Joy Luck Club* or Tim O'Brien's *The Things They Carried.* This is different from Stake's (1995) definition of vignettes, which are "briefly described episodes to illustrate an aspect of the case, perhaps one of the issues" (p. 128). My vignettes are stories from the point of view of the participants. It was during my vignette-writing that I looked for what Saldaña (2013) called "buried treasure." Creating these stories allowed me to delve deeper into my participants' words. It required me to revisit and re-read transcriptions, codes, memos, and notes. This process was the lengthiest portion of my analysis. For months, I wrote, revisited, revised, and rewrote. The words of my participants contained many layers, and writing narratives with their words allowed the participants' own expressions to reveal these layers. Although I wrote the vignettes, the participants' words provided the content and context of the vignettes. Their opinions created the layers of the vignettes; my words solely explained and organized their responses.

Credibility, Generalizations, and Limitations of My Study

Mason (2002) explained how validity can be assured primarily by explaining how chosen methods are valid to the research. My methodology chart (see Appendix E) ensured my chosen data sources aligned with my research questions and methodology. The next area to ensure validity is in the data interpretation (Mason, 2002). I ensured my interpretation was valid by revisiting my data multiple time. I first began by cross-referencing my audio recordings with my interview transcriptions, correcting any transcription errors. I watched project presentations

numerous times. This step helped to ensure all transcriptions and fieldnotes were valid representations.

Another way to ensure validity is through triangulation (Stake, 2010). By using multiple data sources, such as interviews, observations, and artifacts, I could cross-reference multiple data sources using my research questions and "BIG INTEVIEW IDEAS." By cross-referencing across multiple data sources, I could ensure consistencies between my interpretations and the words of my participants. This cross-referencing was done between interviews and transcriptions, my field notes, and video recordings of projects.

Finally, stating and considering my own stance in the research was necessary to ensure credibility. I considered my experiences and relationship to the research throughout my data collection and analysis. My role as a teacher at the school where I collected data, my stance as a researcher, and my core beliefs about learning and teaching all influence how I am situated in this research. My knowledge and study of Bourdieuian theory influenced how I perceived my participants, especially in relation to my research site. Stating these positions in the introductory section of this chapter, titled, "Introduction to my Experience with PBL," detailed my relationship to the study as I found it pertinent information to my readers to know my previous experience with the classroom model, specifically with its implementation at North Lake High School.

Summary

Chapter 3 provided an explanation of the methodology and analysis process for this study. The chapter begins with an introduction to my association with project-based learning and an introduction to my research interest with the non-traditional classroom structure. Included in

the chapter was a brief description of the community and school, followed by a more detailed description of The Exchange, the PBL class in which the study took place. A brief description and explanation of the participants and their association with The Exchange followed. Both The Exchange and the 7 participants are the defined case of this study−a single case study formatted using Stake's (1995) case study research, thematically analyzed using Saldaña's coding and memo-writing process. The final step of the analysis process included analysis through writing. It was this final data analysis step that led to the student vignettes that present the findings of the study. Chapter 4 includes the participants' vignettes and a detailed analysis of findings.

CHAPTER FOUR

THE EXCHANGE AND ITS PARTICIPANTS

This chapter documents the findings of my research, which were based upon three research questions. This qualitative case study approach, framed through a Bourdieuian theoretical perspective, allowed me to describe the perceptions of seven high school students in a PBL class. By exploring these students' perceptions, I gained insight into how literacy functioned within a PBL class. I evaluated how students' participatory culture shaped their literacy consumption and production. Through use of one-on-one student interviews, I engaged with students to understand more fully their responses in alignment with my research questions. I observed classroom interactions and project presentations to gain insight into the participatory nature of the course.

I chose to present my findings as a narration of The Exchange. Prefacing the narration is a visual that organizes the thematic ideas found while writing student vignettes. This visual presents the thematic findings of the chapter, which will be explained in detail in Chapter 5. These thematic ideas were reconstructed from themes that I identified in these student vignettes. The themes include: The Exchange as a field, The Exchange as its own social capital, Higher-order literacy within The Exchange, and transference of capitals within The Exchange.

Following the preface is a narrative of a day in The Exchange, which is followed by 7 vignettes, one for each participant. I borrow the term vignette from literature. Authors oftentimes write chapters from differing character perspectives to provide varying points-of-view. The findings in this chapter are presented in a similar manner, which allowed me to use the

participants' words as the core of my findings. This kept the integrity of each participants' point-of-view. The vignettes included students' perceptions in relation to Common Core literacy standards, specifically focusing on research skills in the classroom. Included are students' perceptions of the participatory nature of the classroom in relation to their group projects. Each vignette opens with a quote from the participant. The chosen quote exemplifies the theme of their perceptions, and each vignette is a snapshot of the participant's experience within the PBL cohort, The Exchange.

Preface

Below is a visual of the thematic findings. These findings reflect the themes that were found while analyzing students' in-depth interviews. The themes are reflected within the student vignettes and are supported by student responses. These themes are addressed in detail in Chapter 5.
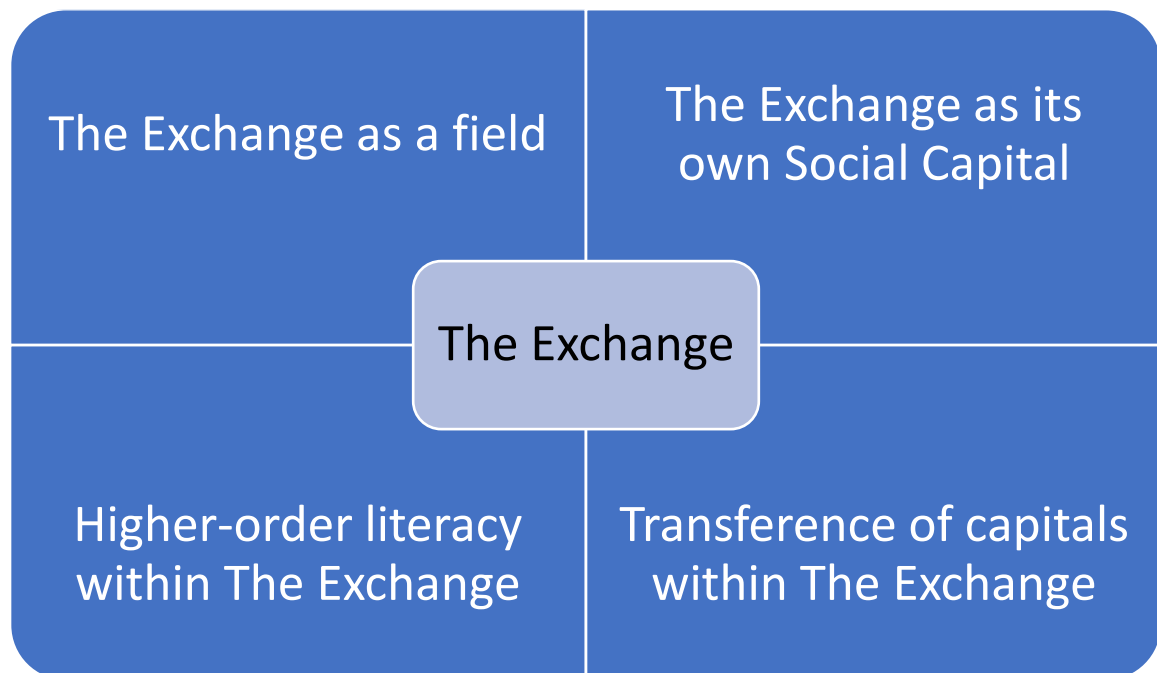
The Exchange as a field	The Exchange as its own Social Capital
The Exchange	
Higher-order literacy within The Exchange	Transference of capitals within The Exchange

Figure 8 Relationship of Themes within the Field of the Exchange and its Participants

A Day in The Exchange

As I answer any last-minute questions from the students in my first period AP Literature course, I quickly glance up at the clock to hear the chime of the bell. It is the end of first period, and like most days, I am shouting last minute instructions to my students as they hurriedly head to their next class. I am right behind them, with keys, phone, and notebook in hand as I too rush down the hall from my classroom at one end of the school to The Exchange, which is located on the other side of the school.

This is the same path I take three to five days a week during my planning period. Down the senior English hallway, past the front desk, outside the building, through the courtyard, to the two-story sophomore building. It is in this building where I spent 7 years as a teacher, and it was in this building where The Exchange, the project-based learning class, resides. Once occupying an entire end hallway, two classrooms in size, The Exchange is now held at a hallway intersection and consists of two separate neighboring classrooms and a computer lab across the hall.

Second period begins the second half of the PBL block. For the 40 students in The Exchange, their first two hours at North Lake High School is their time in The Exchange, a class different from the remaining class periods in their day. This class is one where they can ignore the bell that indicates the end of first period; it is a class where they have the freedom to move between three classrooms, a class where they create their project groups that oftentimes become

their social groups, and, a class where their creativity and opinions drive their projects. In The Exchange, collaboration and student creation drives instruction.

I turn the hallway and head down to The Exchange; I first stop and walk into the computer lab. Most days, students are hard at work on their projects during the second part of the block. At the front dry erase board, Murdoc's project group is together. The students have their chairs in a haphazard circle; one student is lying across the unoccupied teacher desk, and Murdoc is listing comments and ideas on the dry erase board. They are having a mid-project meeting. The students called the meeting themselves.

I circle around the lab, quickly glancing at the computer screens. Most of the groups are working at computers, each group member focusing on his or her delegated responsibilities. I make my way into Dr. Grander's classroom to see if there are any groups there. As I walk into her room, she glances up from her desk and quickly says, "You need to go next door! That one group of girls that keeps having issues getting along is hashing out their differences. Mr. Vincenzo is in there with them."

I walk next door into Mr. Vincenzo's room. He glances up from his desk and shoots me a look indicating the tense situation in the room. The girls glance up as I enter. I ask them if I can sit in on their meeting; they tell me it is ok.

I watch the girls speak with one another with relative poise. However, as emotions rise, so do their voices. At one point, one of the girls removes herself and walks across the room, making it clear she needed to step away for a moment.

This group of six girls has struggled to delegate, collaborate, communicate, and plan—all necessary soft-skills for making a strong collaborative project group. Francesca Sims and Tiffany

Roxanne are both members of this group. This is Tiffany Roxanne's first project experience in The Exchange, and there is a definite look of frustration on her face. Francesca Sims, a veteran of The Exchange, looks defeated.

As tensions steadily rise with each passing minute, the situation is brought to a halt as Dr. Grander walks into the room and approaches the girls with Mr. Vincenzo. Dr. Grander addresses the girls: "Have we come up with a plan of how to handle the issues we're having?" The response from the group is nothing more than blank stares. It is obvious they are at a loss, and it is even more obvious to Dr. Grander that she will need to mediate the rest of the meeting to ensure the girls can come up with a plan to finish their project by their deadlines. I take this as a cue to return to the computer lab

The environment in the computer lab is much different. At this point, Murdoc's group meeting has ended and each member is seated at their own computer. The group is spread out between two rows. A hodgepodge of words and doodles remains on the white board, a visual display of their collaboration. The group members communicate with one another from behind their screens; some of the conversations relate to the project, while other conversations are side social conversations. This pairing of work and socializing is a great example of multi-tasking, as most of The Exchange students would, with a chuckle, explain to me.

I continue to make my rounds around the computer lab, eavesdropping on student conversations only to be interrupted by the bell indicating the end of 2nd period, and the end of The Exchange block. Another day in The Exchange has come to a close. I pick up my belongings and head back to my side of North Lake High School to teach my third period class. The

Exchange students gather their belongings and continue the rest of their school day, which consists of traditional classes.

Francesca Sims

"I decided to take The Exchange to get out of the classic, traditional classes that are normally offered in high school."

During interviews, many participants chose to focus on relationships built in the class as well as their project experiences; however, Francesca Sims' focused more on the PBL structure itself, specifically, why she preferred a project-based setting over a traditional classroom. Her reasons for preferring her time in The Exchange over her time in her traditional classes included the hands-on learning and collaborative nature of the class. Francesca Sims felt these experiences prepared her for college as well as her chosen career path.

She felt that The Exchange developed an unfair and unnecessarily bad reputation. Because past students took advantage of the freedom that came along with the PBL course, some teachers and students not associated with The Exchange formed negative perceptions of the class. These negative perceptions became synonymous with The Exchange: "they're not really learning anything in there," "the class is an easy A," and "the teachers don't teach." Throughout the interview, Francesca Sims felt the need to dispel skepticism about The Exchange.

Francesca Sims was my first interview; therefore, her choice to focus on the class structure itself rather than her experience in the class did not become apparent until I started to analyze her interview transcription alongside the other participants' transcriptions. As the other interviews continued throughout the year, and I continued to analyze my participants' responses, it became clear that Francesca Sims thought highly of the PBL structure—though, of course,

other participants had a lot of positive opinions of the class as well. However, with Francesca Sims, I noticed throughout the interview that PBL was where she felt most comfortable as a learner. It is for this reason I chose to begin my vignettes with her story.

As with all the other interviews, I began our discussion by asking her why she decided to join The Exchange. After stating how she wanted something different than what is found in traditional classrooms, she continued to describe why she was in search of an alternative classroom structure:

> Well, I like project based learning a lot better because it is more hands-on learning, which is more like the field I want to go into, which is engineering. And that's a lot of hands on kind of thing. While in a traditional setting, I'm listening to more lecture; it's boring, I might fall asleep in class. I like to get up and move around.

Francesca Sims revealed later in the interview that she attended two different elementary schools where hands-on learning was part of the school environment. Although the schools were not labeled PBL, they used alternative classroom methods to deliver instruction. Therefore, Francesca Sims entered the middle school cohort with some experience with hands-on instruction, unlike the other participants whose first experience with hands-on learning was there. This could be why she chose to speak so highly of The Exchange rather than to focus on her own experiences; her experiences with hands-on learning in The Exchange were not completely new to her. Through her responses, however, it became clear that Francesca Sims had learned a lot about herself as a learner and the type of learning she naturally enjoyed. In her response, she expressed a desire to pursue engineering. I was curious if the PBL structure had anything to do

with this goal. Francesca explained that it was not PBL that introduced her to her chosen career path, but rather childhood curiosity:

> I want to go into nanoengineering. It's pretty much building at a microscopic level, so you can build … I'm actually doing some research into this … it is when you take small atom size things. I can go into the biomedical field and that's where it goes into different nanobytes that can go into the blood stream and stuff like that.

I was curious of Francesca Sims' specific choice of nanoengineering, because it is such a specific area of study. She explained how she first came upon the idea:

> What made me want to do that was … this might sound kind of weird … but I was watching TV and I saw a mechanical limb and there was this other movie on how there was this nanobyte that was put into someone's blood stream, and it caused them to change dramatically, and so that piqued my interest, so I looked into it, and I was like, this is so cool!

Francesca Sims came across these two TV programs the summer before she went into 5th grade. This was a year before she entered the PBL middle school cohort. PBL did not inspire her chosen future career path; however, it seemed that her chosen future career path inspired her to join the middle school PBL cohort. Francesca Sims childhood experience finding her passion for engineering was like the data of Rowsell and Pahl's (2007). They show how habitus can be influenced by participants producing text in their home. In the same way, Francesca Sims became interested in nanoengineering while consuming text in her own home. The open structure of PBL provided a field to explore this area, not in content, but rather in the type of hands-on learning she knew she would encounter while pursuing engineering. When asked if she thought

the PBL structure would provide her with experiences she needed for her chosen career path, she replied:

> Yea, because in a traditional classroom, it is you and the teacher and they're giving you information and you do paperwork. That's all it is. And in The Exchange, it is more collaborating with other students and running into different problems and issues that you would rather run into now than you would want to run into later.

Francesca Sims went on to explain how she believed the PBL structure presented her with different learning opportunities than those she received in a traditional classroom setting. When comparing the two classroom structures, she elaborated on how she believed PBL prepared her for college differently than traditional classrooms. Specifically, she mentioned the challenges of an open classroom structure. One of these challenges is in how information was administered. Francesca Sims explained that her traditional classes prepared her for lecture-style courses, while The Exchange prepared her for the self-taught aspect of college.

> In a regular classroom, the teachers give us ideas in order for us to pass the test or in order for us to pass … graduate high school. And, that involves us getting good grades. And, if we take AP, passing AP exams, so we can save ourselves money from college. Whereas in The Exchange, it's more about preparing for the hardships in college, not taking one less class.

The self-taught aspect of PBL that Francesca Sims believed prepared her for college is an aspect of the class that received most criticism from students and teachers not involved with The Exchange. I wanted to hear her opinion as to why she thought so many people equated student directed learning with off-task behavior and loose grading. Francesca Sims specifically

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referenced how students in The Exchange had a reputation of receiving large curves on assessments. Unfortunately, the difficulty of implementing PBL for the first time in a public-school setting, for both the teachers and the students, led to a negative reputation:

> …it was the group two years before us, they kind of gave us a bad reputation the way they handled the freedom. They were really wild about it, going off thinking they could do their own thing, and it gave us all a bad rep, so it followed those in The Exchange, those in the continued years, and people would also think that The Exchange gets all these extra things like that, and I guess people see us as favorites at the school or we get curves because of the projects we do, like learning curves.

I followed up her response, asking if she felt any less prepared for major assessments since PBL had less direct instruction. From my own conversations with teachers, many were skeptical of PBL; they felt that the open structure led to lower classroom expectations. However, what PBL offers is a structure that teaches students to learn (Newell, 2005). Much like the forerunners of PBL at the Minnesota New Country School envisioned, PBL is designed for knowledge acquisition rather than delivering a curriculum. Francesca Sims understood this idea of learning:

> The preparedness isn't solely based on me, but also the teacher. The teacher gives me the information and depending on what I do with that, shows how prepared I am, so it's my own fault if I feel like I'm not prepared.

Francesca Sims gave a realistic description of the mutual responsibility between student and instructor. The instructors in a PBL setting provide students with tools to be successful (Thomas, Enloe, & Newell, 2005). In The Exchange, these tools included content in the form of weekly lectures or direct instruction, texts both class assigned and supplemental from the school library,

and online research access from the class lab. The PBL structure of The Exchange is a blend between teacher-led lecture style and student directed hands-on learning; the two PBL teachers use the first half of the learning block for lecture and direct instruction when needed. This blended structure was implemented during the school year in which I collected data to control the amount of content students received and to ensure ample test preparation. One of the courses in the cross-curricular block was AP World History. Its instructor, who was new to PBL, felt more comfortable offering weekly lectures in addition to the PBL structure. Lecturing ensured students received course content, then, as Francesca Sims explained, it became up to students to apply the content in their projects. The hope was that the blended style would assuage any future skepticism of the course. Although this blended style does not mimic the ideal PBL structure imposed by schools such as the Minnesota New Country School, the blended structure is what worked best for Lakeside High School and for implementing a PBL structure in a traditional public high school.

Not only did Francesca Sims take responsibility for her own learning, but she brought up how learning is different in The Exchange. It is this difference that led others who are not familiar with PBL to misinterpret how students were learning in a PBL classroom. The information they researched was different because they were creating innovative projects where they applied content knowledge learned in the lectures. These projects required research proposals, project timelines, project and group member schedules, and research documents. I asked her if she found herself reading higher level texts since the research portion of the class is broad in the sense that project ideas arose from student choice, and the resources the students used included sources aside from the class texts. Francesca Sims' response reflected on both text complexity as well as what she meant by the learning being different:

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It's not so much that it's a higher level, but it's the different information we're looking at like how to make proposals or how to create the project itself, it gives us a train of thought differently than in a traditional classroom where it's, "this is how we're reading, this is how you do it, memorize it."

Because we're trying to build products that are not already made or something that is new and that we could probably, in the future, sell to future investors, or just a small working idea that sometime in the future could do something.

We're also reading other outside sources, like websites and different books that normally people wouldn't pick up and read for fun. It's to gather information that we would definitely need to create a product and the product can be anything from a game, different kinds of games, like a board game or an original game, or it can go to an actual product like um, what's it called, like something that is given to the community, like an event for the community.

Francesca Sims mentioned that student research in The Exchange forces the students to go beyond the teacher and beyond the textbook. She found herself not only reading texts she did not expect to read for class, but she found herself purchasing some of these texts and adding them to her personal library. I could not help but think of Francesca Sims' personal library as cultural goods that reflect her cultural capital (Bourdieu, 1986). As she researched on her own, Francesca Sims found texts that relate not only to her research, but to her interests as well. These texts could reflect her identity and may aid in the production of projects that reflect her and her group members' identities.

I continued our research discussion with questions regarding text complexity and methods for evaluating sources. As both criteria are referenced in the Common Core anchor standards, I was curious to find out more about the texts Francesca Sims mentioned in her previous response, texts that "people wouldn't pick up and read for fun." I asked her if research expectations were strict in regards to the type of texts used.

> Yea I think so, like we all basically know Wikipedia is not a good source, because you can easily edit that, and sometimes we look at the sources and how the information is written, like if it is written with really small words or easy words, then you know it's not credible all that much.

Francesca Sims agreed that she has improved her ability to gauge the credibility of sources, a skill she mentioned as being valuable in college. But more valuable is her ability to apply the knowledge she learned from class lectures and her own research:

> Well apart from the AP class, some teachers are like, you have to sit there and listen to the lecture … that's inevitable, it's going to happen … it's [The Exchange] teaching us how I can take the lecture and put it into something that I'll remember and give me a better understanding of how I can keep it in my head to pass the test.

Francesca Sims explained how applying knowledge she learned from class into collaborative projects gave her a better understanding of what she learned. Her experience connecting with the content while producing projects is similar to many student examples from The Minnesota New Country School (Thomas, Enloe & Newell, 2005).

Francesca Sims explained that the project expectation was to create an idea that can be turned into a product. For many of these project ideas, students created a prototype that was

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displayed during the project presentations. As Francesca Sims explained, some of these projects included board games or video game prototypes; some were books, such as her group's children book; and some were community projects. Although time constraints kept some of the projects from fruition, at minimum, students created real products by applying their AP World History knowledge, Common Core literacy and research skills, and computer research abilities. When I asked Francesca Sims if she had a project she would like to follow through to production, she referred to the children's book project:

> Yes actually, I believe it was our last project with the writing of a children's book. I really liked the storyline we were going for, but because of the time we were given, we had to shorten it and condense it, and because of some of the problems we were having as a group, we had to change it a bit, so I'm thinking about taking that and editing it a little bit and making it a bit longer and see if I can publish it or do something during my own time, or if not, do something I can work on and keep in my file for myself.

As Francesca Sims referred to the children's book, I was brought back to Rowsell and Pahl's (2007) research on sedimented identities in text. They specifically suggested that identities can be conceptualized through literary activities. Rowsell and Pahl's idea can be applied to students' identities in a classroom; therefore, their identities are reflected in what they do or what they produce. In this context, the children's book became a reflection of both Francesca Sims and her group members' identities; the book became a reflection of their collaborative identities. Francesca Sims and her group members created a children's book that reflected not only the information learned in class, but their identities created within The Exchange.

As Francesca Sims mentioned in her previous quote, group issues prevented the project from evolving how she hoped it would. To Francesca Sims, learning to collaborate with her classmates during the project period was some of the course's best college preparation. This process began with getting to know one another's strengths and weaknesses:

> Well last year gave us an idea of how to find each other's strengths and weaknesses; we just wrote down our strengths and weaknesses in different areas, not just subjects but also communication skills or scheduling and stuff like that. One of my own personal strengths is scheduling 'cuz my family is very sports orientated after school and we only have one car, so that's why everything is on a calendar, like if you look at my calendar right now it's like really busy, and so that's one of my communications skills: scheduling and communicating with people outside of school and during school, because I have school Wi-Fi so it is easy to connect with people, and one of my weaknesses is actually meeting my personal due date, which is my own thing that I have to get done for the group myself, normally I either finish it too late, well not too late, but just in time, so it really puts that procrastination level on me.

I was interested in how Francesca Sims pointed out both her own strengths and weaknesses. I asked her if she thought The Exchange helped work out individual weaknesses or if the freedom only promoted those weaknesses:

> I think it makes it easier to work on because you're physically looking at each other's strengths and weakness, while in a traditional class you're not looking at anyone's strengths or weaknesses; the only way you can figure that out is through their grades, which ones are higher and which ones are lower.

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Francesca Sims mentioned a pertinent point in her response: the PBL structure allowed students to see each other beyond their grades in the course. Unlike a traditional classroom where collaboration is not integrated into every aspect of the class, in The Exchange, students work together and get to know one another as learners and collaborators. They learn from one another's strengths and weaknesses and learn to work alongside one another, collaborating in ways that benefit the whole group. Student collaboration becomes organic since participatory culture is a focus of the PBL classroom. Students learn to work with one another. They create their own learning communities within the PBL learning community. These relationships become a type of social capital (Bourdieu, 1986) where students create networks with one another, networks that can last beyond their years in The Exchange. Francesca Sims gave an example of this collaboration. Although all members may try to lead the group, they eventually learn to work alongside one another and to let one person emerge as the leader:

> We all try, but you can tell who are the actual leaders in a group and you can also tell who are those who are good working in the background; I'm one of the ones good working in the background and kind of helping the leader out, saying "hey you're getting too broad, come back"

I asked Francesca Sims what skills she gained from the collaborative experiences with her classmates. She responded:

> Besides communication skills with different personalities that can affect mine in a negative or a positive way, it [PBL] also gives me an idea of how [to work], not just in a working field, but just work in general, because you're going to have to do certain things

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that you don't want to do, and it still has to get done, and you have to give up your

differences, and it has to get done.

The collaborative nature of the class constantly creates and re-creates learning communities;

these learning communities are an example of Jenkin (2007) calls participatory cultures. Rather

than solely consuming information, which is the basis of most traditional classrooms, Francesca

Sims and her classmates are contributing to the class with their projects. These projects make

them producers as much as they are consumers. More importantly, the projects and products the

students produce reflect their identities within The Exchange.

The collaborative nature of the class is one of the original reasons Francesca Sims gave

as to why she wanted to branch outside the traditional classroom structure. However, towards the

end of the interview, she also mentioned the senior internship opportunity as another reason she

joined The Exchange:

Oh, and another reason I joined The Exchange was because of … I heard in our senior

year we get internships and that's something colleges really look for. Internships in the

field that you want, even if it's not even in your field, if you've had an internship, that's

really good to look forward to, and it also gives us exposure to not a school life, but that

reality or the world itself, and in order to get the job you have to have resumes, and we

learned how to make one last year and I'm thinking about editing mine.

Providing internship opportunities for students in a field they hope to pursue is a great way to

allow students' identities to be part of a class. As we closed the interview, Francesca Sims

referred to some of the larger projects she and her classmates produced during their years in The

Exchange. She explained that the projects did not necessarily put them in contact with people of

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power unless they created projects that put them in that situation, such as one group that created a city-wide event that was approved by city hall. Francesca Sims said she hoped to work towards that caliber of a project, and even said it could be possible. I ended our interview by telling her she already made it possible by taking the initiative to follow through with the children's book. My comment made Francesca Sims smile.

At the end of the semester, administration announced that The Exchange would not be continued after the current school year. When I heard the news, I gathered the participants and asked them how they felt about no longer having a PBL option. Francesca Sims mentioned she feared she would regress in a traditional classroom setting. She explained how she is naturally shy, and PBL helped her become more confident and comfortable in the classroom. She believed the collaborative structure allowed her to express her ideas, as well as to learn to work alongside others. As mentioned earlier in the vignette, Francesca Sims realized at an early age that PBL best suited her learning needs. Unfortunately, Francesca Sims could no longer register for a PBL course. It was obvious from our interactions during the interview, as well as her poise throughout our conversation, that Francesca Sims had indeed gained much confidence as a learner.

Carson

"Actually being able to communicate with one another and learn from one another is huge."

I was familiar with Carson before I spoke with her. She is one of the cheerleaders at North Lake, and at the time of the study, I was the assistant director of the cheerleading program. Her brother, a graduate of North Lake High School, was one of my students. Her mother is well known in the community, and I know her from her involvement with the cheerleading program. Her mother spoke to the district school board about the benefits of PBL. Carson attended this board meeting and gave her testimony on behalf of the program. Therefore, it came as no

surprise when Carson volunteered to participate in an interview. I was, however, surprised by what she had to say.

I will embarrassingly admit that I went into the interview with preconceived notions. Carson comes from a family that is well connected in the community. If only considering Carson's familial background, involvement in the school, and gifted academic status, some might say she is privileged. Walking into the interview, I almost thought to myself, "there could be a chance the interview will yield presumed results, especially in relation to Bourdieu's ideas of capital; Carson's habitus was already well established." Her background provided her with the economic, social, and cultural capital necessary to be successful in society and in school. However, Carson realized regardless of her background, larger powers prevented accessibility in areas where access seemed logical, like obtaining academic resources from other teachers. Her questioning is what led her to join forces with Murdoc, another participant in the study, to create their capstone project, the project which Carson hoped to be her legacy.

This capstone project is one Carson referred to when asked which project was her favorite so far. She was eager to explain why:

> Because, I actually feel like we're going to follow through with it. 'Cuz a lot of the projects don't end up making it through, just because, at least from my projects, I'm always trying to reach out into the community, and so, that tends to fall through, with, not getting approval for certain things. But, what we're trying to do now is like a peer tutoring thing.

So like where students can share resources, so if I have lecture notes for Mr. Vincenzo, then people who have Mrs. Chasid, who's the other AP World teacher, can have those same lecture notes.

During her explanation, Carson referred to limited access in two ways. She referenced past projects not coming to fruition for lack of approval, specifically when the project required approval from community personnel. Her second reference to access is in a different context: student access to teacher information. Carson did not accept that information was not accessible to all students at the school. Carson and her partner Murdoc were creating a peer tutoring forum where students would be able to share resources and notes with one another because students do not have access to other teachers' web pages; they only have access to their own teacher's page and information. If they want notes from another teacher because they better understand the content with another teacher's notes instead of their own teacher's notes, they need to track down a friend who has that teacher and ask for his or her notes, or they need to approach the teacher and ask if they can have a copy of the notes from the class—a conversation that can be a bit awkward for the student. When asked the purpose for creating the forum, Carson's response was simple:

Well, I mean, I know for my reasons, I think it's unfair that students have other resources versus other students, and that's why maybe some students succeed more than others. I know from Mrs. Chasid, I'm a worksheet type of person, just like, writing it down and down again; that helps me process it. And I know Mrs. Chasid does a lot of work sheets, but Mr. Vincenzo doesn't. So like, I'll get work sheets from her students and I'll do them too, and that's what helps me.

…but it's like, if I learn better with Mrs. Chasid, then I should be able to access

her resources. Because in the system, now, for each class, you can't access other

teacher's resources … since we're students, we can't. So, we're in the process of finding

a website like it [the school's on-line forum].

Carson and Murdoc had to find an external website to create their online tutoring forum because

they were unable to access the school's e-learning website. They attempted to go through the

official channels and receive approval; however, they were denied. They were instructed to find

an independent website for the project. Carson and Murdoc were upset, as they knew not having

their peer-tutoring forum on the school's main e-learning portal would limit students' knowledge

of the resource and, therefore, limit students' access. At the time of the interview, Carson and

Murdoc had received approval from the school's technology coordinator to create the website,

but they were waiting on approval as to whether they would be able to access all teachers'

resources. It was informative to hear Carson explain the different channels they were having to

navigate for approval. The tone of her voice hinted at an absurdity in the whole situation: not

being able to access information from other instructors' pages seemed foreign to Carson. This

situation was not foreign in the sense that she did not already know these restrictions existed;

rather, it was foreign in the sense that having these restrictions at all was unnecessary.

Navigating these hierarchical channels seemed to reaffirm the power that begins with

perpetuating a teacher-student binary, an implied hierarchy that reinforces the division of capital,

and one that Luke (2008) identified as an issue in schools' creation of students' cultural capital.

Carson's questioning of the reasons for these restrictions revealed the value she placed on

participatory culture. To Carson, learning communities and collaboration were natural parts of

social interaction. Many of the students in The Exchange saw collaboration as a part of their personality; collaboration is the reason many participants gave for joining the PBL.

The digital age revolves around a collaborative culture, so it may be the case that collaboration is ingrained in many students' cultural capital. What Carson and Murdoc faced while creating their project was constraints on access to information. Carson acknowledged the existence of these constraints. She has learned there are channels of approval to navigate but that not everyone is able to navigate them. Carson was concerned—*not everyone is able to navigate the channels.* As a person with established capital created by her rearing and associations, one might assume her access would have no barriers. However, she quickly learned while working on her capstone project that access to information was limited and, sometimes, unattainable. She learned how her status as a student did not grant her the privileges she expected in a school setting, such as access to information for a course in which she was enrolled, but from teachers to whom she was not assigned.

With PBL's participatory and collaborative nature, The Exchange students expected to share notes and information. The students in The Exchange not only collaborate with one another, but they collaborate with students outside the PBL classroom. As students, both in The Exchange and not in The Exchange, shared notes during study sessions, Murdoc saw an opportunity for a peer tutoring collaborative forum. Not only did the participatory culture of the classroom allow for the creation of this project, but the influence of having such a natural collaborative environment led to the creation of an innovative online sharing tool with the potential to benefit all students at North Lake High School. The forum could even promote collaboration among teachers. So, while access to course information may be limited, access to information provided by other students within The Exchange was not. The networking and

collaboration between students in this PBL environment was the heart of the class's existence. When asked about the classroom collaborative environment, Carson explained, "We make connections even within [the classroom], and it will last." The relationships they build within the classroom, as well as the relationships they build from working on projects with one another, was, in Carson's opinion, unparalleled. Not only do they learn from one another, but also they learn how to learn from one another. Carson mentioned how she has learned to work with people different from her and how to handle conflict:

> It's difficult, because we have a lot of strong-minded kids in this class, and everyone is such … you have your creative thinkers, you have like your technology, so with different personalities it's hard to work it out sometimes, but it always pans out.

Carson has seen past her differences with others to see them for the good they bring to the group and project. She has learned to appreciate a person's attributes rather than to focus on the personality traits that conflict with her own:

> We all have our different talents, so it's just like, helping each other, like my strengths would be obviously, going out into the community, talking to people, getting connections, whereas you know Reggie he can code any website he wants, so like we did a coding project last year, and so like he obviously helped me with that, and then one of his projects, he had to go out I think it was to a local pizza place, and he didn't know how to do that, so I went with him, and talked to them with him.

It was these relationships Carson saw as most valuable towards improvement and social mobility. She admitted that although the projects promote work with personnel outside of the classroom, relationships built inside the classroom are most beneficial. These are beneficial not

only for the immediate future, but for the future beyond high school as well. It became clear from student responses that they perceived their possible transference between capitals through their relationships with one another and not so much with their relationship with people in positions of power. She explained:

> I don't know, like, we're all like one big family, so like, we all know each other, so I mean there's like networking within, but then we also, all of us are going out into the community to find different resources…

While I envisioned the students going into the community creating opportunities for social mobility, Carson saw the interactions differently. As students go out and meet with people outside the classroom and learn from these resources, they bring back these skills to the classroom where they share what they have learned with one another. These experiences include consulting with classmates' parents when creating a project, or consulting with a professor at UGA to learn more on a particular content. However, the network Carson was building was not with people outside of The Exchange but rather with the students in The Exchange. Although limited access to information initially seemed like an issue in Carson's eyes, she was being granted access to information through another avenue: the students' interactions with one another and the relationships they were building within The Exchange. The classroom's participatory culture granted them access to different resources and skills.

Carson said that these skills were as rewarding as the networking. When asked if she thought the class better prepared her for college, her answer was enthusiastic:

> 100%! Like, there's so much that I've learned. I've learned how to work with people that necessarily … like our personalities don't match, but we still work together and we

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still make a wonderful product. So obviously, I've learned the skill of, I guess being a people pleaser, that kind of a sense. We've learned interview skills, which will obviously put us ahead. Then we have the internship, like because we take three classes in two periods, I have an internship my senior year, I mean that's huge just because when I graduate college … I'll already have a year under my belt.

Carson went on to explain how The Exchange has provided opportunities outside of the classroom; opportunities that would help her both with getting into college and when she is in college. These opportunities included applying for county-wide and school-wide student leadership organizations, as well as applying as an Outreach Coordinator for her student council. The participatory nature of the class not only aided in her ability to work in learning communities within The Exchange, but she took those experiences and applied them to learning communities outside the classroom.

Besides the internships and extra-curricular opportunities afforded to her from the class, Carson gained valuable literacy skills through research and presentations. While some of her friends who were not in The Exchange had not even written one research paper all year, she had already written three papers and still had one project to complete before year end. When explaining the research portion of the projects, Carson had a lot to say in regard to spoken and written presentation of ideas: "You see we've written three already! We've written three already this year, and last year I think we wrote six!" Although more does not always mean better, it is not the amount of research that seemed most valuable to Carson. Instead, what was valuable was the project process: brainstorming, researching, planning, producing, and presenting each project. To outline the experience, Carson referenced the online resource project on which Murdoc and she were currently working:

A lot of it is communication…

…so you might just see us sitting there talking for an hour, but if we don't talk for that hour then the project doesn't get done right…

…so a lot of it is communication during those parts.

So, even like, throughout the entire process it's all about the communication.

… because like, let's say I'm working on a proposal…like Murdoc and I for this past project; we've been working on the proposal together, so like we'll sit there and we'll type it out together, so yes it's communication but we're still getting our work done.

When probed about the differences between The Exchange's research process and her other traditional classes' processes, Carson explained by walking me through the project process and expectations:

You have reflections, we talk about like how we think the project is going, how we feel if we need help we can ask, we have like a pre- like we have a research document where we just type out all of the research, it doesn't have to be sentences, it's just bulletpoints that we get … and then we convert that into a research paper.

So, those are two separate things, we always have our presentations, and then your product is physical, then you have to turn that in too.

It's just that there's so much I take out of The Exchange that I wouldn't get out of regular class; like, in Language Arts, people read books, you do grammar, you do vocab, but, like, in our Language Arts classes we've learnt how to write research papers, which

I'm sure you do in others, but like, we've been able to apply our own passions to those research papers…

So we obviously have to be motivated, by ourselves, to do stuff like that.

But we motivate each other to do stuff. So, but, I mean, you obviously have deadlines within the projects, so, by April 3rd I have to have a Project Reflection in, by April 20th I have to have my research document in.

So within the long span of the project we have minimal due dates, and then like the overall project is the last due date.

The Exchange's research process is not just about breadth, but the process requires depth. This is not only depth of understanding the content through an extensive research process, but depth in understanding one another as contributors to the project. This understanding between members creates the informal learning communities Jenkins (2009) referred to in his discussion of participatory culture. Caron learned much through deeply understanding her fellow group. She explained how the process has taught her to learn about herself as a group member in a collaborative setting. Carson provided an example of a conflict she and a fellow classmate had regarding differing religious views. Carson explained her response to the situation, as well as what she took away from it:

We just we don't always see eye-to-eye, like religiously, like she's very like strict in her religion and I'm like, "you gotta expand," it's like we were doing a magazine as one of our projects like in the beginning of this year. And I wanted to do a Horoscope, you know? A fun little Horoscope; and she was yelling at me just because it is against

her religion. So, you know, I've learned to take a step back and be like, "okay, you know, that's not a big…"—like, "in the grand scheme of things, that's not a big battle."

When I asked her if she learned about herself from the situation, she replied, "Uh, huh. Just like … how to react." And then, later, she continued, "Yeah, you have your strengths, but you obviously find your weaknesses very easily."

As we finished the interview, I asked Carson her opinion on the class's bad reputation.

I don't understand the bad, like why people view The Exchange so badly, just because, like, I've been in it so I obviously adore it, just because all the stuff it's taught me. But I guess people on the outside think 'oh it's an easy A', like 'you just do a project'.

People say we're not learning, but it's harder than a lot of my other classes, I think. Just, because, we take three classes in two periods. So we still have regular AP World; we still have regular Language Arts, like the content, and then we have to apply that and make it something bigger, so it's, like, so much more.

As I reflected on the many points Carson made throughout her interview, as a teacher, it seemed completely natural that Carson did not have access to other teacher's resources. After all, most teachers would say these restrictions are to prevent test security breaches. However, as Carson spoke about what she saw as an issue and explained why she wanted access and why she thought it was only natural for her to have access, I quickly realized, like Carson, the absurdity of it. Why are students unable to access other teachers' information? Why is it frowned upon for students at the same school in the same classes, but taking those classes with different teachers, to collaborate among themselves? The intent of the Common Core State Standards (2010) was to prepare students for the 21st century. These standards were for a digital age where information is

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readily available at students' fingertips. They implied a 21st century workplace where collaboration is key to success and the ability to work alongside different kinds of people from around the world is common. If college and career readiness is such a large focus of the Common Core, why do we still place such a tight hold on academic resources, forcing students to take to the internet and weed through false and misconstrued information? Why do we keep students in lines and rows in closed off classrooms with no access to resources outside the classroom, or sometimes, even, the resources right next to them? The field of a brick and mortar school does level the playing field in one sense: regardless of students' capital, no student has access to unlimited resources.

Carol

"I think it's just taught me how to connect across borders."

Carol stands out. She is a tall, tom-boyish, and vocal young lady. She did not fit a "type," nor did she want to. She admitted to being overly conservative, rooted in her faith, and maybe even a bit pushy when it came to her principles. Her extra-curricular interests supported these qualities as she was a member of the school's ROTC program, involved in her church, and part of American Heritage Girls. She admitted to being not the most popular or always well-liked; she could rustle feathers, and she knew it. She was a protagonist with antagonistic qualities.

When I began interviewing Carol, I became a bit concerned as she admitted to going off on tangents. Later in the year, she complimented me on my interviewing skills as I kept her on task. I simply explained her great responses allowed me to ask such great questions. What was interesting about Carol was her acute awareness of who she was, flaws and all. She is self-aware about her experiences in The Exchange. Carol continuously referred to The Exchange as being

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"real." This is an adjective I would use to describe Carol. She oftentimes used the word "real" when she reflected on the relationships she built, her learning experience, and her self-reflection. What was interesting about Carol's responses were, much like Carson's, she seemed to get *it*. This elusive *it* was Bourdieu's concepts. I could only assume that these students were unknowingly referencing Bourdieuian capital in their candid descriptions of their experiences within The Exchange.

It was Carol who flipped my whole topic on its head. She was my second interview after Francesca Sims. I went into my study believing the interactions students had with people of power was where most capital transference would occur; however, Carol explained to me that the students thought differently. While I thought that students would find interaction with people of power as the most valuable social interactions in the class, the students did not seem to care. It was what happened within the field of The Exchange and between the students that was the real story, at least it for Carol. Capital exchange had the most potential to occur in the PBL classroom's inter-workings. Carol explained it to me best:

> I think networking should be about friends because if I ever have a later business relationship with those people in the future, like with Alex or whatever. … If I see that woman and she's at the head of an executive board and she sees me and I come in for a job. … I'd have a leg up on everybody because of that friendship we have.
>
> I mean, Alex doesn't do The Exchange anymore but … We're still like friends. And if I see her twenty years from now … it's awesome.

This "leg up" Carol described was an advantage to which only she would have access because of her experiences alongside Alex in The Exchange. This relationship, which was built within the

PBL class, far exceeded the walls of the classroom. Although Alex was no longer part of The Exchange, the relationship between Carol and Alex created a network that would follow both for years after The Exchange. This kind of advantage, which comes from being part of an exclusive group, is an example of Bourdieu's (1977, 1986) ideas of social capital.

Carol started in The Exchange as a middle school student, but took a year off her freshman year. She described her induction into the program as being "thrown into" it. She was thrown not just into the program itself; rather, she was placed in what was understood by the students as the lesser of the two groups: the kids who were not as smart. Carol is not labeled as gifted, nor did she see herself as a high achieving student, at least not until she was presented with some of the opportunities that came along with being part of The Exchange. The makings of the PBL curriculum, with its inclusion of both gifted and non-gifted students, coupled with a teacher who believed in Carol's potential, provided a transformative experience for Carol. She stated, "I started taking these gifted. … Even though I, myself, was not gifted, I started taking these gifted language arts classes with people who were gifted just because we were all thrown together." In The Exchange, Carol had an opportunity to take AP level classes, an opportunity she may not have otherwise had because of her status as non-gifted, and for that she said, "I'm very thankful for the opportunity to start taking those difficult classes and push myself."

Carol recognized that The Exchange gave her additional opportunities, specifically to take higher level courses. Carol's comment made me realize that The Exchange has its own social capital in the eyes of its participants. Much like the name of the class, there was an exchange happening between the students, the class, and one another. The class provided an opportunity for Carol to take higher level classes, classes she otherwise would not have taken had she not been in The Exchange.

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With the chance to take rigorous courses, Carol learned a lot about herself as a learner. She attributed her ability to make connections between courses to the cross-curricular nature of The Exchange:

When you're coming up with a project idea … that's the hardest part. … You have to connect it with the topic.

They don't teach you how to do that in normal school. They don't teach you how to connect your math with your science. Like I'm sitting there in science and I'm like "Oh, that's like the math thing we're learning in geometry right now," and so I understand it more. Or sitting there in biology, I'm like, "Oh, that's like the AP Human that we're learning about, the S curve and the J curve." … I think it's just taught me how to connect across borders. Because if you can connect. … let's see … Renaissance fashion ideas with a magazine or … a company that moves people from place to place with migrational movement … or, I'm trying to remember all of my projects now. … or the separation of Texas from the United States or when it became part of the United States, what it was like before and after—that occurred with a radio project—then those connections just kind of start to happen. It becomes a habit.

But I know that for me it's fostered it even more. I think I can honestly say that now that I think about it. It's honestly fostered the ability to make those connections. Even if it wasn't natural, I think that other people do it too because they have to, it's for the class … I think we've all learned to make those connections. Like especially when a group of Exchange kids gets together. We just need that one spark. Once those sticks are rubbed together and we get that one spark, we can take that spark and make three billion

fires because we learn to make those connections. We've learned how to work as a team and make stuff happen.

To Carol, the connections made were more than just connecting the dots between content areas. They were made through social interactions, and while making these connections, students found possibilities of reflecting on their own learning and role in the classroom. Carol explained how the difficulty and the caliber of the projects provided an opportunity for students to put their skills to the test. They were tested on their research and analytical skills in creating cross curricular projects. Their interpersonal skills were tested, such as in their ability to plan and execute a project plan while handling the stress of deadlines and collaboration.

But when you're in The Exchange stuff comes up. Like you get squeezed and the gunk comes out … I think it has. … It brings up questions because in those situations when that pressure is squeezed it makes you who you are because it's in those moments of trial and those moments of challenge that you really see who this person is.

Carol claimed that interaction within The Exchange revealed the true nature of people, particularly how they handle conflict and social interactions when dealing with classmates who may think differently. Carol admitted to seeing those moments in herself. She recently was told there was one girl who did not like working with her because of her strong personality. She even mentioned how it was probably because they both had such strong personalities. The other girl was Carson, one of this study's other participants. Both girls referred to the conflict in their interviews, and both girls stated that the conflict was most likely due to their strong personalities. However, they seemed to respect one another for having such strong convictions. Carol specifically stated:

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But it's like yeah, not many people understand that [personal principles] and she's [Carson] one of those people that I get to learn how to be friends with. … I don't want to say deal with but how to work with because I'm going to go out into the workforce and I'm going to have to work with people like her. I choose to work with people like her.

Carol's explanation of how she chose to work with Carson despite from their differences showed that she understood something important. Carol saw the benefit in working with someone not because of who they were but because of how they could contribute. She chose to step out of her comfort zone, out of her natural habitus and her cultural capital.

It was amazing to see the emotions surface in Carol. The interview was much like a rollercoaster: she evidenced some resentment as she reflected on her experience of being "thrown into" the program and labeled as a "not smart" student. That tone of resentment quickly changed to compassion as she reflected on the teacher who pushed her to be the best learner she could be. And as she told me stories of her current experiences, a look of sincerity remained on her face, as she realized the opportunities she gained through The Exchange:

In fact, I don't think I even realized how much we had until now that I'm talking about it with you. It's such an awesome experience, these relationships that I have with all sorts of different types of people. Because high school is so cliquey … but I walk into The Exchange and it's like … be with everybody! All sorts of different types of people. I mean, you learn to get along.

Carol's final quote epitomized what made The Exchange so different in her eyes. The Exchange gave Carol a better educational situation that went beyond class rigor. The relationships that she built within the class held the most value. They taught her to be more

accepting, more open, and, in a way, influenced her through exposure to others' experiences and backgrounds. Could project based learning be the curriculum change that could break the cycle of the academic market creating cultural capital? Could it be that The Exchange, in its own microcosmic way, carries its own social capital, and, therefore, influences students' cultural capital? It was through Carol's words that I began to understand how students perceived The Exchange and its worth as an academic opportunity.

Murdoc

"I think the reason that I like this one [current project] so much is 'cuz I feel like it will have an impact and maybe once I'm gone, once I'm a senior and I've graduated, it will still be here."

Murdoc's opening quote was his response when asked which project had been his favorite this year. The project, to create an online resource sharing forum for students at North Lake High School, was one he and Carson, another participant in the study, were hoping to leave behind as their legacy. After talking with Murdoc for only a short time, it came as no surprise that leaving behind a legacy was important to him. Talking with Murdoc was like talking with a 15-year-old executive of a major Fortune 500 company. His drive and intelligence, as well as his personable and opinionated nature, was obvious. His maturity was years beyond his age and his inquisitive nature could be envied. He approached the class with an entrepreneurial focus; this focus reminded me of many of the student accounts from the Minnesota New Country School (Lonnquist & Enloe, 2005) and, even more so, of the entrepreneurial spirit that lies within most students of this generation (Zhao, 2009 & 2012).

What made Murdoc so interesting to speak with was the stoic persona while presented while objectively describing his experience in The Exchange. This persona Murdoc attributed to

the mandatory leadership classes he attended during his early years of karate training. He described his karate experiences as contributing to his work ethic, strong leadership skills, and ability to speak well in front of people. Throughout the interview, Murdoc employed professional and business-like word choice when describing his experiences. There were moments throughout the interview where I silently chuckled to myself and wondered "who is interviewing whom?"

As he answered the routine first question as to why he chose to be in The Exchange, Murdoc explained the initial appeal of the alternative structure of a PBL classroom:

> I thought it would be really good to be really different from the traditional classroom environment. Even though as a fifth grader, I didn't really have much knowledge about a traditional classroom environment. It just sounded fun, so I decided to do it. I thought I'd be good at it. And it turned out being pretty, uh …. pretty profitable.

There were multiple responses from Murdoc that I found interesting. One example is his reference to traditional and non-traditional classroom structures, for instance. Although he admitted to not understanding the terminology as a fifth grader, after almost 5 years in a PBL setting, he now understood the differences between a non-traditional classroom and a traditional classroom. The second comment I found interesting was his choice to refer to his experience as being profitable. Murdoc's use of the word profitable to explain his experience almost sounded like he was acknowledging a return on an investment—a return on a gamble he took when joining the first middle school PBL class—the start-up, if you will, and all the growing pains that came along with implementing a non-traditional class for the first time in a public middle school. Murdoc was part of the first cohort of students to join the PBL class; he was one of the students

who joined The Exchange in 6th grade and remained in the program through 10th grade. When I asked Murdoc what he found to be so profitable about taking the class, he elaborated on the skills that projects and presentations helped him to improve:

> So, I've always been good at that [presentations], but I think it brings it to more of a professional level. So, when presenting a project, you have to dress nicely, you have to have a presentation ready, you have to know specific things. And I think I definitely have improved on that. I improved on my time management as deadlines were set in place more than any other class. And I feel like other student relations uh … sometimes you have to do a project with somebody you don't necessarily like, somebody who doesn't necessarily work really hard, and so you have to kind of ensure even if they're not people who work hard that they work hard for you. Or you put them towards something that they can do, something they enjoy so that they will work hard.

Murdoc admitted to having strong presentation skills, but he attributed improving those skills to the class. Presentation skills are outlined in the CCSS (2010) as soft skills: the skills many industries deem valuable in future employees. Industry feared that presentation abilities had been lost among millennials (Zhao, 2009). Unlike most traditional classroom settings, the participatory nature of the class focuses on soft skills as the driving source for project planning, implementation, and presentation. These skills are necessary for students to implement the CCSS (2010) anchor standards in their cross-curricular projects.

Collaboration skills, particularly with people of differing backgrounds, is included as a CCSS soft-skill. Murdoc mentioned understanding how to work alongside those with whom it may be difficult to work. Zhao (2012) explained how global competency is not a defined set of

skills, necessarily, but being able to work alongside people with differing backgrounds, particularly in other geographical locations, is a large part of it. Although Murdoc was not necessarily working alongside people from different locations, he was working with people who came from different backgrounds. His ability to work alongside others collaboratively while accepting and learning from one another's differences demonstrated his global competency.

These soft skills were not just the presentation and intrapersonal skills Murdoc mentioned, but they included collaboration skills. Throughout the interview, he continued to reference the importance of collaboration and attending to the participatory nature of the class:

I was warned by my sister to pick people who were good and then after the first year, people will know who you are. People will know if you are good or not. Um, so, I kind of took that to heart, so I tried to be as good as I can as a working person … a worker. So, I think for the most part, I have always been that way. Especially in The Exchange.

I always picked people who were good, not necessarily the people I liked.

I like to pick people who are good at specific things. Like, I like to pick someone who, previously, that is good with computers and websites, so they can work on the website. People who are good with ideas.

Murdoc was not the only participant to mention how students were quickly "labeled" for their talents and work ethic. In labeling one another, the students seem to be creating mini learning communities within The Exchange; these communities are a type of social network that values students' strengths, weaknesses, and skills. This network was not only an example of Jenkins' (2009) participatory culture at play, but it bared a strong resemblance to Bourdieu's (1986) idea of social capital. Much as Bourdieu's understanding of social capital placed value on

social groups and organizations, The Exchange's students placed value on the different learning communities created within it. Collaboration between students within these self-created learning communities created a social network where students valued one another's cultural capital. Students mentioned how they capitalized on and profited off one another, as well as the experiences they gained from learning from each other. To the participants, these experiences seemed to have value in both their present and future successes.

Murdoc was the first participant who did not specifically speak about the relationships built within The Exchange. He spoke from a much more omnipresent point of view. He focused on the workings of The Exchange, the system itself rather than what it is to be in the system. His responses led me to question: does Murdoc represent a person with strong cultural capital? Would he be the type of person many of the other students within The Exchange sought as a partner? I asked him if leadership came easy to him because his leadership within the class was obvious. Although he did not volunteer the information on his own, once asked, he admitted his value within the class:

> But I really like it. I like project based learning. I like um, presenting. I don't want to brag, but people like having me in their group not necessarily for the project, but for the presentation. 'Cuz that what I excel at. I excel at the presentation. I excel at putting my ideas out there, explaining what we did in the project and even if it's not a great project, I can make it sound really nice.

I followed up Murdoc's response by telling him I believed it was more than his presentation skills that made him valuable to others. It was obvious from my observations that many of his classmates within The Exchange viewed him as a leader in the class. The way Murdoc spoke

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about research in the class and his experiences with research made it obvious that he had strong

research skills. When we first spoke about research in the interview, Murdoc went back to his

childhood:

> When I was a kid, I used to do research. Very weird kid. I don't know why. I just did, I
>
> would do research on random topics. My friend, his dad was Australian so when I went to
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> his house once, before I went I did research on koalas. I had a research paper about
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> koalas with like WordArt on it. It was great and I loved things like that! I don't know
>
> why. I guess it was kind of … I have that kind of still … I still like to be curious about
>
> things when I research them. And that was good, and I feel like the research could be
>
> done better in The Exchange. 'Cuz sometimes it's things that I'm not always too
>
> interested in that I have to research.

From Murdoc's response, it was clear research was an interest of his, but what was even more

interesting about his response was his comment on how he thought research could be

implemented better in The Exchange. This idea came up later in the interview when I asked

Murdoc how research functioned in the class:

> It's kind of forced, it feels like. We have to do annotated bibliographies; we have to make
>
> 3 sentences. We don't really have too much freedom. It has to be specifically pertaining
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> to the project. I enjoy research when I enjoy it, when I enjoy the topic. Like I guess, I
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> enjoy koalas back then so I enjoy looking up koalas. I looked up frogs one time. So, I
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> liked things that were interesting to me, but with this … in The Exchange, sometimes I
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> get to do things that are really interesting. Like when we talked about the warfare, I mean
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> I'm not super into warfare but it was nice to kind of understand the evolution of weapons

throughout things, it's kind of not necessarily the warfare behind it, but the technology.

So, kind of like, understood levers and pulleys and things like that and that was really

cool, and so that was interesting to me. I enjoyed researching for that project. But my last

project, researching bullying, is like…I have heard so much about bullying in the

counseling thing [advisement program]. We don't need to research even more, but I had

to because that was part of the project, so I don't know. A way to make it more of a

personal choice, I mean not … if you made it a personal choice to research that'd be bad,

but maybe more emphasis on researching things you enjoy and maybe doing projects on

things you enjoy.

One of the criteria of PBL is student choice. Of course, in a public education setting, curriculum

is standardized, so curricular standards must be adhered to in class projects. Therefore, the idea

of freedom is loosely used in The Exchange, but students still have much more freedom in what

they are producing than in a traditional classroom. Murdoc was specifically referencing the

standardization of research within the classroom. He again referenced the standardization of

research when I asked him if he thought he was improving his research skills in The Exchange:

That's hard. Um. We started off not really knowing what we were doing, but in like a

month or two, we knew what we were doing. I'm not sure, necessarily, if I've improved

in my research skills. I've definitely improved in doing things the way Mrs. Grander likes

them. So, that's good. But necessarily with specific, like, researching as a whole … I'm

not sure if I've gotten better at it, like getting more efficient with finding sources and

stuff like that because, I think it's standardized. It's so standardized that you have to do it

a certain way. You to have your synthesis a certain way, you can't … it's supposed be

something, I don't know, enlightening, something new. And, the first time, I thought she

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was looking for something that was, "This is a synthesis, this is what I researched. Here is my research just in paragraph form." Um, and, so … I was kind of iffy in the beginning. It's getting more interesting, definitely, now that you have to kind of form kind of an argument in your papers. But, I still feel like it's standardized. It's … you pretty much have to do the same every time. So, I'm not sure if I'm getting better at research as a whole. I'm definitely getting better at research for her, and if that's how research is, then I'm getting better. But I mean, there's tons of different kind of research. There's research for different things. I feel like research for different topics should be different, but in this, it's all the same. So, when I'm researching bullying and revolutions, two complete different times, I feel like the synthesis should be completely different. Some should be more factual based, some should be more like, "This is happening and guess what happened?" So, but it's all the same, so. I think I, I babble too much … I feel like I am getting better at research, but it's very standardized and I don't have much freedom with the research that I do.

Murdoc's response to research in The Exchange was completely different from all the other participants. While the other participants felt they were improving their research skills and saw value in their research experience, Murdoc, who seemed to have more inherent research skills, pointed out the flaws in having such a standardized way to research.

Throughout the interview, as Murdoc and I spoke about the structure of the class, the project products, and research, Murdoc's responses consistently referenced one theme, realness or authenticity. The term "real" came up with multiple participants. Whether it was the realness of the class or the realness of the relationships within the class, many of the participants referred to these aspects of the class being more "real" than in a traditional classroom. With Murdoc, it

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was important to him that the experience and the projects were real. He did not like to create projects that would not come into fruition. He even admitted to this holding him back when creating projects:

> But I reserve myself sometimes, because I don't like to do things I know I can't do. That's the biggest thing. I don't know if you have this as a question, but the biggest thing that bothered me in The Exchange was people who took things on that were never going to happen. People made things like Doctors Without Borders, but, like, you're never going to do that. I mean don't… this isn't an idea thing, you're making a product. It's called a product, not an idea. They had so many ideas for all these things. There was a food truck thing that went around the United States. There were all these things. Some of them were great ideas, but they were never actually going to fulfill them. So, I always did it my best to make something. Not just an idea. It always frustrated me when they were like, "This is great!" and all the teachers were like, "Wow that's so great!" And, I was thinking, "they're not doing it." They made an idea. That's it. It's an idea. They had how to do it, but they never did it. So, I mean that's fine and all. And I think I did that for one project. It was still kind of, I still felt bad about it when I had that idea. I mean it's a lot easier to do that. It's a lot easier to come up with that idea, be like wow that's a great idea, and then not do it and ditch it and next semester you do something completely different. So, yea…

Murdoc gave himself this personal criterion of creating projects with a product. He found it necessary to ensure his ideas became a concrete and real product. It was this criterion that made him so excited about his current project with Carson. As the opening quote indicated, Murdoc, and Carson as well, believed this project could be their legacy. The online tutoring program

brought the participatory nature of the PBL class beyond the borders of the classroom. It created

social networks and learning communities throughout the entire school, not only between

students, but by blurring the boundaries between teachers and students. This project had the

opportunity to lessen the barriers between classrooms and even broaden students' learning field

within the classroom and even within the school.

Murdoc explained the project to me:

Um, what we're doing is we're trying to make a school, by online, peer tutoring type

thing. Um. So, there's all these teachers' kind of web pages. Like Mr. Vincenzo, he has a

ton of stuff on his webpage, but people in Mrs. Chasid can't access that. They can't get

that, so…so, we tried to get the OK of all the teachers to kind of compile all of this stuff

into one area, have a discussion board where they can do… uh ask questions. Be like,

"Hey. Parts of information, what's this all about?" Or specific things. Uh. We wanted to

do it directly through the e-learning portal because that would have been really perfect

'cuz there are the discussions, you can do quizzes on there, I think, you can do a lot of

stuff and put materials into folders. It was really good, we had it all planned out. We

made a proposal on the first day. Me and Carson were so excited about it um, and then

later on we talked to Coach T., uh we couldn't do it through e-learning portal because if

you are to do that and you are to have people be able to write questions, you have to be

able to moderate it and students can't get on to moderate or edit things directly in the

portal so we're having to do it through an off source program, uh kind of program, it's

Schoology, I don't know if you've heard of that. You might have. It's not as exciting

because we don't get to make it ourselves. It's not our own, but we're definitely utilizing

that and making that as great as we can. Close. And eventually maybe if it is a good idea,

we can get teachers to work on it and put that up on the portal. Um, but I think the reason

that I like this one so much is 'cuz I feel like it will have an impact and maybe once I'm

gone, once I'm a senior and I've graduated, it will still be here.

Murdoc and Carson's final project brings their participatory nature to new heights. Although the

students within The Exchange create learning communities that have fraternal like qualities,

Murdoc came up with an idea to bring those learning communities beyond the PBL class. From

collaborating with his friends both in The Exchange and those who are in traditional settings, he

saw a need for an online resource forum. Murdoc's idea was to bring what the students were

already doing on their own, which was sharing class resources and helping one another, to an

online forum where all resources can be housed in one place and can be accessible to all students

at the school. Murdoc's feeling about sharing notes and ideas were similar to Carson's, why not

share with and help one another? Students in this generation are so collaborative (Zhao, 2012)

that sharing ideas is not cheating, it is working alongside one another. Of course, Murdoc and

Carson ran into some roadblocks trying to house their forum on the county's e-learning portal.

However, they did receive approval to use an outside source with hopes to one day connect that

source to the e-learning portal, making the resource accessible to all students and teachers.

As Murdoc and I finished the interview, I asked him one last question, if he gained any

skills while in The Exchange. His answer was simple and clear:

I mean yea. Time management is a big one. I'm not the greatest at time management, but

I'm a lot better than a lot of my friends, a lot of high school students.

I probed one last time and asked Murdoc if by "a lot of my friends" he meant in The Exchange or

outside of the class:

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I'm pretty good at … Um…Yea. Well friend in The Exchange and not in The Exchange. Um. Yea, I feel like I've tried to get as much as I can out of The Exchange. I enjoy the projects. I've gotten a lot better with technology like online technology that I'm able to use outside of school as well. Um. So, I feel like I've gotten better definitely with my leadership. I'm able to … definitely with my presentation. I think that's really really good. Um. Talking in front of people and presenting ideas has really helped me, I mean I've been doing public speaking for a lot of my life, but it was pretty good.

Although Murdoc came into The Exchange with strong leadership skills from experience with leadership courses in karate, he credits PBL for improving those skills. Not only have those skills improved to a professional level, but his time management skills have improved. Murdoc credits the class for improving his technology skills as well. These skills—presenting, technology knowledge and implementation, time-management and planning—are all ones outlined in the CCSS (2010), whether in the anchor literacy standards or throughout with mention of 21st century skills and soft skills. They are the skills Zhao (2009 & 2012) mentioned throughout his texts as being those most valuable to global leaders. Although my initial thoughts on Murdoc were that he entered the class with strong capitals, he would probably argue that he learned more from the course than others learned from him.

Michael

"Over the next two years when I decide what I want to do for the rest of my life, I want to be a person who can help others and change the world. I feel like with The Exchange, I've gained. I want more out of my experiences from life than just, you know, just getting that pay check every two weeks."

When I first entered The Exchange classroom, Michael immediately stood out. He stood out not because he stands tall for a sophomore, reaching close to six feet, but because it was obvious from my first impression that Michael is an amazing young man. He comes from African immigrant parents, and he owns his roots in his surname. His personal style is a mix of prep and hip-hop, an interesting fashion compilation from early 90s rappers and today's hip-hop gurus. But besides his height and fashion sense, Michael more so stood out because it became clear, early on, that he was a leader among his peers.

In The Exchange Michael seemed to be a consultant of sorts. Not a day went by when he was not called from his project group to help another group or when he was not pulled into an impromptu tutoring session for an advanced math class. It became clear that Michael is a bright young man and many of his classmates respected him for it. So, when I sat down with Michael for an interview, I had preconceived notions of who I thought he was and how I thought the interview would go. I almost questioned if it would be an interview worth having because Michael seemed to be the type of student who would be successful in any given classroom, traditional or PBL.

But much like most of my experiences with my participants and my time in The Exchange, Michael's interview surprised me. Some of my preconceived notions were correct: Michael would most likely be successful in any classroom, as I found out through the murmurs of other students that he was ranked at the top of his class. However, what surprised me most was Michael's perception of The Exchange. He believed the experiences he gained from The Exchange far exceeded the experiences he gained in his traditional classes. Michael was going to be sure to capitalize on these experiences, experiences he believed put him at an advantage when it came to leadership opportunities.

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Much like the other participants, Michael joined The Exchange with an interest in trying something new and different. Although the class did not offer as many fieldtrips as he had hoped, he still stuck it out because of the skills he saw himself gaining:

> I mean, you know, as a sixth grader I learned how to use PowerPoint and stuff. I mean, it's not that impressive now, 'cuz like, I'm a sophomore, but back then it was like, "wow, I'm making all this stuff"; I might as well continue with it.

When asked if the technology skills were all he was gaining, Michael quickly expanded on his initial response. He explained that he learned to be more independent; he learned how to make the most of his strengths and weaknesses.

> I became more independent because of it, you know. I mean, I've always been an independent kind of person, but, you know, now I try to do everything I can on my own before I reach out to other people. You know? And that makes everything I do more unique, more me.

He later came back to this idea in the interview when asked how he approached each project in The Exchange:

> Sometimes, with one project, you need to take one of your weaknesses and make them stronger … but also, sometimes you take your strengths and make them even stronger. So, it really depends on what you need to accomplish during the project phase.

Michael's response indicated that the student-led, teacher-facilitated classroom allowed for more individualized learning, specifically with students exploring topics and concepts on their own before reaching out to others for guidance. This opportunity for students' learning to flourish

within their own created context is an example of less institutionalized influence on students'
education, as explained by Kramsch (2008). Kramsch mentioned how less institutional influence
on students' cultural capital allowed educators to better understand students' true successes and
failures. For example, less institutional influences on how students learn or the pace in which
they learn, or less influences on what is deemed literacy success. Michael even mentioned how
the projects allowed him to recognize his own strengths and weaknesses.

PBL's individualized learning provides a way to lessen institutionalized influences on
students' learning. Not only does this aspect of PBL correlate with Bourdieu's (1986) ideas of
institutional influences on cultural capital, but it aligns with the anchor literacy standards of the
Common Core (2010). When asked what type of texts he read in The Exchange, besides the
required novels and textbooks, Michael reflected on a specific project from the previous
semester, the Phantom Mask, a Kevlar bullet proof mask created for military personnel:

Like when we were building the Phantom Mask, we researched Kevlar and how it works
and how we should orient it, and then, you know, we find out from our research that we
need to layer it because the more layers you have, you know, the more effective it is, and
you have to research where you can buy if from, the cheapest price, so you know, you
kind of learn how to research it better because it is not always "go to Google and get the
first site."

In order to thoroughly research Kevlar to the extent that Michael described, he and his group
members focused on the literacy anchor standards of the CCSS (2010), specifically
understanding the validity and evidential support of sources. Michael's group was learning to

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weed through research and look for sources that contained the strongest support, the sources, as he mentioned, that are not always the first ones to show up on an internet search.

Michael further expounded on these skills while continuing his description of his research experience with the Phantom Mask project:

It's more like, we have to find the best source, the one that looks more credible, go for that .edu or .gov, trying to look for that best source that you can use to make your product as good as possible.

Interested in Michael's process of weeding out credible sources, I asked him if he thought the research he was finding consisted of difficult texts. He responded:

Yea, because a lot of times the really best articles are the ones you don't want to read …

So yea, it's hard to read at a higher level, to scan and find what you actually need, and so yea, I would say we all bring out a high level, and we are reading more challenging, more practical stuff than people would read in a traditional classroom.

Michael's comparison of the texts read in the PBL classroom versus those read in traditional classrooms piqued my interest. I probed further, asking him to compare the research process he implements in a traditional classroom to that implemented in the PBL classroom:

They [traditional classroom teachers] give you a rubric, you know, tell you about it, and then all you do is check it off, and check it off, and then you don't, you don't really put a lot of time into it; it's more like, "oh, let's go to the library for a little bit and do this really quick PowerPoint." But with The Exchange, you're trying to, you have to take this broad topic, take … make a specific topic out of it and then you create your own checklist and

you create your own calendar and, you know, you make your own checklist that you can

check off and then you create something that is more practical than whatever they're …

what you do in a traditional classroom.

It's more creating something that you care about versus in traditional you just …

it's just another thing that has to get done by next week.

Michael's comparison described the research expectation in the PBL class as one where students

are expected to take the broad concepts learned in class and refine those ideas into a specific

research topic. In order to come up with such a specific topic, many of the Common Core (2010)

literacy standards need to be addressed. For example, text interpretation is needed to breakdown

a broad topic into a more specific focus. Integrating content knowledge into a specific research

frame is a necessary skill when creating an innovative research question. Lastly, a student must

be able to read and interpret difficult texts independently in order to undergo the task of creating,

researching, and presenting a novel research idea (CCSS, 2010).

Although Michael's comparison of the research process in his traditional classes to that

of the PBL class explained the presence of Common Core (2010) literacy standards in the PBL

class, I still wondered if the students were learning more about the content by researching

independently. Michael responded to my question by referencing his experience researching

Genghis Khan:

Yea, it makes you…it helps you, you know, take the … connect. And then be able to

make better connections with your personal experiences, which, you know, helps you

kind of understand the topic better because you relate more to it.

> … if you can connect what he's [Genghis Khan] done to what you've done, or to
>
> what you've seen others do, then it makes it easier to remember and, you know, you learn
>
> better and you admire the history better; you admire the process and struggle that the
>
> historical figure went through because you can relate to it and see the importance of it.

It is almost common knowledge among educators that if students can relate to the information

and make it personal, then they are more likely to resonate with the information and internalize

it. Michael described just that. He is not the first participant to express how the information

seems to become more real when students research independently. Two of the other participants,

Carol and Tiffany, mentioned continuing research on their own out of genuine interest and

inquisitiveness.

However, Michael's response focuses on a much bigger idea than connection making; he

is focusing on learning from history and from the mistakes of the past. Not only is the

information Michael researching resonating with him because he is able to relate to it, but it is

probing Michael to think about these historical figures as more than just people from our past,

but as individuals whose stories can either help or hurt us as a society moving forward. Allowing

our students to think independently can help foster socially just classrooms, classrooms that

some researchers claim as the link between theory and practice (Duncan-Andrade & Morrell,

2008; Maloney, 2010 & Morrell, 2009). This independent research leads to projects that are

personal and real, making the information presented more personal and real.

These connections that Michael and some of the other participants talk about innately

making as they complete research in The Exchange seemed to be a common idea. Therefore, I

decided to ask Michael whether he thought the cross-curricular nature of the class had anything

to do with him making connections between the two courses in The Exchange: AP World History and Honors Language Arts.

> Yea, a little bit, in the writing, you know? Because in AP World the writing is more about "get all the facts out" and then, um, in Language Arts it's more about "how you write it." And then, you can be able to mix those two types of writing together and create something that, you know, uses all the content and is still appealing to the ear, you know, is interesting to read.

Michael's response correlates with the CCSS (2010) anchor standards as he explained differing contents having differing purposes in relation to text. His response demonstrated his ability to understand text purpose and then translate that understanding to his own writing, which is one of the highest literacy skills outlined by the CCSS (2010).

Michael's reflection on research in The Exchange covered many Common Core (2010) literacy skills, from understanding how to hone in on a specific topic from a broader idea, creating a plan of attack on getting the research done and a product created by specific deadlines, weeding through research and texts to decipher credible from non-credible sources, independently reading and understanding the text complexity of credible sources, and lastly, combining the standards and skills of the two curricular courses in the creating and writing of each project plan. These skills not only coincided with the CCSS (2010) anchor literacy skills, but they were the independent and self-directed skills needed to be successful in college and beyond.

Michael and I spoke extensively throughout the interview about the different skills he saw himself gaining in The Exchange through his project experiences. Many times, he referred to

the exclusive leadership organizations of which he is a member. Throughout our dialogue, we switched between the two topics regularly. Michael's own recollection of these two topics could not be explained better than through his own words. I felt that the following two monologues epitomize Michael's experiences. Before the first monologue, I asked him if he was always the type of person to join extra-curricular activities. His response:

> Um (pauses) I'm not sure, I don't think, not really. You know, me, I think of myself like, if I was in a traditional classroom, like if I was traditional, I think all my focus would be on my grades, you know trying to have that perfect transcript. But through The Exchange, I found that I love leadership. I love, you know, interaction with other people, creating products, like, you know, that people are going to be proud of and teach others. And through these experiences I've had with The Exchange, I've taken that, and gone to get other opportunities like SYL, I'm trying to get into NGSLT and stuff like that, and then I'm about to apply for this other program called MARC – which is like SYL – Metro Atlanta. And then, last night, I applied for this program called Brooks & Kings that Tiffany told me about yesterday morning, then I applied last night. And it seems like a good opportunity to work on the more business side. So I feel like The Exchange has, you know, shown me that I can be more than I could ever imagine, there are so many opportunities out there, because you never know what could happen from simple opportunities.

Michael's second monologue was in response to a specific question. I asked Michael if he thought the skills he gained in The Exchange were going to help propel him in the future:

I feel like my opportunities have kind of increased because when I apply for a program and they have the question "what makes you stand out?" I'll just talk about The Exchange because that's a program that not many people are able to encounter, so when I talk about it, it kind of makes me look more attractive to the program.

… there are a lot of programs that directly, The Exchange has helped me gain … do well in. Like last year, it was, we went to a program called BAM, it was, like, Blacks At Microsoft. Me and some other African American students … we were there on a Friday in February, I believe, last year. And I entered into the essay contest and then, it talked about "How can you increase, like, the opportunity to use technology, you know, use real world stuff in the classroom?" Then I remember I was looking up the prompt outside my house, you know, I was … I did it the night before, I was procrastinating, and I thought, "what am I going to talk about?" and thought, "why don't I talk about The Exchange?" So then I wrote about The Exchange, and I went; I talked so much about it. I think I went right at the word limit at first. And I turned in the essay, right? And then, when we went to the event, and they were announcing who'd won, I got third place!

And it was pretty cool because that's usually … usually freshman don't win; usually freshman don't even try. It's a junior, senior type thing. And to be able, as a freshman to go, and to win third place, you know, that was really … I was really proud of that, and I slapped that all over my resume, you know, "I won third place in this."

The joy that emerged over Michael's face as he recollected his experience of winning third place in the essay competition spoke volumes of how proud he was of that moment. However, joy was

not only on Michael's face in that one instance. Joy and pride were on the faces of all the students I interviewed; they were proud of what they had accomplished while in The Exchange.

Michael was a unique young man. There was a reason he belonged to so many exclusive leadership organizations: he stood out. However, as Michael explained, he thought it was The Exchange that helped him to stand out. It was not to say that The Exchange was the primary reason Michael was so successful. As mentioned earlier, he was at the top of his class, so propelling to higher limits would probably not be such a challenge for Michael. But what The Exchange seemed to provide Michael was a creative outlet to use his ingenuity and intelligence to create products that could be used in today's society (such as bullet proof Phantom Mask). I cannot help but wonder what else Michael and his fellow PBL classmates could create given more time and an opportunity. But more than that, I could not help but wonder how other students in The Exchange, those who were not necessarily at the top of the class or those who were not initially tracked to take AP courses, benefit from having a classmate such as Michael.

Tiffany Roxanne

"I do like it. I love it actually; it's … I wish I had done it earlier because I didn't really know exactly what it was about, so I kind of just heard things, 'Oh, they don't do anything, Oh, they don't … they're not as smart, or whatever…'."

Tiffany was completely new to the The Exchange and project-based learning. She had reservations about joining the class because, as her quote signified, The Exchange had a reputation among both students and teachers as being a waste of class time. The student-led, teacher-facilitated structure was foreign to many who worked at, attended, and were affiliated with public education. Tiffany Roxanne was involved at North Lake High School; she was a

cheerleader, participated in student leadership organization, and was a self-proclaimed social butterfly. However, Tiffany Roxanne did not need to self-proclaim her social personality. She had a bubbly and sweet personality that was infectious. It may have been Tiffany Roxanne's first year in The Exchange, but my observations of her interactions with classmates made her seem like more of a seasoned veteran.

As her quote showed, Tiffany Roxanne did not hold back from sharing her initial perceptions of The Exchange, but just as freely she admitted to her initial perceptions being more like misconceptions. Tiffany shared how she now saw the class so differently than she initially had: "But now I actually know about it, now that I'm in it; I can see that it's different." When I asked her to elaborate on how it was different, she replied, "I can see it's not just like…'Oh, let's go make a website about some random thing and have it not be related to school, but let's get a grade for it'." Within her response, Tiffany Roxanne began to describe her first project experience. I was eager to hear what she had to say, especially since her first project experience was her first PBL experience. Tiffany Roxanne's group was one of the groups I often spoke with during my first set of observations. I remembered from my observations that her group struggled with keeping to their timeline and completing the project to the specifications they initially planned.

Tiffany Roxane told me about her first project experience:

Um, I feel like it was a bit rough overall. In the end we did come together and we did get through it and our actual project was good, but the road to getting there was difficult. Because—it was because of—we had a bunch of different personalities in our group which it was kind of good but at the same time it was, it was like a love hate relationship

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with everybody. Because you kind of, it's good to see how other people think and how other people view things but at the same time it's like … conflict.

But overall I feel like when choosing groups for—if I could go back to my old self and tell myself something I would say, "Look for different things and have—be organized, the more organized you are the easier it'll be and it will, I guess, prevent some of that conflict." Because I'm not sure if you were in there or not that day but, or a couple of days, but there in that first project there were like screaming fests.

Tiffany Roxanne's first project experience was, as she said, rough. As a student completely new to PBL, Tiffany Roxanne had a steep learning curve to overcome. Many of her group members were part of the original cohort. Tiffany Roxanne not only had to learn how to navigate the PBL structure, but she had to learn how to work alongside new personalities. Although in any classroom students will be placed in new situations with new classmates, in a PBL classroom, these relationships are tested. They must withstand the duration and intensity of their projects. The project period in The Exchange was long: months, not weeks. Their products were not simple ones, such as a PowerPoint presentation or website that relayed learned information, the outcomes of most research projects in a traditional classroom setting. In The Exchange, a PowerPoint presentation or website was used as a tool to present an innovative product created by applying knowledge learned in class. Attempted products ranged from video games (coded by the students), published children books, clothing lines, furniture refurbishing companies, online tutoring forums, and more. Some of these projects made it to fruition while others remained an idea or a potential business plan.

These projects required brainstorming, planning, collaboration, and trust. Tiffany Roxanne's group had more lows than highs with their first project. When I asked Tiffany about her first project experience and whether she felt like she had to prove herself to others, she responded:

> Definitely. I definitely feel like I had to kind of prove myself and just show like, "Hey, I know you don't know me, but you're going to have to like trust me some because this is my grade too and I— I care."

As follow up, I asked if she felt like she learned a lot during the process. She responded:

> Oh yes, I learned … I feel like I developed problem solving skills better, and I just kind of— "suck it up buttercup," that kind of attitude. Even though this isn't fair, this goes against what the project was supposed to be, suck it up. You want to get a good grade, do it.
>
> And also, don't yell with someone, don't—like at first I was like, "You know what, don't talk—" and then I was like, I'm wasting this time. I feel like it really developed a part of my character more that I hadn't really tweaked on, touched on yet. So, I feel like, I'm really glad I took that away.

Tiffany Roxanne, unfortunately, learned the hard way, how to deal with difficult personalities. Although she chose her first group based on who she knew, she quickly learned that choosing friends was not always the way to go. The group had many disagreements. Some of these disagreements even turned into loud verbal altercations where teachers had to mediate. However, Tiffany Roxanne appreciated the growing pains that came with her rough introduction into PBL.

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As she mentioned in her above quote, it helped develop a part of her personality she never had to use in previous classes.

Tiffaney Roxanne's experience with her second project went much smoother. For the second project, teachers made students work with different group members. They were instructed to work with no more than 50% of their previous group. Tiffany Roxanne's second project group had seven members total, and three of the seven members, including Tiffany Roxanne, were from the previous group. Tiffany Roxanne transitioned into our conversation about the second project while explaining how the first group came up with their project. The first group decided to "play it safe." They kept to projects they knew worked; however, the second group was willing to think differently. Tiffany Roxanne explained the difference between the two groups. Her explanation of the first group's project process:

> Um, although we had a bunch of different ideas since they were in The Exchange before I was, they were like, "Oh, websites always work. Everyone does websites, books, games, or apps." So, they just chose from the top four, they chose a book. I was like, personally my idea, I was like well why don't we do birthday cards—choose birthday cards. Because there are always birthday cards for everyone like, "May God Bless You" or whatever, so I was like, well let's do this. And they were like, no. And I said, well let's do a spa or something like that, like relaxation, like a kind of place where you can meditate but you can also get like a lady feel to it, and you can bring in monogrammed bathrobes—I had it all planned out, but [laughs], but I feel like they just kind of stuck to what they know, you know. Stick to the status quo, don't really veer off. Like hey, these four things have worked before, let's do one again. I guess that's kind of good because you know it's going to get a good grade, you know how to do it, you know what you

already know, but at the same time you don't really … if you keep doing the same things you never grow and you never learn how to do new things. Which is where our second project, we did something totally opposite from that, which was like a clothing line.

We transitioned into her second project experience. She explained the product to me:

> We did a clothing line. Well it was kind of like empire based clothing, so something that. … Like um, I don't want to say older women and younger women, even though, like the way they dress, like the clothes they wear are different, I feel like they kind of have the same style.
>
> So we were going to do things that um, based off of ancient empires that could kind of come in and I guess make clothes out of what they used to wear, kind of modern—make them more modern.

When I asked how they came up with the idea, Tiffany Roxanne explained the organic nature:

> I—I don't know I feel like … oh! On the first day, we literally sat and had a 20-minute conversation about clothes. So, I feel like, yeah…
>
> We were just like, "Oh my gosh, I like this!" And we were like—talked about shopping and all kinds of stuff. The next day one of the group members came in and said, "I have it, why don't we do a clothing line?"

The girls came up with a clothing line as their product after bouncing around ideas like a reality television show, doggie clothes, and a cooking channel. Instead of going with one of the project ideas they had, one group member came in the next day and suggested they create a clothing line since clothes was an interest they all had. What started out as a social conversation, turned into a

great project idea. This is an example of the class's organic participatory nature. It leads to some of the best project ideas. Because of the encouraged participation, students are able to start from their interests, apply content knowledge, and then create an innovative idea. I asked Tiffany Roxanne to walk me through the project stages from collaboration to members' responsibilities:

> Because we had a larger group, we had seven people, I feel like we kind of worked. … Last time we kind of tried to divide and conquer … in our old project we tried to divide and conquer. We tried to like, ok these two people write, someone will draw pictures, someone will whatever, make a website. And we were like, oh that might work, but like, we didn't really realize we were, like, making one product so everything really needed to be done together. Because a person can't make a website off of a book they don't know yet. Someone can't write a book with no pictures. So, you know we really just tried to do everything together.

With the second project:

> So first we were like, you know, let's see what we can do because you know everyone in our group, we all have different body shapes. We all have different style, like taste in what we like to wear, what we enjoy wearing. We all have different shopping tastes; we're all different. But, we have like the same like, we're all females, we have that in common. And we have other things in common, like we're all very very—we're not too out there you know. We're not going to wear stuff that's like v-neck, long dress, whatever. So, first we were, like, let's go to stores, let's go to the mall. Let's not only find stuff that we think is cute, get it so that we can change it, but we didn't want to just buy something out of the store and be like this is our product. Everything that we did we took

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something else and changed it. We sewed it, one member dyed part of her dress. So, and also we had to do an interview. So, when we went out shopping we did our interviews with the same people. Like, "Hey what's in? What would you wear? If you could dress me right now what would you put me in?" And we also did research based on like old fashions, like back in different centuries. Like, um, what they wore in 18th, 19th, whatever century. That way we could say, you know, this trend is still here. The gold jewelry, like that's still there, let's include that because older people might like it and younger people still like it. That way we could have those similarities. After that we were kind of hitting our research paper very, very hard.

Tiffany Roxanne explained the differences in the two groups' dynamics, as well as their different planning styles. She explained the different avenues the groups took to come up with a product. While one group decided to play it safe, the other decided to try something new. When the first group tried to divide and conquer, they quickly realized their type of project was better served by more collaboration and group work. The second project, on the other hand, allowed for more individual work with deadlines for collaboration. Regardless of whether a project process was successful or how difficult it might have been, both project processes and the highs and lows that came with student collaboration exemplified participatory culture and the highs and lows that come along with collaboration. Tiffany Roxanne admitted to learning much about herself and her learning style from both processes.

As she concluded her explanation of the second project experience, she transitioned into talking about the research paper for the project; she admitted to disliking that project's paper. When I probed to find out why she didn't enjoy the research paper, she elaborated on her dislike for standardized research:

I hated it. I hate research, well not research I enjoy looking up stuff but I hate having to like, "Oh…" I do research wrong. I will read something, I'll find all of these articles in magazines and I'll read them and be like oh that's cool and I'll write it and remember it and then forget where I got it from. I just hate having to go back and cite it.

Tiffany Roxanne explained how she would rather verbalize her research in her presentations rather than by writing a research paper. I decided to switch our conversation's topic to research to hear her thoughts on how research functioned in the PBL classroom. I was interested in her response as this was her first year in a PBL classroom. I began by asking her to compare how research was implemented in a traditional classroom to how research was implemented in the PBL setting. Tiffany Roxanne had a lot to say about research expectations in both classroom styles, as well as how information was distributed in both types of classrooms:

Um, I feel like in a traditional classroom we had like, when it comes to research papers, we had more of like a broad thing. Like we had a general topic, but we had a broad thing that we could do it on. Now that its narrowing it down to history and we're kind of having to relate those two together … we're trying to find common ground between things that are completely different and it's kind of hard for me because, I mean, one, I don't like reading, so it's hard to kind of have to read one thing and kind of switch and read on another and then try to find whatever is the same.

In this quotation, Tiffany Roxanne is specifically referencing a skill outlined by the CCSS (2010), making connections between texts. The anchor reading standards specifically state the importance of analyzing two or more texts that address similar themes. Tiffany Roxanne's response specifically mentioned how difficult it was for her to find connections between two

topics. However, many of the other participants who had been in The Exchange since the beginning mentioned how they often found themselves making connections between topics not only in The Exchange, but in their other classes as well. Tiffany Roxanne continued to explain the differences in research expectations in The Exchange compared to her traditional classes:

> With the traditional classroom and The Exchange I feel like, I guess it's still research because research is research, but maybe it's just the way you have to do it. Because, The Exchange outlines you have to back up with every little thing that you get, whereas in traditional, they're like, "Oh, you got a paper, cool let me read it." And if everything isn't cited, that's fine, you know, it's ok you still cited everything. You know I feel like there's more leeway.
>
> I feel like in here we had like different requirements and of course we have like the same, like, oh you have to do a bibliography. Here it's annotated and we have to back up and like, "Hey, why did you choose this, why did you do this, why?" For everything we do there's always that "Why?"

I asked Tiffany Roxanne if she thought these expectations would help her in the future. She responded:

> In the long run it's probably a good thing, but at the same time you don't want to kind of like … well, I mean, personally I don't like it, but making me do it will probably help me when I get into college and get up higher in my education.

I followed up this question and asked her if she sees herself researching more with these projects in comparison to the type of research projects she had in traditional classes:

Yes, I have to… usually I'll know where to get information on stuff because we have broader topics outside in a traditional classroom. But in here, I have to go find this specific thing, this specific thing, this specific thing. Make sure I'm hitting off on everything, and also, I used to go and actually do more books… books, interviews, magazines, not as much online. Now it's just everything is online, every single source I have is online unless I have to have something that isn't. So, I feel like that's … it's good and bad because people make the internet, people make different sites and so if someone says something wrong and I go back and record it, now it's wrong.

Tiffany Roxanne brought up text validity, an anchor standard of the CCSS (2010). This provided a great opportunity to end our research conversations with one final question. I asked Tiffany Roxanne if she thought she learned a lot about research while in The Exchange:

Yes, yes. I've never really had a teacher like sit down and tell us, 'Make sure that your um, your sources have a publisher.' I did not know that until this year! I've been writing papers since 6th grade! Make sure that, um, make sure when you look they've got like a copyright year or whatever. I did not think that was important at all! Also, I've learned that whenever you do read—whenever you look up something I've learned how to look up things differently. So, if I'm looking for, um, I can't really, hold on let me think I'm going to give you an example… like when we were doing our first project I would literally just type in "Buddhism Facts" or whatever and go from there. Now I've learned to start going to like different college websites and looking at professors' notes and looking at um, I think it's Britannica? Yeah, looking at stuff like that and not just Googling and finding—and clicking on the first thing I see.

Tiffany Roxanne admitted to learning the more detailed aspects of research and citing in The Exchange. She learned how to consider different texts and validity of texts, research skills mentioned in the CCSS (2010) anchor standards. The skills Tiffany Roxanne mentioned in her above account included all the anchor standards listed under the CCSS (2010) Key Ideas and Details. These skills included being able to read closely and determine what the text says while citing specific textual evidence, determining central ideas and themes while summarizing supporting details and ideas, and analyzing how and why ideas develop in text. Besides referencing the skills mentioned in Key Ideas and Details, Tiffany Roxanne referenced the skills mentioned in Integration and Knowledge of Ideas, which include integrating and evaluating content present in different text formats, and evaluating arguments and text validity. While Tiffany Roxanne's time in The Exchange was limited, she seemed to gain research skills that will last her a lifetime.

We ended the interview with a focus on the class dynamic. I asked Tiffany Roxanne how people in The Exchange function differently than people in her traditional classes. This is what Tiffany Roxanne had to say:

First of all since we're in there for 2 hours I feel like we're closer knit. We work together more; we're forced to work together more. Whereas in Chemistry, you know, you go in there, you take notes, you do a quiz, and you leave. You don't really necessarily get the chance to talk around with people. I feel like it kind of makes like a … like a … Exchange family, really. And um, also, I feel we're more open to conversations, we see our teacher, we're closer to our teacher. Whereas with a different class, you go in, and if you have a question, 'Hey, um how do you whatever?' Whereas with Mr. Vincenzo, because he does lecture all the time, you can be like, "Wait, well what about that?" like

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"Hey, maybe this!" and it's just more of a discussion. It's more of like a, uh, it's not really lecture. It's more of like a relaxed discussion where you can kind of see other people's point of view on things and kind of get their questions and be like, oh I didn't really think about that. In a traditional classroom, you just write down the notes verbatim. Study the notes. It's like you do this, you do this. Kind of like that, like a repetitive cycle.

Tiffany Roxanne's last opinion on the nature of the classroom is more like an example of Jenkin's (2009) participatory culture. Almost every participant interviewed mentioned a familial type relationship in The Exchange. While relationships in traditional classrooms were almost non-existent, as stated by Tiffany Roxane, the relationships in The Exchange were more collaborative, accepting, and deep. Discussions during lectures were conversations that forced students to listen, understand, and respect the opinions and ideas of their fellow PBL classmates. These soft-skills then transferred to group projects where students again learned to collaborate with one another. Not all these collaborations were perfect, as Tiffany Roxanne mentioned with her first project group. However, even when faced with disagreements and confrontation, the students still learned to mediate through their issues and create a collaborative project that reflected shared ideas.

The participatory nature of the class that allowed for these student interactions is what provides an opportunity to discuss Bourdieu's relevancy to PBL. Classroom collaboration, comprised of both interpersonal interactions between students and text interactions through extensive research and presentations, reflected all aspects of Bourdieu's cultural capital. Students' embodied cultural capital was fostered within the participatory nature of the class where students' natural ideas were promoted and accepted. The students' access and interaction with text both inside and outside the class walls provided them with a type of objectified cultural

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capital that may not have been offered in a traditional classroom. Lastly, interaction between students and in some cases with people outside the class walls, provided a type of institutionalized cultural capital. The Exchange itself could even be considered a type of institutionalized cultural capital, as not all students at North Lake High School can state that they were part of an exclusive learning environment. However, the familial sense of the class that is shared by most of the students interviewed can be most fully understood in terms of Bourdieuian concepts. This familial quality seemed to be its own social capital. To these students, being part of The Exchange carried its own weight. These students saw their time in The Exchange as a privilege, an opportunity not awarded to all students, and to them, their experience was one that would last years after The Exchange was dissolved. Referencing Tiffany Roxanne's own words: this class was anything but the repetitive cycle experienced in most traditional classrooms.

Ava

"Honestly, like up until the first semester of ninth grade I hated it; I was like ready to drop out and then I did this one project and I'm like, 'I actually kind of like how this is going,' and so I decided to toughen it out, and I'm really glad I did because I love The Exchange."

Although she only entered the PBL cohort once she got to high school, Ava was no stranger to the program. She had an older brother who spent his freshman through junior years in The Exchange cohort and was currently completing his senior internship. But, Ava did not necessarily follow in her sibling's footsteps as some of the other participants; Ava did not join The Exchange until she entered high school, even though she had the opportunity to join in middle school. Ava was an interesting young lady; she was quite eclectic and of Indian-American descent: her parents migrated to the U.S. from India. She valued independence and

loyalty, and, like many teenagers, had a sarcastic personality. Her fashion style consisted of flannel shirts and ripped jeans with an uneven punk haircut and piercings. She was not labeled as academically gifted by public school standards. On the contrary, during the interview, Ava self-identified as an average student: a student who did not take AP courses.

The Exchange presented her with her first AP experience. With its cross-curricular structure, Ava had no choice but to take AP level Social Studies and Honors level Language Arts when she registered for the PBL cohort. While this could seem scary to some students, Ava explained that The Exchange's PBL structure gave her confidence to continue registering for additional AP courses. The dichotomy of a supportive yet independent environment provided Ava with the structure she needed to gain confidence in order to transition from an average student to an AP student.

The supportive side of the environment resonated much with Ava. One quality not initially noticeable about Ava was that underneath the punk, independent persona is a person with medical issues. I did not ask her to elaborate when she brought up this point about herself, but throughout our interview, she periodically brought up her excessive absences due to medical issues. It seemed that this bit of information was important for Ava to mention or for her to at least include in her experience descriptions of The Exchange. However, it was not describing the medical issues that were important to Ava; it was important to mention how her friends in the class helped her handle absences when these medical issues did flare up:

> …because I'm gone a lot … she [a friend] will write down my AP notes, she'll get my
>
> stuff from Dr. Grander if I'm missing quizzes or something. She'll keep me updated. So, I

think with The Exchange you always make a connection with at least one or two people that will have your back, you know?

Ava, much like some of the other participants, identified The Exchange's fraternal quality. Ava further specified this quality as familial:

And, The Exchange is kind of like a family. Like… I might not have had a project with some of these people but I still feel closer to them than I would with like somebody else in the class [a class not part of The Exchange] that I never talk to.

This comparison of the relationships in The Exchange to that of a family, specifically the closeness of the relationships among and between students, was repeated by multiple participants. In one way or another, this family type bond influenced the participants' experience and perception of The Exchange. For Ava, having strong relationships with other students in The Exchange gave her an ally, specifically someone who looked out for her when she missed school due to hospital visits or illness.

The familial aspect for Ava stemmed further than the relationship built with other students. She saw allies in the instructors as well. She mentioned a tough love student/teacher dynamic between her and the instructors. Dr. Grander, the Language Arts teacher, was understanding of her absences but she held Ava accountable:

Sometimes it's hard because I don't have a lot of free time at home. Like at home I spend most of my time at the doctor's office or at the hospital and so sometimes I won't have enough time to read the chapters. But if I talk with Dr. Grander, she'll give me extensions and so it works out.

Ava was adamant that these extensions were not given often. Although some students did take advantage of the freedom offered in a PBL class, Ava made a point to explain that she adhered to the integrity of the course, even though she was out a lot and could ask for more extensions if needed. Speaking to this integrity, she mentioned, "like people who abuse that power … we don't want to, but at the end, like, if they really don't do anything, you have to go to the teacher and be like, 'Hey, they're not doing anything'."

Ava explained how the instructors did a good job of assessing these situations by observing and interviewing students while they collaborate, and by having students complete member evaluations in order to ensure students were not taking advantage of the freedom. The purpose of this checks and balance system was to promote fairness from project to project and from group to group.

Ava was a big fan of the system; she believed it made the group projects more like real-world expectations:

> Well, I mean, in the real world you don't get to decide everything. You don't get to decide who your partners are, you don't get to decide who does the work and if you get stuck with somebody…like if your boss doesn't do the work then it's going to affect you. And you have to deal with mean people, you have to deal with people that don't work. You have to deal with … not our teachers [The Exchange instructors] because we got lucky and we did get good teachers but in some cases you have to deal with teacher that aren't so nice. So … and like sometimes it's not fair. Like… in The Exchange … because it's going so fast … if you're gone for two or three days you miss a couple of quizzes, you

miss a project journal, you miss like a group meeting and you're completely lost. And

that's how it is in the real world.

In this response, Ava showed familiarity with many of the issues she may face once she

graduates high school and moves on to college and her chosen career path. In her opinion, the

structure of the class was more realistic to industry standards than traditional classrooms are. As

she explained, in the real world, she would be expected to work with and deal with differing

personalities and work ethics. Ava referenced how she believed the class prepared her for

college. Because of her experiences within The Exchange, she has become confident dealing

with different instructors and working with people who are different from her, and she feels

confident in her ability to handle a fast pace class.

Ava believed the freedom of the course provided opportunities to create meaningful

relationships. When asked if she thought the group projects help foster the family-type

relationships she referenced earlier in the interview, Ava responded:

I'm not really sure … I think like because I'm just biased because of The Exchange …

because there is only two classes and so we are regular classes for the rest of our classes.

For projects in other classes we usually don't do group projects so much. I guess like …

you're only there with those people for like fifty-five minutes. Thirty five of it the

teacher's talking and the other fifteen minutes the teacher is yelling at you. So, you don't

really get to make those connections with those kids, but with The Exchange, it's like

every five minutes there is a joke going on. And it's like two hours of complete freedom

… honestly, With Mr. Vincenzo, like he's be in the middle of a lecture and I could like

get up and go to the bathroom. But with another teacher it's like … "Where are you

going? How long are going to be there? Write down your time" … you make a stronger connection with the teachers and the people. I like it better.

Ava not only appreciated the freedom because it gave her more independence, but she enjoyed the mutual respect between student and teacher that came from such an open classroom structure. Ava saw the long-term benefits in her growth as a learner and individual. It was as if being allowed to move and communicate freely in the PBL classroom provides students with a more authentic environment to grow and learn, an environment where schooling did not have such an effect on their cultural capital because students were able to act and interact more freely without having to follow as many rules as in a traditional learning environment; the type of rules that reinforced the teacher/student binary (Luke, 1996). When asked if she thought this freedom made her more responsible for her own actions, she replied:

> Yeah. I think … if you think about it … like we're in high school … for us, two more years and we're off to college. And they baby us in all of the classrooms, you know? It's like "leave your phone here, don't be gone too long" … but in college you don't even have to go to your class. It's like you need to know the material and be there on test day. So, I think The Exchange, it's like that … I'll be gone for weeks at a time and then I'm still expected to take the test if it's that day. So, I think it's the responsibility, kind of.

The independence Ava so greatly raved about was the same freedom she was not much a fan of at the beginning of her experience. Ava was accustomed to direct instruction, and she learned well in that environment. She admitted she would rather have direct instruction than more of a self-taught atmosphere; however, she explained that learning to survive in such a self-

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taught atmosphere better prepared her for college. When asked how she transitioned to the new learning style she replied:

> … it took me by surprise because that's how it was…because I learn better when they're [teachers] talking to us, but they never would. So, I was failing both like my classes. I didn't want to keep up with the project and then the language arts … but after time I was able to … once I finally just like got out of my head, "I'm going to stay here, I have to get over it, learn how to do it myself" … once I made that connection and I started doing the work, it kind of just got better.

She explained how this teaching style will aid her in the future: "if I were to make that transition in college I would have been lost."

This new-found freedom paired with classroom expectations aided in Ava's growth as a learner. She learned to adapt to a different learning style; she has evolved as a confident academic. Ava explained how she was beginning to see the signs of how The Exchange was different from other classes in terms of content:

> …with The Exchange you're mostly around technology and people. So it's kind of made me more tech savvy than I was earlier because we learn how to code; we have to learn how to do everything on the computer. So I've gotten good at it and so I was thinking about maybe doing like AP Computer Science next year and like honestly, two years ago I would have never thought I would've even considered it and now I'm actually saying, "Yeah, I'm going to take it!"

Ava never saw herself as a student with AP potential, but in The Exchange she has taken AP Human Geography as a freshman, she was currently taking AP World History as a sophomore,

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and she planned to register for AP Computer Science and AP Language as a junior! Her interest in computer science started in The Exchange. Most of her computer skills were self-taught. When asked how she learned to code, Ava replied:

> It was on me to figure it out. Like we had to make our portfolios online and it was … you had to code everything. If you want the background to be blue, you have to go in and change the coding and make it blue.

This is just another example of how the freedom of the class provided Ava with the confidence to propel herself into more intense and rigorous work.

In Ava's opinion, self-taught classroom expectations are the best way to prepare students for their futures:

> It forces you to grow up and realize that this is how the real world is going to be … Like I won't ask teachers too many questions, I'll kind of like stick to myself … I'll do all the homework and everything … I think it's preparing me for college and out of college and everything.

Ava saw the benefits of the class's freedom. Not only was it positive in her own learning experience as it pushed her to evolve her own learning style, as well as her collaboration skills, but it was positive in that she believed the class prepared her for college level rigor and expectations more so than a traditional classroom.

Ava's interview raised a lot of questions: Is the familial quality of The Exchange just as influential on a student as the cultural capital of one's inherent family? Or, was this familial or, rather, fraternal quality of The Exchange its own social capital? Luke (1996) explained the

power school has on a students' cultural capital. If The Exchange provided such freedom to students, could the influence of the PBL class structure be less conflicting with a students' cultural capital than traditional schooling? And, if The Exchange is its own social capital, could admission to this group provide opportunities for social mobility? The possible difference in the cultural capital or social capital provided by The Exchange than that of a traditional classroom is the students' resonation with peer-to-peer collaboration rather than teacher/student interaction, although Ava saw just as much value in the teacher/student interactions, as she did in the peer-to-peer interactions. The strictness of the teacher/student binary seemed to disintegrate when Ava spoke about her relationship with Dr. Grander.

What is to be said about a classroom structure that functions more like a family? Adults often refer to a "work family." The relationships built within work lives oftentimes becomes important to our development as contributors to society. So, it only seems natural that students feel the same way about their classmates. To Ava, the confidence gained in The Exchange and the allies she created were important; her learning community helped her survive academically, especially when battling health issues.

CHAPTER FIVE

FINDINGS

During the interviews and observations, I identified multiple themes that aligned with my research questions. These themes ranged from 3 to 4 ideas per research questions (Table 6). I reconstructed these themes in order to create 4 thematic headings. In the following section, I have addressed these four major themes in my analysis of findings. These themes included: The Exchange as its own field, The Exchange and social capital, Higher-order literacy— specifically through research within The Exchange—, and Possible transference of capital within The Exchange. The following section will address each of these themes while referring to the participants' descriptions. Below is a chart that aligns my research question to the themes that emerged during student interviews.

Table 7 Research questions in conversation with student themes

Research Question	Initial Themes	Reconstructed Thematic Ideas
1. How are students applying higher-order literacy skills within their participatory projects?	• Research as different from traditional class research. • Making connections between content areas. • Importance of citing sources and understanding text validity.	Higher-order literacy within The Exchange.

2. How are student projects a projection of their identities?	• Opportunity to research interests. • More organic process. • Learning life-long skills through collaboration, presentations, and technology.	Higher-order literacy within The Exchange. The Exchange as its own field.
3. How can students provide their own opportunities for social mobility through their participatory projects?	• Opportunity to research interests. • More organic process. • The class is like "family." • Real networking. • Lasting relationships. • Course opportunities.	The Exchange as its own field. The Exchange as its own social capital Possible transference of capital within The Exchange.

The Exchange as a Field

Pierre Bourdieu (1986) described a field as a system of social interactions; it is not a concrete area, and it is malleable. When I approached this study, I had preconceived thoughts of how the field would be defined. The students and I had differing ideas. I perceived the field as being more malleable than the students perceived it. Much like how I thought most of the opportunities for capital transference would come from interactions with people outside the classroom, I thought the field would include the social interactions that occurred with people outside the classroom. However, when I began to ask the students if the classroom provided them with opportunities to explore interests through interactions outside the classroom, they all focused on the skills they gained inside The Exchange. Most of the participants agreed that they joined to try something different. Francesca Sims was the only participant with previous PBL experience; she joined because she knew a PBL classroom would prepare her for the type of

classes she would take to pursue a career in nanoengineering. Her interest in a hands-on career led her to join a hands-on classroom.

Francesca Sims:

> Well I like project based learning a lot better because it is more hands-on learning, which is more like the field I want to go into, which is engineering. And that's a lot of hands on kind of thing. While in a traditional setting, I'm listening to more lecture, it's boring, I might fall asleep in class. I like to get up and move around.

> Yea, because in a traditional classroom, it is you and the teacher and they're giving you information and you do paperwork. That's all it is. And in The Exchange, it is more collaborating with other students and running into different problems and issues that you would rather run into now than you would want to run into later.

Murdoc, Carson, and Michael all referenced the skills they would gain being part of a non-traditional classroom. These skills were all soft skills: communication skills, interpersonal skills, and for Michael, computer skills.

Murdoc:

> So, I've always been good at that [presentations], but I think it brings it to more of a professional level. So, when presenting a project, you have to dress nicely, you have to have a presentation ready, you have to know specific things. And I think I definitely have improved on that. I improved on my time management as deadlines were set in place more than any other class. And I feel like other student relations uh… sometimes you

have to do a project with somebody you don't necessarily like, somebody who doesn't

necessarily work really hard, and so you have to kind of ensure even if they're not people

who work hard that they work hard for you. Or you put them towards something that they

can do, something they enjoy so that they will work hard.

Carson:

We've learned interview skills, which will obviously put us ahead. Then we have the

internship, like because we take three classes in two periods, I have an internship my senior

year, I mean that's huge just because when I graduate college … I'll already have a year

under my belt.

Michael:

I mean, you know, as a sixth grader I learned how to use PowerPoint and stuff. I mean,

it's not that impressive now, 'cuz like, I'm a sophomore, but back then it was like, "wow,

I'm making all this stuff"; I might as well continue with it.

I became more independent because of it, you know. I mean, I've always been an

independent kind of person, but, you know, now I try to do everything I can on my own

before I reach out to other people. You know? And that makes everything I do more

unique, more me.

Carol, Ava, and Tiffany Roxanne all attributed their growth as an academic to the Exchange.

Carol:

I started taking these gifted … even though I, myself, was not gifted, I started taking these gifted language arts classes with people who were gifted just because we were all thrown together.

I'm very thankful for the opportunity to start taking those difficult classes and push myself.

Ava:

…with The Exchange you're mostly around technology and people. So it's kind of made me more tech savvy than I was earlier because we learn how to code; we have to learn how to do everything on the computer. So I've gotten good at it and so I was thinking about maybe doing like AP Computer Science next year and like honestly, two years ago I would have never thought I would've even considered it and now I'm actually saying, "Yeah, I'm going to take it!"

Tiffany Roxanne:

Oh yes, I learned … I feel like I developed problem solving skills better, and I just kind of—'suck it up buttercup' that kind of attitude. Even though this isn't fair, this goes against what the project was supposed to be, suck it up. You want to get a good grade, do it.

While all their experiences may not be the same, all the students saw The Exchange as its own area aside from North Lake High School. It was, to them, its own entity. So, while I began this study with the thought that one real value of The Exchange was its malleability and the opportunities awarded to students to take their projects outside of the classroom, the students saw

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the confinement of the class as more beneficial. It was at this moment that I began to understand the social capital that may be associated with The Exchange. If it is indeed its own metaphorical structure, then it must have its own capital or worth. Its worth to these students were the skills they gained in the class. Whether it was honing in on leadership skills and communication skills as with Murdoc, Carol, and Michael, or if it was academic opportunities awarded through the program, like with Carol, Ava, and Tiffany Roxanne, or if it was because PBL was an environment in which the student felt most comfortable, as in the case with Francesca Sims, to all 7 participants, The Exchange provided them with skills. These skills were created, enhanced, or put to the test within the field of The Exchange.

When describing these experiences, the participants all reference ways in which they were improving, using phrases such as "I learned," "I improved," "I became better." While describing all these self-improvements, the students never mentioned a person influencing these advancements—not a teacher, a person in the community, or an individual of power. Instead, they referenced the class and its structure. To them it was The Exchange that provided these opportunities.

Project experiences were especially impactful for students to gain and improve these life-long skills. Carson, Murdoc, Michael, Francesca Sims, and Tiffany Roxanne all described projects that resonated with them. For Carson and Murdoc, who worked on the project together, the goal was to create an online resource sharing forum to promote collaboration between students and among teachers and students. Their hope was not only to fill a need they believed existed, but to leave behind a legacy. Michael's group created a Kevlar bullet-proof mask. This project allowed him to create a product that incorporated his love for science, while filling what

he believed was a need in the military industry. Tiffany Roxanne's favorite project was an idea that emerged from social conversations about fashion. And, Francesca Sims co-created a children's book she hoped one day to publish.

Murdoc:

Um, what we're doing is we're trying to make a school, by online, peer tutoring type thing. Um. So, there's all these teachers' kind of web pages. Like Mr. Vincenzo, he has a ton of stuff on his webpage, but people in Mrs. Chasid can't access that. They can't get that, so … so, we tried to get the OK of all the teachers to kind of compile all of this stuff into one area, have a discussion board where they can do… uh ask questions. Be like, "Hey. Parts of information, what's this all about?" Or specific things. Uh. We wanted to do it directly through the e-learning portal because that would have been really perfect 'cuz there are the discussions, you can do quizzes on there, I think, you can do a lot of stuff and put materials into folders. It was really good, we had it all planned out. We made a proposal on the first day. Me and Carson were so excited about it um, and then later on we talked to Coach T., uh we couldn't do it through e-learning portal because if you are to do that and you are to have people be able to write questions, you have to be able to moderate it and students can't get on to moderate or edit things directly in the portal so we're having to do it through an off source program, uh kind of program, it's Schoology, I don't know if you've heard of that. You might have. It's not as exciting because we don't get to make it ourselves. It's not our own, but we're definitely utilizing that and making that as great as we can. Close. And eventually maybe if it is a good idea, we can get teachers to work on it and put that up on the portal. Um, but I think the reason

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that I like this one so much is 'cuz I feel like it will have an impact and maybe once I'm gone, once I'm a senior and I've graduated, it will still be here.

Carson:

So, like where students can share resources, so if I have lecture notes for Mr. Vincenzo, then people who have Mrs. Chasid, who's the other AP World teacher, can have those same lecture notes.

Well, I mean, I know for my reasons, I think it's unfair that students have other resources versus other students, and that's why maybe some students succeed more than others. I know from Mrs. Chasid, I'm a worksheet type of person, just like, writing it down and down again; that helps me process it. And I know Mrs. Chasid does a lot of work sheets, but Mr. Vincenzo doesn't. So like, I'll get work sheets from her students and I'll do them too, and that's what helps me.

…but it's like, if I learn better with Mrs. Chasid, then I should be able to access her resources. Because in the system, now, for each class, you can't access other teacher's resources…since we're students, we can't. So, we're in the process of finding a website like it [the school's on-line forum].

Michael:

Like when we were building the Phantom Mask, we researched Kevlar and how it works and how we should orient it, and then, you know, we find out from our research that we

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need to layer it because the more layers you have, you know, the more effective it is, and you have to research where you can buy if from, the cheapest price, so you know, you kind of learn how to research it better because it is not always "go to Google and get the first site."

Tiffany Roxanne:

On the first day, we literally sat and had a 20-minute conversation about clothes. So, I feel like, yeah…

We were just like, "Oh my gosh, I like this!" And we were like- talked about shopping and all kinds of stuff. The next day one of the group members came in and said, "I have it, why don't we do a clothing line?"

Well it was kind of like empire based clothing, so something that … Like um, I don't want to say older women and younger women, even though, like the way they dress, like the clothes they wear are different, I feel like they kind of have the same style. So we were going to do things that um, based off of ancient empires that could kind of come in and I guess make clothes out of what they used to wear, kind of modern- make them more modern.

Francesca Sims:

Yes actually, I believe it was our last project with the writing of a children's book. I really liked the storyline we were going for, but because of the time we were given, we had to shorten it and condense it, and because of some of the problems we were having as a group, we had to change it a bit, so I'm thinking about taking that and editing it a little bit and making it a bit longer and see if I can publish it or do something during my own time, or if not, do something I can work on and keep in my file for myself.

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Within the field of The Exchange, the students explored personal interests. The participatory nature of The Exchange provided a platform for these interests to emerge during student collaboration. When participants talked about research in The Exchange, they mentioned it being "different." The difference was the opportunity to explore, connect, and apply content standards with personal interests. The freedom of PBL allowed for this exploration to occur. It provided the platform that teachers and students needed to promote interest-driven student production.

The Exchange as Its Own Social Capital

Social capital is defined as social relationships, which provide a gateway to privileged opportunities. These social relationships are normally with people of power, those deemed important to society, or those who have membership to select organizations. Country clubs, fraternities, and elite organizations have strong social capital. However, my time in The Exchange raised questions as to whether a classroom entity can have social capital. Initially, this idea never occurred to me, as Bourdieu specified the power necessary to contain social capital. However, the students perceived The Exchange as a group that carried power and its own social distinction. They spoke of The Exchange as its own select group, specifically referencing it as a "family." However, it is important to note that there were negative perceptions of The Exchange, specifically with students and teachers not associated with the class. Students within The Exchange were aware of these perceptions, and with some of the participants, it came up in their interviews. Francesca Sims and Carson both referenced the negative perceptions.

Francesca Sims:

…it was the group two years before us, they kind of gave us a bad reputation the way they handled the freedom. They were really wild about it, going off thinking they could do their own thing, and it gave us all a bad rep, so it followed those in The Exchange, those in the continued years, and people would also think that The Exchange gets all these extra things like that, and I guess people see us as favorites at the school or we get curves because of the projects we do, like learning curves.

Carson:

I don't understand the bad, like why people view The Exchange so badly, just because, like, I've been in it so I obviously adore it, just because all the stuff it's taught me. But I guess people on the outside think "oh it's an easy A," like "you just do a project."

People say we're not learning, but it's harder than a lot of my other classes, I think. Just, because, we take three classes in two periods. So we still have regular AP World we still have regular Language Arts, like the content, and then we have to apply that and make it something bigger, so it's, like, so much more.

Francesca Sims explained how the first cohort of students "gave The Exchange" a bad name. They took advantage of the student-led, teacher-facilitated nature of the class. Because of initial students who took advantage of the freedom in the course, later cohorts dealt with the bad reputation. Students, teacher, and even people in the community questioned the PBL program. Many of these misconceptions were formed from just a few students who never continued with the program. It may have been this "us" versus "them" mentality that created this family like quality among The Exchange students.

Multiple participants used the word "family" to describe the type of relationships built through interactions in The Exchange. Carson, Ava, and Tiffany Roxanne all specifically used the word to describe the class dynamic. Much like certain family names carry importance and power and create social capital, the family within The Exchange seemed to be creating its own social capital.

Ava:

> And, The Exchange is kind of like a family. Like … I might not have had a project with some of these people but I still feel closer to them than I would with like somebody else in the class [a class not part of The Exchange] that I never talk to.

> …because I'm gone a lot … she [a friend] will write down my AP notes, she'll get my stuff from Dr. Grander if I'm missing quizzes or something. She'll keep me updated. So, I think with The Exchange you always make a connection with at least one or two people that will have your back, you know?

Carson:

> We make connections even within [the classroom], and it will last.

> I don't know, like, we're all like one big family, so like, we all know each other, so I mean there's like networking within, but then we also, all of us are going out into the community to find different resources…

Tiffany Roxanne:

> First of all, since we're in there for 2 hours I feel like we're closer knit. We work together more; we're forced to work together more. Whereas in Chemistry, you know, you go in

there, you take notes, you do a quiz, and you leave. You don't really necessarily get the

chance to talk around with people. I feel like it kind of makes like a … like a …

Exchange family, really. And um, also, I feel we're more open to conversations; we see

our teacher; we're closer to our teacher. Whereas with a different class, you go in, and if

you have a question, 'Hey, um how do you whatever?' Whereas with Mr. Vincenzo,

because he does lecture all the time, you can be like, "Wait, well what about that?" like

"Hey, maybe this!" and it's just more of a discussion. It's more of like a, uh, it's not

really lecture. It's more of like a relaxed discussion where you can kind of see other

people's point of view on things and kind of get their questions and be like, oh I didn't

really think about that. In a traditional classroom, you just write down the notes verbatim.

Study the notes. It's like you do this, you do this. Kind of like that, like a repetitive cycle.

Carol specially used the word "networking" while referring to the relationships.

However, she made it a point to explain her idea of networking. She thought it to be more about

friends and lasting relationships, and not just the relationships created for personal advancement.

She explained how strong friendships create strong networks:

Carol:

I think networking should be about friends because if I ever have a later business

relationship with those people in the future, like with Alex or whatever. … If I see that

woman and she's at the head of an executive board and she sees me and I come in for a

job. … I'd have a leg up on everybody because of that friendship we have.

I mean, Alex doesn't do The Exchange anymore but … we're still like friends.

And if I see her twenty years from now … it's awesome.

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In fact, I don't think I even realized how much we had until now that I'm talking

about it with you. It's such an awesome experience, these relationships that I have with

all sorts of different types of people. Because high school is so cliquey … but I walk into

The Exchange and it's like … be with everybody! All sorts of different types of people. I

mean, you learn to get along.

It was interesting that Francesca Sims, Michael, and Murdoc focused on different

aspects of building relationships. While the other participants focused on the product of building

these relationships—the family dynamic, Francesca Sims, Michael, and Murdoc focused on these

relationships' creation. They explained the importance of learning one another's strengths and

weaknesses.

Francesca Sims:

I think it makes it easier to work on because you're physically looking at each other's

strengths and weakness while in a traditional class you're not looking at anyone's strengths

or weaknesses; the only way you can figure that out is through their grades, which ones are

higher and which ones are lower.

Murdoc:

I was warned by my sister to pick people who were good and then after the first year,

people will know who you are. People will know if you are good or not. Um, so, I kind of

took that to heart, so I tried to be as good as I can as a working person … a worker. So, I

think for the most part, I have always been that way. Especially in The Exchange.

I always picked people who were good, not necessarily the people I liked.

I like to pick people who are good at specific things. Like, I like to pick someone who, previously, that is good with computers and websites, so they can work on the website. People who are good with ideas.

Michael:

Sometimes, with one project, you need to take one of your weaknesses and make them stronger … but also, sometimes you take your strengths and make them even stronger. So, it really depends on what you need to accomplish during the project phase.

Francesca Sims, Murdoc, and Michael all used the words like "strength, "weaknesses," and "good" when referring to one another's and their own skill set as contributors to the class. However, how they spoke about one another's strengths and weaknesses differed in contexts. Francesca Sims explained how learning one another's strengths and weaknesses allowed them to form opinions beyond just a letter grade. Her comment demonstrated the students' perceptions of one another; the students placed importance on skills level and work ethic, not grades. Murdoc referred to the warning his sister gave him to choose group members based on talent. He explained that within The Exchange students earned reputations based on their talents and work ethic. What you did, not who you were was the most important. Lastly, Michael referenced how strengths and weaknesses evolved within the class and projects. There was always opportunity for personal and relationship growth.

The family bond created within The Exchange exemplified the strength of the relationships built within that class. These students created a loyal entity within their own school. The students who belonged to The Exchange gave power to the name. To them, The Exchange was an exclusive group who had a strong bond and created a lasting network. This network would continue far after they left the walls of North Lake High School and The Exchange. In Murdoc's words, "I thought I'd be good at it. And it turned out being pretty, uh … pretty profitable."

Higher Order Literacy within The Exchange

The Common Core State Standards, especially higher-order literacy skills, are the literacy thread of my study. They are difficult to bring into interviews with students. As such, I had to be creative on how to ask questions regarding literacy. Specialized terminology, such as "CCSS" or "higher-order literacy," did not necessarily make sense to high school students. Therefore, my questions used words such as "research," "difficult texts," and "research process." Jenkins' et al (2009) new literacy skills in participatory culture were also key words the students understood. Terms such as "brainstorming," "collaborating," and "creating" were part of their daily vernacular and terms they referenced throughout our interviews. I oftentimes started the conversation asking the participant to explain a specific project to me. One of the best way to engage in conversation about literacy was to have the students compare research in The Exchange to research in their other traditional content classes. It was the question that asked for a comparison between the two classroom structures that elicited the most interesting responses.

Students explained that two main differences between research in traditional classes and research in The Exchange is on "making connections" and that research in The Exchange was "different from traditional classes" because of different assignments, different texts, or different research topics. Carol, Michael, Tiffany Roxanne, and Ava all focused on connection making. Francesca Sims and Carson instead explained the difference between research expectations in a traditional classroom versus those of The Exchange.

Carol:

When you're coming up with a project idea … that's the hardest part … you have to connect it with the topic.

They don't teach you how to do that in normal school. They don't teach you how to connect your math with your science. Like I'm sitting there in science and I'm like "Oh, that's like the math thing we're learning in geometry right now" and so I understand it more. Or sitting there in biology, I'm like, "Oh, that's like the AP Human that we're learning about, the S curve and the J curve." … I think it's just taught me how to connect across borders. Because if you can connect … let's see … Renaissance fashion ideas with a magazine or … a company that moves people from place to place with migrational movement … or, I'm trying to remember all of my projects now … or the separation of Texas from the United States or when it became part of the United States, what it was like before and after—that occurred with a radio project—then those connections just kind of start to happen. It becomes a habit.

But I know that for me it's fostered it even more. I think I can honestly say that now that I think about it. It's honestly fostered the ability to make those connections. Even if it wasn't natural, I think that other people do it too because they have to, it's for

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the class … I think we've all learned to make those connections. Like especially when a group of Exchange kids gets together. We just need that one spark. Once those sticks are rubbed together and we get that one spark, we can take that spark and make three billion fires because we learn to make those connections. We've learned how to work as a team and make stuff happen.

Michael:

Yea, it makes you … it helps you, you know, take the … connect. And then be able to make better connections with your personal experiences, which, you know, helps you kind of understand the topic better because you relate more to it.

… if you can connect what he's [Genghis Khan] done to what you've done, or to what you've seen others do, then it makes it easier to remember and, you know, you learn better and you admire the history better; you admire the process and struggle that the historical figure went through because you can relate to it and see the importance of it.

Tiffany Roxanne:

Um, I feel like in a traditional classroom we had like, when it comes to research papers, we had more of like a broad thing. Like we had a general topic, but we had a broad thing that we could do it on. Now that its narrowing it down to history and we're kind of having to relate those two together … we're trying to find common ground between things that are completely different and it's kind of hard for me because, I mean, one, I don't like reading, so it's hard to kind of have to read one thing and kind of switch and read on another and then try to find whatever is the same.

Ava:

Yeah. Because it took me by surprise because that's how it was … because I learn better when they're [teachers] talking to us, but they never would. So, I was failing both like my classes. I didn't want to keep up with the project and then the language arts…but after time I was able to … once I finally just like got out of my head, "I'm going to stay here, I have to get over it, learn how to do it myself" … once I made that connection and I started doing the work, it kind of just got better.

Carol, Michael, and Tiffany Roxanne all explained how the projects required them to make connections between the content standards and the product they created. Connection-making is a part of higher-order literacy standards and research. The CCSS College and Career Readiness Anchor reading standards all refer to making connections whether it is through text inferences, finding similar themes across multiple texts, or determining text validity. These varying types of connection-making align with varying elements of participatory culture as well. Jenkins' (2009) new literacy skills include "judgment," which is the ability to evaluate the reliability and credibility of different sources. Another skill is "appropriation," which demonstrates the meaningful sampling and mixing of content. Carol, Michael, and Tiffany Roxanne all referenced these new literacy skills as being a large part of what made research different in The Exchange compared to their traditional classes. Ava, however, referenced connection making in a different context. Her *aha* moment in The Exchange was once she made the connection between her work ethic and her ability to succeed in the class, particularly in a PBL class since she initially saw herself as someone who learned better with direct instruction. It was this connection that allowed Ava to see her learning ability and learning style in a new light. It was then that her approach towards the projects changed for the better.

Not only are these standards aligned with the idea of making connections, but they aligned with the students' descriptions of the research proposals and research documents they were required to complete for each project. From the students' responses, the breadth and depth of research became clear. For each project period, the students were required to complete multiple research documents. These documents included project planning timelines, extensive annotated bibliographies, and a synthesis paper. The research documents are what made the research expectations so different from research in a traditional classroom, as students were expected to produce these research documents for each project. It was the research topics that differed from traditional classrooms, especially since the students in The Exchange were required to create an innovative product that allowed them to apply their content knowledge. The Exchange was a research driven class; research skills were applied during all parts of the project: from brainstorming, through planning, to creating. The students' research process evidenced multiple new literacy skills, such as collective intelligence, play, negotiation, and simulation (Jenkins, 2009). The brainstorming stage aligned with the skills of collective intelligence, play, and negotiation as the students worked together to collaborate and share information while creating a product that filled a need. "Collective intelligence" and "negotiation" are terms for collaboration, the ability for people to interact and work towards a common goal while understanding each other's differences. The term "play" refers to experimentation and problem-solving and aligns with "simulation." Both new literacy skills are evident in the planning and creating stages as the process simulated real-world production, from the research proposal to creating an actual tangible product. The collaborative nature of the course, with its focus on participatory culture, provided an opportunity for students to apply new literacy skills more regularly than they did in their traditional classes. These participatory-focused literacy skills

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allowed for more exploration and learning through play, which promotes a higher level of

learning and students are reaching the highest level of Bloom's taxonomy levels of thinking,

which is to create. Tiffany Roxanne and Francesca Sims explained the differences between the

two class structures:

Tiffany Roxanne:

> With the traditional classroom and The Exchange I feel like, I guess it's still research
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> because research is research, but maybe it's just the way you have to do it. Because, The
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> Exchange outlines you have to back up with every little thing that you get, whereas in
>
> traditional, they're like, "Oh, you got a paper, cool let me read it." And if everything isn't
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> cited, that's fine, you know, its ok you still cited everything. You know I feel like there's
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> more lead way.
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> I feel like in here we had like different requirements and of course we have like
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> the same, like, oh you have to do a bibliography. Here it's annotated and we have to back
>
> up and like, "Hey, why did you choose this, why did you do this, why?" For everything
>
> we do there's always that "Why?"

Francesca Sims:

> It's not so much that it's a higher level, but it's the different information we're looking at
>
> like how to make proposals or how to create the project itself, it gives us a train of
>
> thought differently than in a traditional classroom where it's, "this is how we're reading,
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> this is how you do it, memorize it."
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> Because we're trying to build products that are not already made or something
>
> that is new and that we could probably, in the future, sell to future investors, or just a
>
> small working idea that sometime in the future could do something.

We're also reading other outside sources, like websites and different books that normally people wouldn't pick up and read for fun. It's to gather information that we would definitely need to create a product and the product can be anything from a game, different kinds of games, like a board game or an original game, or it can go to an actual product like um, what's it called, like something that is given to the community, like an event for the community.

Carson's explanation of the research process provided a reference as to the types of research assignments the students completed, the amount of research they completed, as well as the documents required for each project period. She described, research documents, research paper, research presentations, and a physical product as all the assignments required for each project period. It was this process that the students described as being different from the research expectations in their traditional classes.

Carson:

You see we've written three already [research papers]! We've written three already this year, and last year I think we wrote six!

You have reflections, we talk about like how we think the project is going, how we feel if we need help we can ask, we have like a pre—like we have a research document where we just type out all of the research, it doesn't have to be sentences, it's just bullet points that we get … and then we convert that into a research paper.

So, those are two separate things, we always have our presentations, and then your product is physical, then you have to turn that in too.

It's just that there's so much I take out of The Exchange that I wouldn't get out of regular class; like, in Language Arts, people read books, you do grammar, you do vocab,

but, like, in our Language Arts classes we've learned how to write research papers, which I'm sure you do in others, but like, we've been able to apply our own passions to those research papers…

So we obviously have to be motivated, by ourselves, to do stuff like that.

But we motivate each other to do stuff. So, but, I mean, you obviously have deadlines within the projects, so, by April 3rd I have to have a Project Reflection in, by April 20th I have to have my research document in.

So within the long span of the project we have minimal due dates, and then like the overall project is the last due date.

The last common idea brought up among the participants was the importance of citing sources and gauging source validity. This idea came up when students compared research in a traditional classroom to research in The Exchange.

Michael:

It's more like, we have to find the best source, the one that looks more credible, go for that .edu or .gov, trying to look for that best source that you can use to make your product as good as possible.

Yea, because a lot of times the really best articles are the ones you don't want to read…

So yea, it's hard to read at a higher level, to scan and find what you actually need, and so yea, I would say we all bring out a high level, and we are reading more challenging, more practical stuff than people would read in a traditional classroom.

Francesca Sims:

Yea, I think so, like we all basically know Wikipedia is not a good source, because you can easily edit that, and sometimes we look at the sources and how the information is written, like if it is written with really small words or easy words, then you know it's not credible all that much.

Tiffany Roxanne:

Usually I'll know where to get information on stuff because we have broader topics in a traditional classroom. But in here, I have to go find this specific thing, this specific thing, this specific thing. Make sure I'm hitting off on everything, and also, I used to go and actually do more books … books, interviews, magazines, not as much online. Now it's just everything is online, every single source I have is online unless I have to have something that isn't. So, I feel like that's … it's good and bad because people make the internet, people make different sites and so if someone says something wrong and I go back and record it, now it's wrong.

I've never really had a teacher like sit down and tell us, "Make sure that your um, your sources have a publisher." I did not know that until this year! I've been writing papers since 6th grade! Make sure that, um, make sure when you look they've got like a copyright year or whatever. I did not think that was important at all! Also, I've learned that whenever you do read—whenever you look up something I've learned how to look up things differently. So, if I'm looking for, um, I can't really, hold on let me think I'm going to give you an example … like when we were doing our first project I would literally just type in "Buddhism Facts" or whatever and go from there. Now I've learned to start going to like different college websites and looking at professors' notes and

looking at um, I think it's Britannica? Yeah, looking at stuff like that and not just

Googling and finding and clicking on the first thing I see.

Michael, Francesca Sims, and Tiffany Roxanne all referenced text validity while explaining research in The Exchange. They felt The Exchange prepared them with the skills needed to evaluate sources. Michael explained reading difficult texts, and how the best sources were oftentimes the hardest sources to read. He used the words "credible" and "best source" to explain his process in finding the best sources. Francesca Sims focused on the importance of how texts are *written* and whether they can be *edited* by anyone, such as happens with Wikipedia. "Gauging text validity" and "citing textual evidence" are both terms referenced throughout the CCSS and in Jenkins (2009) new literacy skills; therefore, The Exchange's field exemplifies both the CCSS and Jenkins' new literacy skills. This overlap demonstrates how cross-curricular projects in a PBL collaborative class are able to heighten students' higher-order literacy skills while allowing them to engage in participatory culture.

Tiffany Roxanne's response covered multiple aspects of research. She admitted to her traditional classes not holding her accountable for standard research practices. At one point in the interview, she even said she hated research, and then followed up with a chuckle, explaining that she hated the process and not the actual research. Tiffany Roxanne probably disliked research because she did not have much effective guidance in the past. Her response demonstrated the knowledge of proper research methods she gained while learning in The Exchange. She understood the importance of sources having a publisher and a copyright year, and that she should search for sources beyond Google. What Tiffany Roxanne learned from research in The Exchange far exceeded only understanding research expectations. The project planning phase required students to apply research skills not always required in traditional classroom research.

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The participatory nature of the course expects student to direct their own research while collaborating to create an innovative product. These research steps align with all of Jenkins (2009) new literacy skills and include the course's CCSS literacy skills. Although students did not directly reference all new literacy skills in their interviews, all the skills were present in their projects: brainstorming and collaborating to come to a consensus; planning, delegating, and designing a research proposal; and creating a tangible product. The Exchange's research process requires a high level of thinking, communicating, and creating because it focuses on student collaboration and independent research.

Murdoc, on the other hand, spoke about research in a different manner. He focused more on the standardization of research, specifically within The Exchange. As a teacher, it was interesting to hear his thoughts on how he though research was forced, even in The Exchange. A self-identified natural researcher, Murdoc opened the research conversation with a story about how he always researched interests as a child.

Murdoc:

> When I was a kid, I used to do research. Very weird kid! I don't know why. I just did. I would do research on random topics. My friend, his dad was Australian, so when I went to his house once, before I went, I did research on koalas. I had a research paper about koalas with like WordArt on it! It was great and I loved things like that! I don't know why. I guess it was kind of … I have that kind of still … I still like to be curious about things when I research them. And that was good, and I feel like the research could be done better in The Exchange. 'Cuz sometimes its things that I'm not always too interested in that I have to research.

Although Murdoc did not enjoy researching topics that were not of interest to him, and he thought research could be implemented better in The Exchange, he did admit that completing the research process to the specifications for the course did improve his ability to complete research according to class standards and expectations. However, he was not sure if his research skills overall improved.

Murdoc:

> We started off not really knowing what we were doing, but in like a month or two, we knew what we were doing. I'm not sure, necessarily, if I've improved in my research skills. I've definitely improved in doing things the way Mrs. Grander likes them. So, that's good. But necessarily with specific, like, researching as a whole … I'm not sure if I've gotten better at it, like getting more efficient with finding sources and stuff like that because, I think it's standardized. It's so standardized that you have to do it a certain way. You to have your synthesis a certain way, you can't … it's supposed be something, I don't know, enlightening, something new. And, the first time, I thought she was looking for something that was, "This is a synthesis, this is what I researched. Here is my research just in paragraph form." Um, and, so … I was kind of iffy in the beginning. It's getting more interesting, definitely, now that you have to kind of form kind of an argument in your papers. But, I still feel like it's standardized. It's … you pretty much have to do the same every time. So, I'm not sure if I'm getting better at research as a whole. I'm definitely getting better at research for her, and if that's how research is, then I'm getting better. But I mean, there's tons of different kind of research. There's research for different things. I feel like research for different topics should be different, but in this,

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it's all the same. So, when I'm researching bullying and revolutions, two complete

different times, I feel like the synthesis should be completely different. Some should be

more factual based, some should be more like, "This is happening and guess what

happened." So, but it's all the same, so. I think I, I babble too much ... I feel like I am

getting better at research, but it's very standardized and I don't have much freedom with

the research that I do.

What Murdoc may not have realized was his response demonstrated his knowledge in research.

Although he may not have liked the standardization of research, the steps he completed while

researching in The Exchange were the steps in the research process. However, I understood

Murdoc's discouragement with research in The Exchange. As a student-directed, collaborative

classroom, he did not think research should be standardized. However, even The Exchange was

not free from outside influences. The field of The Exchange was under the umbrella of the field

of North Lake High School, the county district, and the national curriculum standards, The

Common Core State Standards.

Table 8 Higher-order literacy in The Exchange and in traditional ELA classrooms

Higher-order Literacy within The Exchange	Higher-order Literacy within traditional ELA classrooms
In The Exchange, the start of the research period begins with an assignment sheet presented by one of the teacher mentors. This project sheet provides guidelines for the research objects. These guidelines include the different assignments to be included in the product; they do not, however, provide a prompt or teacher directed objective. It is up to the students to decide on the product and how the product will address the content	In a traditional classroom setting, the start of the research period usually begins with a teacher directed prompt or topic. Although group research is sometimes implemented in a traditional setting, individual research is more common. Most traditional English Language Arts classrooms do not implement more than one research paper a semester, so teachers often have students work individually to ensure that each meets the classroom

standards for the course. The begin this process, students collaborate and brainstorm to create a project schedule. In this schedule, all students have their own objectives. This first step is carried out by students networking with their classmates to create project groups. In these groups, students research information about their product. The goal then becomes creating their product. Students collaborate while judging, assessing, and criticizing both print and non-print sources. Non-print sources include online articles, multi-media sources, and interviews. The non-print sources allow students to navigate across various media, as well as interact with subject matter experts via face-to-face or on-line interviews. Researching print sources provides an opportunity for students to evaluate source validity. Once students gather the necessary information, they create their product, which is a tangible product that is filling a need in society. The product can be an idea or even a video game that aids in learning through play. During the creation process, students are responsible for creating a project timeline. Each member is allocated specific responsibilities. Each group member creates an annotated bibliography for all sources used and writes a synthesis research paper. This portion of the project period allows students to create a product that demonstrates their shared ideas and individual contributions while demonstrating the research process that went into creating the product. Once the product is created, students present their creation to the class, and in some cases at a community event. This is an opportunity for students to defend their product and justify the need for such a product. The entire product period provides students with an

academic standards. Once students are given the research objective, their individual research of print and on-line sources predominates the rest of the research process. Non-print sources may be suggested, but most traditional classroom research focuses on print and on-line sources. These modes of information provide opportunities for teachers to instruct evaluating text validity. The research project oftentimes requires annotated bibliographies or works cited pages, depending on the classroom grade level and standards. Once students research and compile sources via annotated bibliography or works cited page, students undertake a writing process to demonstrate their understanding of the research process. This process includes: brainstorming, drafting, rough draft, and final draft. Depending on the instructor and classroom, students may participate in peer editing and revision. The research project's final product is oftentimes written. What type of paper students write reflects the grade level and standards for that grade level. These written products include papers that are informative, persuasive, synthetic or analytical. Synthesis and analytical written products are usually reserved for upper grade levels and advanced classes. Although some classes may have students present their findings to the class via a class presentation, this step is not common in a traditional classroom.

| opportunity to simulate industry collaboration and creation. | |

Transference of Capital within The Exchange

Since the participants talked about The Exchange as its own exclusive group with possibilities of providing its own social capital, it raised the question of how much students' interactions within The Exchange influenced the transference of capital. Luke (1996) mentioned literacy as a key to social mobility. The anchor reading standards of the Common Core State Standards defined the literacy standards for the study. However, besides reading and writing literacy being a strong component of the Common Core, soft-skills were mentioned as career and college ready skills. All of the participants referenced soft-skills in their interviews. Most of the time the topic came up when asked what skills they learned or improved upon during their time in The Exchange. As the students referenced the participatory nature of the class when asked this question, I began to question how soft skills related to student interactions. These soft skills, which revolved around collaboration and student interactions, was the most important skill to these 7 students. It became clear through their responses that the skills they learned from these interactions were becoming deeply part of them, not so much that these skills were not already a part of them, but more so that these skills were affecting them beyond social interactions. To label the significance of these students' interactions would simplify it. From the responses of the participants: these interactions were teaching the students how to survive and excel both in college and in their future careers. However, three thematic ideas were mentioned in their responses. These thematic ideas related to the possibility of capital transference between the students within The Exchange in the following ways: the appearance of true personalities during

collaboration, social skills that improved because of The Exchange, and opportunities that arose because of The Exchange.

The following responses from Carol and Carson not only focus on the personalities within The Exchange, but these two participants referenced one another in their response. Carol and Carson did not see eye-to-eye. Carol had strong conservative values, and Carson respected Carol's values but struggled with understanding them. Both girls, unknowingly, referenced the same conflict in their interviews. Although they did not agree on everything, the respect they had for one another was obvious.

Carol:

> But when you're in The Exchange stuff comes up. Like you get squeezed and the gunk comes out … I think it has … it brings up questions because in those situations when that pressure is squeezed it makes you who you are because it's in those moments of trial and those moments of challenge that you really see who this person is.

> But it's like yeah, not many people understand that [personal principles] and she's [Carson] one of those people that I get to learn how to be friends with … I don't want to say deal with but how to work with because I'm going to go out into the workforce and I'm going to have to work with people like her. I choose to work with people like her.

Carson:

> We just we don't always see eye-to-eye, like religiously, like she's very like strict in her religion and I'm like, "you gotta expand." It's like we were doing a magazine as one of our projects like in the beginning of this year. And I wanted to do a Horoscope, you

know? A fun little Horoscope, and she was yelling at me just because it is against her religion. So, you know, I've learned to take a step back and be like, "okay, you know, that's not a big…" like, "in the grand scheme of things, that's not a big battle."

It's difficult, because we have a lot of strong-minded kids in this class, and everyone is such—you have your creative thinkers, you have like your technology, so with different personalities it's hard to work it out sometimes, but it always pans out.

Carol and Carson in their own ways explained how The Exchange reveals true personalities. As Carol nicely explained, in The Exchange, the gunk comes out and reveals people for who they really are. Collaboration can bring people closer or it can tear them apart. As collaboration created participatory culture within The Exchange, the students learned from one another's differences. As students learned to understand and accept one another's ideals, principals, and personalities, they were learning to understand one another's habitus. These moments of conflict, though possibly as small as a dispute over a Horoscope article, taught Carol and Carson to respect one another. They not only learned to respect one another, but as they explained, it taught them to choose battles wisely and to choose people based on strong qualities they saw in a person rather than qualities with which they conflicted.

When the participants were asked about the skills they improved during their time in The Exchange, all of them referenced interpersonal skills. They said they learned more from working alongside others and learning to work alongside others. They all deemed this skill as the most important college and career readiness skill. Although they did not refer to the skills as college and career readiness skills, they mentioned similar ideas, such as references to the "real world," "working with people," "developing character," "leadership," and "independence."

Carson:

100%! Like, there's so much that I've learned. I've learned how to work with people that necessarily … like our personalities don't match, but we still work together and we still make a wonderful product. So obviously, I've learned the skill of, I guess being a people pleaser, that kind of a sense. We've learned interview skills, which will obviously put us ahead. Then we have the internship, like because we take three classes in two periods, I have an internship my senior year, I mean that's huge just because when I graduate college … I'll already have a year under my belt.

Ava:

Well, I mean, in the real world you don't get to decide everything. You don't get to decide who your partners are, you don't get to decide who does the work and if you get stuck with somebody … like if your boss doesn't do the work then it's going to affect you. And you have to deal with mean people, you have to deal with people that don't work. You have to deal with … not our teachers [The Exchange instructors] because we got lucky and we did get good teachers but in some cases you have to deal with teacher that aren't so nice. So … and like sometimes it's not fair. Like … in The Exchange … because it's going so fast … if you're gone for two or three days you miss a couple of quizzes, you miss a project journal, you miss like a group meeting and you're completely lost. And that's how it is in the real world.

It forces you to grow up and realize that this is how the real world is going to be…Like I won't ask teachers too many questions, I'll kind of like stick to myself…I'll

do all the homework and everything…I think it's preparing me for college and out of

college and everything.

Francesca Sims:

Besides communication skills with different personalities that can affect mine in a

negative or a positive way, it [PBL] also gives me an idea of how [to work], not just in a

working field, but just work in general, because you're going to have to do certain things

that you don't want to do, and it still has to get done, and you have to give up your

differences, and it has to get done.

Tiffany Roxanne:

And also, don't yell with someone, don't- like at first I was like, "You know what, don't

talk—" and then I was like, I'm wasting this time. I feel like it really developed a part of

my character more that I hadn't really tweaked on, touched on yet. So, I feel like, I'm

really glad I took that away.

Murdoc:

Yea, I feel like I've tried to get as much as I can out of The Exchange. I enjoy the

projects. I've gotten a lot better with technology like online technology that I'm able to

use outside of school as well. Um. So, I feel like I've gotten better definitely with my

leadership. I'm able to … definitely with my presentation. I think that's really, really

good. Um. Talking in front of people and presenting ideas has really helped me, I mean

I've been doing public speaking for a lot of my life, but it was pretty good.

Michael:

> I became more independent because of it, you know. I mean, I've always been an
>
> independent kind of person, but, you know, now I try to do everything I can on my own
>
> before I reach out to other people. You know? And that makes everything I do more
>
> unique, more me.

When all the students interviewed used these words and ideas, it became clear that the field of

The Exchange was not only providing them with skills to be successful in the "real world," as

they said, but also that they were learning these skills from one another. The possibility for social

mobility and transference of capitals was not between the students and outside influences; the

transference of capitals was happening in the participatory nature of the class, in the student's

social interactions and conflicts.

The experiences dealing with social interactions and conflicts, however, did aid in

opportunities outside the classroom as well. One of the reasons some of the students, like

Francesca Sims and Carson, joined The Exchange was because of the internship opportunity

available during senior year. Francesca Sims was quick to bring it up in her interview. In her

response to the first question I asked each participant, which was why they joined The Exchange,

she brought up the internship:

Francesca Sims:

> Oh, and another reason I joined The Exchange was because of … I heard in our senior
>
> year we get internships and that's something colleges really look for. Internships in the
>
> field that you want, even if it's not even in your field, if you've had an internship, that's
>
> really good to look forward to, and it also gives us exposure to not a school life, but that

reality or the world itself, and in order to get the job you have to have resumes, and we

learned how to make one last year and I'm thinking about editing mine.

Carson mentioned the interview skills and the opportunity for the internship as opportunities that

will put them ahead.

Carson:

We've learned interview skills, which will obviously put us ahead. Then we have the

internship, like because we take three classes in two periods, I have an internship my senior

year, I mean that's huge just because when I graduate college … I'll already have a year

under my belt.

Both girls saw The Exchange as an opportunity to advance themselves in their chosen career fields.

Between the career skills such as interviewing and resume building, and the internship opportunity

in their career field, Francesca Sims and Carson saw The Exchange as a class that will *put them

ahead* and prepare them for the *real world.* The opportunity for an internship affects each girls'

capital. Not only is their social capital affected by The Exchange and their association with the

class, but the opportunity for an internship provided them access to the social capital of their career

field. These social capitals affect the students' cultural capital, particularly in its institutionalized

state. Between their association with The Exchange, which in the eyes of the students is an

exclusive group, and their association with an internship at the young age of 18, Francesca Sim

and Carol will have the opportunity to increase their economic capital.

Michael referenced immediate results from his association with The Exchange. He

explained how his participation in the program placed him in a unique situation compared to other

students

Michael:

> I feel like my opportunities have kind of increased because when I apply for a program
> and they have the question "what makes you stand out?" I'll just talk about The
> Exchange because that's a program that not many people are able to encounter, so when I
> talk about it, it kind of makes me look more attractive to the program.

He specifically said his opportunities have been increased because he looks more attractive to decision-makers than other candidates due to his association with The Exchange. This comment carried a lot of weight in relation to possible transference of capital within The Exchange. Michael affirmed the social capital of The Exchange. His saw his association with the class as making him unique since the class itself is unique. He provided an example of an opportunity given to him because of his participation in The Exchange, and how The Exchange was the reason he won an award:

> …there are a lot of programs that directly, The Exchange has helped me gain … do well
> in. Like last year, it was, we went to a program called BAM, it was, like, Blacks At
> Microsoft. Me and some other African American students … we were there on a Friday
> in February, I believe, last year. And I entered into the essay contest … So then I wrote
> about The Exchange, and I went; I talked so much about it. I think I went right at the
> word limit at first. And I turned in the essay, right? And then, when we went to the event,
> and they were announcing who'd won, I got third place!

Michael entered an essay contest for Blacks at Microsoft (BAM). He had the opportunity to attend the conference because The Exchange teacher brought some of the African American Exchange students to the conference. Not all the students at North Lake High School had this

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opportunity, so not only was Michael's affiliation with The Exchange unique to BAM, but Michael's opportunity to attend BAM was unique.

Summary

Chapter 5 provided an analysis of the findings of this study. The findings were drawn from personal interview transcriptions. Presented in a vignette style, findings included students' words and anecdotes to explain the opinions of each participants' experience within The Exchange. Three research questions guided the analysis of the findings. These research questions were: How are students applying higher-order literacy skills within their participatory projects? How are student projects a projection of their identities? How can students provide their own opportunities for social mobility through their participatory projects? Using these three questions, I found themes in the students' responses that responded to the research questions and theory. The themes were reconstructed into four thematic ideas. These ideas included: The Exchange as a field, The Exchange as social capital, Higher-order literacy within The Exchange, and Transference of capital within The Exchange. The analysis connected the research questions to the students' responses while once again relying on students' words to address the research questions. The following and final chapter provides a discussion of the findings.

CHAPTER SIX

IMPLICATIONS FOR POLICY, PRACTICE, AND RESEARCH

The purpose of this study was to explore how project-based learning's participatory nature heightened students' capital and higher-order literacy. Throughout previous chapters, I referenced Henry Jenkins definition of participatory culture, specifically drawing on the idea of learning communities. The idea of participatory culture, a more widely understood term, was used to bridge Pierre Bourdieu's ideas on cultural capital, habitus, and field with the student-directed philosophy of PBL. Bourdieu's ideas of social capital were referenced when analyzing the PBL class as its own social capital. Common Core reading anchor standards provided the study's higher-order literacy skills to be evaluated. These ideas were analyzed through 7 student interviews and classroom and project observations of a 10th grade cross-curricular PBL class named The Exchange.

My research questions provided direction for studying and analyzing student interactions within The Exchange. Through observations of the participatory nature of the class, specifically in student interactions during the project planning period and project presentations, I analyzed the relationship between the participatory nature of the class and student learning, specifically focusing on student exchange as a means of heightening student cultural capital within the PBL field. Class observations allowed for me to observe the function of literacy in the class, specifically how Common Core literacy standards were addressed through student projects. Besides my observations, one-on-one in-depth student interviews provided me with student

perceptions of the project planning process. The rich accounts from each participant detailed their perceptions of The Exchange as a learning community. The interviews provided an opportunity to understand how the students experienced the course's participatory nature and the role it played in their learning. The Exchange to them was more than a class where they spent two hours of their school day. It was truly a learning community where students shared ideas, feelings, and stories. In The Exchange, student relationships developed beyond only those of classmates. As the students explained, being part of The Exchange was being part of a family.

My analysis of observations field notes and student interview transcriptions elicited four main themes. These themes were listed in chapter 4 as: The Exchange as a field, The Exchange as its own social capital, higher-order literacy within The Exchange, and transference of capital within The Exchange. These themes were assembled into three broader ideas, which will be presented in this chapter. I will take up the implications for practice and policy by addressing these broader ideas of field, capital, and literacy. However, before suggesting these implications, I recognize that this case study only described one PBL classroom in one high school out of many educational institutions throughout the county. This study, although small in the number of participants, proposes the value and possibility of implementing more PBL classrooms at the high school level in public education. This single case provided an example of a non-traditional, cross-curricular humanities classroom focused on participatory learning communities and rigorous literacy standards.

Comparably structured studies in different school situations would strengthen and enhance the implications presented in this chapter. For example, The Exchange was an established PBL program. At the time of the study it was in its fourth year. A case study including the initial planning and design of implementing the class would be beneficial to

researchers and teachers who are interested in understanding the planning and implementing of a PBL program in a public high school. A Bourdieuian ethnographic study conducted over multiple years would be beneficial in learning about students' identities within a PBL educational field. Although the students in The Exchange provided rich data with their personal stories, PBL research is still relatively new. However, until policy makers, researchers, administrators, and teachers feel confident in implementing a non-traditional model at the high school level, particularly in public schools, the research will continue to remain relatively minimal. The following sections provide examples of research from Common Core literacy standards, Bourdieuian theory in literacy education, and PBL studies to suggest implications for policy, practice, and research.

Implications for Policy and Practice

This section is divided into three parts, loosely assembled from the four main themes identified in Chapter 4. Both the themes identified in the previous chapter, as well as the broader ideas addressed in this section, were driven by the following research questions:

1. How are students applying higher-order literacy skills within their participatory projects?
2. How are student projects a projection of their identities?
3. How can students provide their own opportunities for social mobility through their participatory projects?

This section's key ideas refer to Bourdieuian concepts applied to curriculum standards, literacy, and PBL. The first idea will address curriculum influences on an educational field; this field can be referenced in a larger context, such as a school, or in a smaller context, such as a classroom. The second idea will relate literacy and capitals, specifically literacy as a means for capital

transference. The third and final idea will address the shift in PBL and content importance from humanities to STEM-focused classes. In addressing this shift, I will provide examples of PBL at the high school level for both STEM as well as humanities, and suggest possibilities for more PBL classrooms in public high schools.

Curricular Influences on Field

The defined field of this study was The Exchange. However, in chapter 4 I explained how external fields, especially fields with power, influence a defined field. This section addresses nationalized curriculum influences on PBL. For the purpose of this discussion, I will reference practices within The Exchange. Using the example of The Exchange, I will address the barriers and opportunities for a PBL classroom in a public high school. These barriers and opportunities could apply to other school and classroom situations; however, different school districts have different circumstances. I will reference research examples of a PBL structure in high school AP classes. I have chosen to reference AP classes both because The Exchange incorporated an AP class along with an honors level language arts class and because AP classes follow nationalized curriculum standards. The College Board, the organization that created AP standards, participated in creating Common Core State Standards, the literacy standards that are referenced in this study. The College Board currently has a strong influence in education between its involvement in the common core and its revamping of the SAT. New changes in the SAT have directly affected state end of course tests. By examining PBL in an AP class, we can understand how PBL can work in a classroom structured around a rigorous nationalized curriculum.

National and state influences on curriculum. Currently, Common Core has been nationally adopted into local curriculum, and states received 5 million dollars for adopting "Race

to the Top," a competitive grant awarded to states and districts for innovative reform (Zhao, 2012). However, there remained a preference among decision makers in education to not label the CCSS as a nationalized curriculum. But one may wonder about why there are fears of deeming the standards as nationalized. Essentially, there are two types of educational systems in the world: one with a central government authority that prescribes and enforces what students should learn through national or state curriculum and assessment programs, i.e.: China, Singapore and Korea (Zhao, 2012, p. 28). The second education system is a type that has no national control; instead, it is left to the local government. Such systems were implemented in the United States, Canada and Australia prior to the Common Core. With STEM becoming increasingly a focus of education, it is no secret that the United States is in an educational race with Korea, China, and India; however, these countries have completely different political and social systems than the United States. This difference raises questions about whether mimicking a nationalized curriculum is the best decision for our education system. Some of our educational allies have found themselves having to go back to the drawing board to ensure that their national standards were not causing curriculum narrowing (Zhao, 2012).

The Common Core comes from a place of wanting to do good by providing equal and accessible education to all students. However, there is room to question who is driving such an initiative. For example, Career Readiness is one of the standards' keyed terms, but it is hard not to question what exactly "career readiness" means. Zhao (2012) explained how The National Center for Education and the Economy (NCEE) reports in *Tough Choices or Tough Times* that "the best employers the world over will be looking for the most competent, most creative, and most innovative people on the face of the earth and will be willing to pay them top dollar for their service" (p. 32). So, are the standards mass-producing students through mass produced

standards in order to fulfill the needs of the future? It all seems dystopian and *Brave New World*.

Although mass production has its efficient qualities, mass production can eliminate

individualism and creativity. After all, the driving forces behind such international competition

are corporations like Programme for International Student Assessment (PISA), Trends in

International Mathematics and Science Study (TIMSS), and the Common Core State Standards,

all which were created with the help of College Board and ACT.

However, if the motive behind college and career readiness is to prepare students for jobs

that have not yet been created (Zhao, 2012), then there is no better time to begin implementing

PBL type classrooms at the high school level. Common Core reading anchor standards drove the

literacy portion of this study; however, with AP World History as a content portion of The

Exchange, The College Board AP World History standards were present in the curriculum of the

course. Although the AP World History standards were not addressed as part of the study's

literacy standards, it could not be ignored that another national curriculum was already part of

the class curriculum. It could not be ignored that The College Board, the entity that creates

curriculum standards for Advancement Placement courses, had a role in creating Common Core

standards. Therefore, two nationalized standards influenced the curriculum and expectations of

The Exchange.

In chapter 4, I explained how the structure of The Exchange evolved over its lifespan.

The initial structure of the course followed a more traditional project-based learning classroom

structure with little teacher directed instruction. However, as time passed, concerns over AP

scores led to changes in the class structure. At the time of the study, the class used a blended

style, which allowed time for class lectures. This blended style was to ensure the students

received the AP World History information for the AP Exam. Similar to how The Exchange

altered the structure of PBL to fit its purpose and school climate, other schools can use the PBL structure as a model and make the necessary changes to better accommodate the school environment.

However, previous research described the traditional PBL structure as an option for AP classes. A mixed-methods study conducted by Colette Armstrong-Grodzicki (2013) titled, "Meeting the Standards of the Standardized Test: How Does Project-Based Learning Correlate to Traditional Learning in an Advanced Placement English Language and Composition Course?" found that a majority of students performed as expected from learning in both a traditional setting and a PBL setting. The PBL setting Armstrong-Grodzicki studied followed a more traditional PBL structure and did not implement a blended style of learning. Dana H. Maloney (2010) implemented PBL with her senior AP Literature class in lieu of a traditional senior capstone paper. Students still wrote a synthesis research paper; however, much of the assignment was an independent research project on recent social issues. The students' projects ranged from creating non-profit organizations to lobbying about civic concerns to local government. Students then presented their social issues projects at an expo after the AP Exam. Both research examples demonstrated the possibility for PBL at the high school level regardless of strict nationalized standards.

A commonality between College Board AP standards and Common Core standards is the focus on literacy. The Common Core reading anchor standards focus more on literacy skills rather than content expectations; this change of focus leaves room for teacher experimentation and creativity. As Catherine Maderazo (2013) explained, the loose content standards of the Common Core leaves room for teachers, administrators, and policy makers to look at literacy differently; it provides an opportunity to redefine literacy to be more suitable for today's society

and today's learner. However, it is important that the standards are not translated to a "one size fits most" view. This mentality can lead to curriculum narrowing and an over emphasis on test preparation. The Exchange program adhered to both College Board AP World History standards and local curriculum standards derived from Common Core. Students took local standardized assessments throughout the year and took the AP World History exam in May. According to The Exchange's teachers, their students performed well, and according to student perceptions, their learning went beyond content: they learned how to learn and how to collaborate with others, particularly with classmates with whom they did not see eye-to-eye. In other words, the students learned content standards for an AP curriculum, applied Common Core literacy skills, and learned soft skills all while collaborating in student centered classrooms. All of these learning opportunities are part of a college and career readiness curriculum.

Unfortunately, as my study ended, so did The Exchange. The program was discontinued; the students were told it was due to lack of personnel. However, the other PBL class at North Lake High School, which had a STEM focus, remained as a non-traditional route for 9th grade students. It was unfortunate that The Exchange ended, and it could only be assumed by the teachers, students, and parents that it was done so for good reason. However, as The Exchange students caught word of the program's end, they questioned why the program was cancelled while the STEM focused PBL class remained. Results from a simple Google search indicate the strong STEM focus in PBL literature. As STEM courses became increasingly more important to curriculum and policy makers, PBL became increasingly popular. However, PBL was still predominately used in STEM settings. This shift towards STEM-focused curriculum also shifted educational prioritization from humanities courses to STEM. As the shift in content focus from humanities courses to STEM courses occurred, a shift in national testing followed. The new

SAT, which first appeared fall of 2016, focused more on reading complexity. Ironically, this version of the SAT is similar to the AP Literature exam. It tests reading analysis skills with text-dependent questions from varying contexts, including from Victorian satire prose. Although the shift mentioned is still a recent change, the new SAT could swing the content pendulum back to humanities, creating an opportunity for humanities-focused PBL classes. However, until student success is no longer synonymous with test results, education will continue to implement a curriculum focused on test preparation. These shifts in both content and testing continue to influence curriculum at the school level, and very well may influence the extending or diminishing of PBL programs like The Exchange.

For more PBL classrooms to be part of public education moving forward, it is necessary for policy makers, researchers, and educators to shift the perception of school. As Common Core standards focus on college and career readiness, schools too should focus on preparing students for college and career environments. Teacher education programs should re-design undergraduate and graduate curricula to include PBL pedagogy. Although PBL is often referenced as a learning option within a classroom, teacher education curricula should include classes that focus on designing cross-curricular PBL programs, programs that can be implemented in public schools and not just reserved for private and charter schools. In addition, schools and local districts should place emphasis on creating professional development courses that not only provide training to create PBL classes but allow teachers to approach Common Core standards creatively. These training opportunities would help educators address the standards with a more creative approach, seeing the freedom, not the restrictiveness, in the standards' literacy focus. PBL focused staff development would help teachers prepare for the more diverse and technologically driven student populations that already fill their classrooms.

This population will only continue to grow as our society becomes more global and technologically dependent. The current reality is that today's students are not the ones for whom the current classroom model was intended.

Curriculum standards will always influence education. However, it is important for teachers and administrators to find the opportunities in curriculum changes rather than only seeing the restrictions. Although Common Core did promote an emphasis on standardized testing, as some feared (Zhao, 2012), others saw it as an opportunity to begin dialogue in redefining literacy education (Maderazo, 2013). As with any research, there are always limitations. This study was written with a particular topic in mind: power structures in education. It intended to show more than only the failings of contemporary curricula. Instead, it provided a window into the workings of a single PBL classroom during a time of high-stakes testing and a nationalized curriculum.

Literacy and Capital(s). A goal of this study was to aid in teachers' and researchers' understanding the role literacy education plays in students' social mobility. Allan Luke referenced Bourdieu to ask questions regarding genres of power in literacy education, specifically how:

> schooling and literacy are used to regulate and broker not just access to material wealth and the means for producing that wealth, but as well access to legally constituted 'rights', to cultural and sub-cultural histories and archives, to religious virtue and spiritual rewards, and to actual social networks, gendered desires and identities. (p. 309)

Chapter 4 detailed the role literacy played within The Exchange, specifically by exploring student perceptions of their research skills. Many of the participants said that cross-curricular projects helped improve making connections between content areas; they elaborated on how they found

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themselves applying this skills in their traditional classes as well in the PBL classroom. Common Core places an emphasis on cross-curricular literacy. If the study's students perceived improvement in their ability to make connections across content areas, as well as their ability to research independently, then it suggests that PBL enhances students' analytical literacy skills. If so, do these literacy enhancements broker students' access to cultural rights, material wealth, and social networks? In other words, could PBL provide a learning experience where students' literacy improvements influenced cultural capital and their position in society?

Literacy carries its own capital, and literacy education affects both of its objectified and embodied forms. The objectified state, which includes scholarly training, is clearly part of literacy education, since literacy is necessary for education advancement at all. Through a Bourdieuian lens, we can see that literacy is a possible tool for social mobility; this advancement occurs with scholarly training. As for the other state of cultural capital, the embodied state, literacy carries with it possible passing of cultural distinctions defined by the field of education and most social classes in society. Terms such as "well read" or "learned" create these distinctions. With literacy standing as a cultural marker, an increase in literacy skills can influence one's cultural capital. Through literacy, these distinctions can be achieved. Kramsch's (2008) memoir outlined her own experiences learning cultural distinctions and differences while in academia. Much like Kramsch learned to switch between her bourgeois and working class selves, students can learn to accommodate for any misaligned cultural capital, particularly since Luke (1997) stated how the cultural capital of schools does not align with all students. This misalignment is caused by governing bodies and social constructs. The participatory nature of a PBL class could provide the pedagogy for such learning and literacy advancements by fostering students' habitus and providing the independent literacy skills to improve cultural capital with an educational field. The student-

centered nature of the course provides opportunities for students to become independent thinkers with little teacher influence. Although the teacher/student binary does not disintegrate completely in a PBL class, the roles of the students as directors and the teachers as facilitators, lessens the binary to create a more collaborative relationship. Teachers provide guidance in students' learning rather than setting a pace for students to keep up.

The students within The Exchange saw the benefits of the class's literacy focus, as well as its participatory learning community. Chapter 4 provided participant descriptions of their experiences within the class and the significance they placed on The Exchange as a learning community. My analysis explained how students gave The Exchange its own social capital. Their references to the class being like a family, an exclusive group to which only they belonged, acknowledged this idea. If a classroom can have its own social capital and literacy education its own cultural capital, then are PBL classrooms vessels for capital exchange? Rowsell and Pahl's (2007) research with text identity in children's homes aligned with this possibility. Much like their participants demonstrated traces of habitus in the text they created within their own homes, student production within a PBL setting may show traces of student habitus. This idea needs to be explored more in PBL research, especially since the participants of this study perceived The Exchange as its own social capital. Students within The Exchange placed a familial importance on the class and their relationships within the class; therefore, these familial relationships affected their learning and their identities while in The Exchange. To loosely quote many of the participants, their learning experiences in The Exchange was just "different."

The "difference" The Exchange students referred to is the "difference" that policy makers, teachers, and administrators should address in literacy discussions. Although Common Core has brought literacy to the forefront of education, it has brought confusion and division among some

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teachers. I say this from my own experience with curriculum revamping. The 70/30 split of fiction versus non-fiction text refers to all content areas and not just English Language Arts (CCSS, 2010). With little staff development to guide teachers to incorporate the new standards, misinterpretation led ELA educators to view the 70/30 split as a direct attack on fiction literature in literacy education. Experiencing the confusion that came along with curricular revamping with the Common Core confirmed the need for staff development. However, knowledge can begin with pre-service teachers. Undergraduate and graduate coursework that promotes innovative and technologically driven literacy instruction is a good way to start the conversation in redefining literacy to fit the needs of today's learner and to address the literacy focused standards. Although cross-curricular literacy and content area literacy are addressed in undergraduate and graduate studies, emphasis on implementing these areas within a non-traditional classroom structure is a way to include PBL in the course design. This would provide an opportunity for new and veteran teachers to design PBL and cross-curricular focused classrooms creatively. At the practitioner level, staff development opportunities are needed for teachers and administrators to collaborate on implementing PBL classrooms that address the standards while not focusing solely on test-preparation. Incorporating more PBL classrooms at the high school level will help target students whose cultural capital does not match that of traditional schooling. It is a great way to prepare students for college and the work force, again aiding in students' ability to advance, academically and socially, through literacy education.

Until there is acceptance and comfort in allowing students to drive their own learning, the same traditional classroom model will continue to drive education. In order to create coursework and professional development that incorporates PBL characteristics, the perception school and literacy education must evolve. There is no "fix" for the inconsistency between some students'

cultural capitals and the cultural capital in schools and classrooms; there are too many politics and outside entities that make decisions in education. However, educators, researchers, and advocates can collaborate to offer options for students. PBL is a curricular option for students, not necessarily a solution. With terms such as "college and career readiness" driving literacy education, a rethinking of what it means to be college and career ready is necessary. Success on state and national tests is only one indicator of students' worth and success. Their abilities to learn independently, research information, collaborate with others, solve problems, and create solutions are indicators of students' ability to learn independently and lead a successful life. Students' ability to implement these literacy and soft skills in day to day life is a cultural marking that can be taught in classrooms, specifically PBL classrooms. As Newell (2005) explained when describing PBL at the Minnesota Country School, PBL classrooms provide an environment where students are free to be themselves and are not made to fit a stereotype. PBL's student-driven, teacher-facilitated structure provides the potential for students to play a role in redefining literacy in schools.

PBL within High School Classrooms. If literacy is a lynchpin for social mobility, and if students have such positive perceptions of PBL, then an obvious question is why more high schools do not implement PBL as an alternate learning route. Although teachers implement projects in their classrooms, a true PBL style of learning is seldom implemented. There have been non-traditional classroom offerings, as seen with The Exchange and the STEM focused PBL at North Lake High School; however, PBL remains a niche in education. One can only assume emphasis on test scores and school rankings prevent more schools from offering non-traditional learning avenues. Although academy style schools have become a trend—a trend derived from Common Core's emphasis on career and college readiness pathways—most of these schools are either speciality schools, such as private or charter schools, or in pilot phases.

The Minnesota Country School remains one of the more widely known examples of successful PBL. Referenced throughout the literature review, The Minnesota Country School is a full PBL high school. During its planning phase, the school's creators paid careful attention to eliminate power as much as possible. Mentor/mentored relationships replaced teacher/student binaries. The bell-to-bell school day was eliminated so the school day mimicked real life environments. Students oversaw their own learning and the pace at which they learned. Although all these criteria for the Minnesota Country School are unlike any traditional school and to outsiders may seem almost nonsensical, what is more nonsensical is the fact that the traditional school day is so different from the average adult work day. Although a change from traditional schooling to schooling similar to the Minnesota Country School would be radical, there are other PBL focused schools, such as Paideia School. Enloe (2005) referenced Paideia as one of the best examples of a PBL school that balances content, rigor, and progress. However, Paideia School is a private school; PBL in the public sector remains sparse.

The Exchange provided an example of the possibilities of PBL at the public high school level. It showed that encouraging participation, through student-directed projects, can maintain rigor and adhere to content standards. It provided an example of a humanities focused PBL. Although STEM continues to become increasingly popular in education, humanities-focused PBL classes are becoming more common. Jonathan Williamson and Alison Gregory's (2010) article focused on using PBL in entry level political science and government classes. Walter Parker, Susan Mosborg, John Bransford, Nancy Vye, John Wilkerson, and Robert Abbott in their article "Rethinking advanced high school coursework: tackling the depth/breadth tension in the AP US Government and Politics course," researched the implementation of a new PBL curriculum framework across 3 high school and with 314 high school students. Their findings

concluded that after the first year of the program, scores were the same or higher than previous years' scores, and teacher perceptions were that students received deeper conceptual learning.

Although there is plenty of PBL STEM focused research (Chapman & Heater, 2010, Faris, 2008; Garcia, 2014, Putnam, 2001), and research over the past 10 years in regard to humanities-focused PBL classrooms has increased (Armstrong-Grodzicki, 2013; Filipiak, 2006; Maloney, 2010; Thomas, Enloe, & Newell, 2005), there is still a large gap in the research. PBL research either revolves around students labelled as high-risk in lower performing schools (Morrell, 2009) or is geared towards gifted and AP Students (Parker et al, 2011; Ratcliff et al, 2012, Williamson & Gregory, 2010). The gap in the research widens as we search within the past five years. In order to understand Common Core as a transition that can be advantageous, literacy needs to be understood in broader and more cross-curricular contexts. As Maderazo (2013) explained in her research, Common Core standards provide an opportunity to reimagine and rethink literacy to create a curriculum that incorporates literacy skills aligned with today's thinker.

In order to bridge the gap in PBL literature, educators and researchers need to work together to promote more PBL classrooms. Undergraduate coursework needs to include texts and research that focuses on non-traditional classroom models, so pre-service teachers learn the model in a larger context. This will allow undergraduates to view PBL as an optional learning route for students rather than learning about PBL as a project orientated classroom philosophy. By addressing perceptions of PBL in undergraduate coursework, the ability to see learning and classrooms beyond its traditional sense will gradually become a norm in teacher education. Graduate coursework that provides opportunities for teachers to collaborate on creating cross-curricular classroom models will aid in evolving the perceptions of school. At the practitioner

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level, staff-development opportunities for teachers across grade-levels and content areas to collaborate and create cross-curricular PBL models that can realistically be implemented into their current situation can provide teachers with the time and knowledge to evolve their perceptions of learning in their own classrooms. Until training opportunities challenge educators, researchers, and advocates to think differently about the classroom structure, the gap in PBL literature will continue to widen due to a lack of classroom examples. Implementing more PBL classroom at the public high school level requires more than changes to teacher learning, it requires all those involved in education to rethink the teacher/student binary, rethink bell schedules, and rethink schools completely; it requires the radical thinking used to create The Minnesota Country School.

Implications for Future Research

This study provided one researcher's single account of a single PBL cross-curricular class in a suburban public high school. The Exchange, as it was called throughout the study, demonstrated the possibility of implementing student-directed and collaborative learning in cross-curricular classrooms while still adhering to national standards. The study provided an example of a participatory learning community where student capital transference was possible. As the name suggests, The Exchange provided an opportunity for students to learn with and from one another while creating their literary identities within the defined field of The Exchange. Although the students provided great stories of their experiences, the study exposed the politics that sometimes tie hands, as after a great 4-year run, The Exchange PBL program was cancelled. During and upon completing this study, through research and experience, the continued need for PBL research became clear.

I chose to conduct one interview per participant with informal conversations ensuing throughout the data collection period. Although this may seem like a data collection limitation as there were 7 single interviews rather than multiple interviews for each participant, the outcome proved to be more beneficial in providing student accounts of their literary experiences within The Exchange. The students' stories created my data and fulfilled my research purpose, which was not to implement change or to provide a look into a specific situation or phenomenon as is seen in some case study research (Chapman & Heater, 2010; Justice et al., 2009; Ratcliff, Jones, Costner, Knight, Disney, Savage-Davis, Sheehan & Hunt, 2012).This study did not attempt to solve a problem or highlight an issue. Instead, it explored questions regarding literacy education and students' participatory culture with the goal of creating new meaning through findings and ultimately to leave the reader with more questions than answers (Stake, 1995, 2010). In the case of this study, the exploration of a single PBL classroom's ability to heighten students' participatory culture and higher-order literacy skills will hopefully provide information to assist teachers and educators in developing new meaning for literacy education in the 21st century.

Findings from this study underscore research from others who cite the possibility of PBL classes at the high school level to promote independent thinking and research while addressing higher-level literacy standards. Some research outlined PBL at the AP level while adhering to national standards (Armstrong-Grodzicki, 2010; Maloney, 2010; Parker et al, 2011; Williamson & Gregory, 2010). Other research implemented the structure school-wide and rethought schooling completely (Ratcliff et al, 2012; Thomas, Enloe, & Newell, 2005). Likewise, research including Common Core addressed the ways in which these standards allowed educators to think differently about learning and instruction. Sulzer's (2014) referenced Jago's analogy, which described Common Core like a GPS device with teachers' voices helping students navigate

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through learning, but the students, ultimately, drive the vehicle. Maderazo (2013) challenged educators and policy makers to use Common Core as an opportunity to incorporate literacy in new classroom designs. However, with a new political party in Washington, there is a chance that standards will once again change. Regardless of current or new standards, a focus on literacy education is necessary, but a focus on innovative classroom structure is necessary. To broaden the research field, literacy should be redefined to fit today's young thinker, the thinker with an entrepreneurial spirit that must not be diminished by an overemphasis on standardized testing (Maderazo, 2013; Zhao 2012).

This study focused on PBL and literacy standards through a case-study design. It made use of a Bourdieuian lens. Although use of Bourdieu's thought is becoming more common in educational research, there are still opportunities to analyze students' position in an educational field by applying ideas of capital, habitus, and field. Alvermann, Friese, Beckman, and Rezak (2011) analyzed content-area literacies through a Bourdieuian lens. Their research examined math teacher perceptions of content knowledge and the cultural capital associated with math content area reading instruction. Hurst (2013) researched class habitus in regard to different student types at the collegiate level. His research specifically examined students who came from working class background and students who came from academia backgrounds to analyze perceptions of schooling and purpose of schooling. In their book, Albright and Luke (2008) extensively examined literacy education through a Bourdieuian lens, applying all forms of capital, habitus, and field within the context of literacy education.

It is their individual research that provides a strong platform for future research in literacy education through a Bourdieuian lens. Applying Albright's (2008) idea of the generative possibilities of Bourdieuian ideas allows for more freedom in applying individual forms of

capital in education research. Luke's (1996) research poses to question the future of pedagogy. It was his call to change that drove much of the purpose of this study:

> what is needed is a pedagogy which goes far beyond the transmission of genres, and offers social and cultural strategies for analyzing and engaging with the conversion of capital in various cultural fields. An effective literacy pedagogy would have to build for students a critical social theory of practice. (p. 320)

More research in the areas of PBL and literacy could promote a pedagogical change that promotes "social and cultural strategies" (Luke, 1996, p. 320) for students to improve literacy skills that may lead to transference of capitals.

The opportunity to conduct PBL research in The Exchange provided an opportunity to share the experiences and stories of 7 unique individuals. Although this study provided an example of the possibility to implement PBL at a public high school, it was only a single account of a PBL class in a public high school. To truly redefine literacy in schools, the voices of teachers, administrators, advocates, and researchers must be heard. Redefining literacy and perceptions of school is collaborative effort between all those invested in education. Therefore, additional research on PBL, which includes the voices of teachers, administrators, policy makers, and advocates, is necessary. By including these perceptions, all voices and opinions contribute to the evolving of literacy education and classrooms. PBL research that includes teachers' perceptions could prove beneficial to PBL research, not only from a practitioner standpoint, but from a political or academic standpoint, as teachers' perceptions of student literary identities could provide additional data on students' cultural capital in a PBL classroom. Additionally, a study over multiple cases could provide varied examples of PBL at differing public high schools.

By providing research that surveys multiple PBL cases, different teacher, student, and school experiences add to the literature, providing examples of unique PBL situations. A multiple case study can provide the voice of administration PBL learning option at a public high school. It can include the voices of the teachers and the collaborative experience of creating the program. Lastly, it could provide the voice and perceptions of the students during a transitional time in their learning. More importantly, this type of research would emphasize the diversity and uniqueness of a school's learning environment. All schools have unique learning environments and diverse student populations, so a "one size fits all" PBL model is unthinkable. To even suggest a PBL model that fits all schools and learners is to go against the core of PBL philosophy.

Summary

As I come to the close of the dissertation, I want to share a few final thoughts on the insights I have gained from conducting this research. After I complete this dissertation, I plan to remain in the classroom; however, I have accepted a position at another school and will no longer teach at North Lake High School. It is almost fitting that as the participants from this study graduate from North Lake High School, I too will leave with them. Although I am moving on to another school, I am, more than ever, eager and encouraged to continue collaborating with teachers and administrators to rethink literacy and classroom structures. I began this dissertation with a strong belief in the value of non-traditional classroom structures like PBL, and I finish this dissertation believing in the value of PBL even more. The perceptions of the students at North Lake High School provided me with more knowledge on cultural and social capital than I had at the beginning of this study. Their honest and descriptive stories provided an optimistic account

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of the possibilities of PBL at the public high school level. However, I cannot ignore the fact that the program was canceled, so as this study ends, it does so with a bittersweet tone.

Although The Exchange was canceled, the STEM-focused PBL at North Lake High School remains. I find hope in the other's PBL class's continuation. I find hope in the stories of the 7 participants. Their understanding of school, their realization of politics and barriers, and their optimism to see past all of it provided a rich description of how today's student perceives school and learning. Learning to them was not retaining the content they obtained or the standardized skills they addressed in each project. Learning to them was the experiences of collaborating with the classmates in their learning communities. It was learning to work with classmates with whom they did not see eye-to-eye. It was tackling projects and assignments they did not like, but knowing there was value in their achievements. These students learned to learn. They learned to be independent thinkers and researchers. They learned to exist in a student-directed learning environment when direct instruction was a more suitable learning method. Whether it was the participant's first year in The Exchange or their fourth and final year with the program, each student mentioned the value of their experience. They believed their time in The Exchange prepared them more for college and the work force than any other class. Although they knew skeptics criticized The Exchange, the participants knew the skills they gained from their time in the program were seldom learned in a traditional environment.

The 7 participants of this study transitioned into the traditional classroom setting for their 11th and 12th grade years. Most of them continued to take high level courses through their upperclassman years. I even had the privilege of teaching Michael and Francesca Sims in my AP Literature course, as well as other Exchange students who were not part of the study. From my experience with The Exchange students in my own classroom, their maturity, sociability, and

independence is evident. Although these skills cannot be solely attributed to their time in The Exchange, the correlation cannot be ignored. As the researcher with knowledge in Bourdieu's theories, I see the opportunity for students to exchange, transfer, and possibly heighten their cultural capitals in a PBL classroom. PBL offers a unique learning experience where students take the lead in the classroom. Although eliminating power structures in any field, especially education, is a utopian idea, watching these students collaborate and build a learning community with its own social capital, defined by their habitus and experiences, provides an optimistic view of students' taking ownership of their learning and creating their literary identities.

The ideas of Bourdieu, Jenkins, and Luke will continue to drive my research and teaching. These ideas that resonated with me at the beginning of my doctorate course work were confirmed with the stories of these 7 young men and women. As Luke (1996) called for pedagogical change more than twenty years ago and Bourdieu referenced literacy as a means of social mobility (Grenfell & James, 1998), we can only hope that Jenkins' participatory culture will continue to be referenced in educational research. Literature continues to demonstrate the collaborative nature of our beings (Duncan-Andrade & Morrell, 2008; Thomas, Enlow, & Newell, 2005; Zhao 2009 & 2012), and as technological advancements happen faster than a textbook can be published, it is our duty as educators, researchers, and policy-makers to rethink literacy and re-design pedagogy to fit the minds of today's learner.

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Appendix A

Recruitment Script

Hello everyone. My name is Mrs. Baker and I am an AP Lit teacher here at North Lake High School as well as a doctoral student at UGA working on my dissertation on project-based learning. I hope you all are having a great first day of school today.

Your teachers have been very gracious to allow me a few minutes of class time to speak with you guys about why I am going to be in your class this semester. As I mentioned, my dissertation is about project-based learning. I am very interested to explore how you all go about choosing your projects and why you choose the projects you do. I will be in this class for three days a week for pretty much the whole semester.   A lot of my time will be spent watching and observing, but I will also be asking you all some questions about your projects and collaborations. I may even ask for some of you to talk with me at length about your work after school hours, but don't worry, I'll never keep you more than an hour, promise!

I will be audio recording any discussions we may have. These audio recordings will be used as my dissertation data, which means, what you say will be in my study! But it is all anonymous. What I see with my observations and write down in my notes, will also be used in my study. At times you may see me videotaping. The videos are not part of my data so they will not be used in my study. They are really just so I can remember things that happened that day.

The forms that are being handed out are parent and student consent forms. These forms are to let me know if you are or are not ok with my watching your project work or talking to you about your project. There is absolutely no penalty for saying no. It cannot hurt your grade or your success in this class. If you sign yes, then you are telling me I can watch you and write down what I see, and I can talk to you and audio record our discussions, both brief or long. I want to ensure you that participating in this study will neither increase nor decrease the level of success you will have in this class. I just ask that you go home today and go over these two forms with your parents. Please tell them to call or email me with any questions they may have, and you of course can do the same. I am really in here to just learn from you guys, and I am very excited and very thankful that you have allowed me in your space.

Appendix B

Letter to Parents

Dear Parent(s),

My name is Mrs. Baker and I am an AP Lit teacher here at North Lake High School, as well as a doctoral student at UGA working on my dissertation on project-based learning. Administration and the PBL teachers have been very gracious to allow me to complete my dissertation on North's project-based learning class.

The purpose of this study is to explore students' learning in a project-based learning environment. I am very interested in exploring how students' go about choosing their projects and why they choose the projects mediums they do. I will be in this class for three to four days a week for a 12 to 16 week period.

Most of my time will be spent watching and observing, but I will also be asking students questions about their projects and collaborations. I may also ask students to participate in one-on-one interviews after class to better explore their projects and their learning in creating these projects. I will be audio recording any discussions I have with students. These audio recordings will be used as my dissertation data, which means, part of students' responses to my questions about their learning experiences and projects could be used in my dissertation. This is of course only if I have full permission as indicated by the signing and returning of the parental consent form and the student consent form. Students' names will not be used in the dissertation, however, I will use pseudonyms that are student chosen (pseudonyms are made up names). Audio recordings and transcriptions will be password protected and deleted upon dissertation completion. I will also be observing students working within the classroom. All observations will be recorded with field notes. These field notes will be typed and stored on a password protected word document and stored on a password protected laptop. Video recording will take place for me to reference as a memory aid, but no videos will be used as a data source. The information that will be used in the dissertation includes information provided by the students regarding their learning and project process, either through informal class interviews (classroom conversation) or during separate one-on-one interviews held outside of class. Observations of students collaboration and learning experiences will also be included in the dissertation.

The forms that your student brought home today are parent and student consent forms. The student assent form is to let me know if your student is or is not ok with me observing his or her project collaboration experience or talking to his or her about the project. There is also a parent consent form which provides me with permission to observe and speak to your student. A student cannot participate if a parent does not provide permission.

There is absolutely no penalty for saying no to participation in the study. It cannot hurt your student's grade or success in the class. If you and your student sign yes, then you are providing

me with permission to observe and write down what I see, as well as speak and record any discussions in class or those one-on-one interviews held outside of class.

I want to ensure you that participating in this study will neither increase nor decrease the level of success you will have in this class. I ask that you carefully read over the parent consent form as well as the student assent form. Please feel free to call or email me with any questions or concerns, and your students also have my contact information in case they may have any questions or concerns. As previously mentioned, my main objective is to learn from students' experiences within a project-based learning classroom. I thank you for allowing me the opportunity to learn from your students.

Again, please feel free to contact me with any questions regarding this study and your student's possible participation.

Thank you,

Anne-Rose Baker, EdS.
PhD Candidate, UGA
404-337-1424"
anneroselbaker@gmail.com

Follow Up Letter

Dear students and parents,

Welcome back to another great semester! I thoroughly enjoyed observing the project-based classroom last semester, as well as talking with the students. I have decided to extend my data collection period into the spring semester. I just wanted to send a note home letting both the parents and students know of the data collection extension.

Thank you again for allowing me to be a part of the learning experience in the project-based learning classroom. Again, if you have any questions or concerns, please do not hesitate to contact me.

Thank you,

Anne-Rose Baker
anneroselbaker@gmail.com
404 337 1424

Appendix D

**Minor Assent Form for Participation in Research
Parental Permission**

A case study of a secondary PBL classroom: exploring students' cultural capital

and higher order literacy skills.

I am asking for you to take part in a research study. Before you decide whether or not you can participate in this study, it is important that you understand why the research is being done and what it will involve. This form is designed to give you the information about the study so you can decide whether you want to be in the study or not. Please take the time to read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, you can decide if you want to be in the study or not. This process is called "informed consent." A copy of this form will be given to you.

There are multiple places that require initials, so please read the document carefully and completely. A final signature is required at the end of the document.

Principal Investigator: *Donna Alvermann*

                                 Language & Literacy Education

                                 dalverma@uga.edu

Student Co-Investigator: *Anne-Rose Baker*

                                 Language & Literacy Education

                                 404-337-1424

                                 abaker@uga.edu/anneroselbaker@gmail.com

Purpose of the study:
        The purpose of this study is to learn more about project-based learning classrooms and how students learn within these classrooms. I am hoping to gain knowledge about students' chosen project paths and why these decide on such projects. I am also hoping to gain a better understanding of the opportunities project-based learning classrooms provide for students' and their futures.

Study procedures:
        I am asking for you to be in the study because you are in a project-based learning class. If

you agree to be part of the study and your parent/guardian also agrees to be part of the study, you will be asked to:

- Participate in classroom observations: If you agree to be part of the study and your parents have agreed as well, you will be observed for 4 to 5 days a week during a 12 to 16 week period. These observations will occur during your class project collaboration period (the 2nd half of their 2 hours block). I will not be in the room during the lecture period (1st half of the two hour block). The end of the semester project summit presentations will also be observed.
- Participate in informal interviews: During the research period, I will be walking around the classroom talking to you about your project and the type of work you are conducting.
- Participate in One-on-one in-depth interviews: I may also ask you to participate in a 60 minute one-on-one interview outside of class hours These interviews are not mandatory and not all students will participate in these interviews. The one-on-one interviews will be held after the scheduled school day. They will begin around 2:20 and will last approximately one hour. The interviews will be held in the project-based learning classroom and will occur on a day of your choosing. If you cannot stay after school hours because of transportation conflicts, then you do not need to participate in an after school interview.

By initialing below you are agreeing to be considered for a one-on-one interview.

**Please initial below indicating your participation in after school one-on-one interviews:
      I want to participate in one-on-one after school interviews.

      I do not want to participate in one-on-one after school interviews.

- Use of technology: The observations will mostly be done without the use of any technology, however, pictures will be taken and video recordings will occur at times for me to refer to as a memory aid. The informal interviews, as well as the one-on-one interviews will be recorded with an audio recording device.

Risks and discomforts:
- In all research there is a risk of breach of confidentiality. However, as a researcher, it is of utmost importance to keep all information confidential and secure. The use of pseudonyms, or nick names, will be used in the writing of the dissertation data and in the dissertation. You will choose a pseudonym (nick name) that will be used in place of your own.
- As an adult figure in the room, there is always the risk that you may feel the need to answer "correctly" or a "certain way." I want to ensure you that the conversations

between you and me are informal and solely for me to learn more about project-based learning. There are no right or wrong answers to any questions. The purpose of the research is to learn from you, not to evaluate your answers.

Benefits:
Along with risks in research there are also potential benefits. There could be the following benefits from participating in this study, but these benefits are not guaranteed:

- You could benefit from participating in the research by learning more about yourself as a learner.
- There is also the benefit the research could contribute to the field of education, particularly in regards to project-based learning research.

Primarily, the purpose of this study is to learn more about how students' learn in a PBL classroom. I am hoping future teachers will also learn from your experiences and from what you have to say about your learning experience. .

Audio/Video Recording:
An audio recording application will be used to record your response to questions about your project. The recording device will also be used to record the entirety of the one-on-one interviews. These recordings will be transcribed and used as part of the dissertation data. All audio recordings will be saved on a password protected device. All typed transcriptions of audio recordings will be saved on a password protected word document that is saved on a password protected device.

Video recording and picture-taking will occur, however, the pictures and videos are not part of the dissertation data and will not be used in the writing of the dissertation. The pictures and videos will solely be referenced as a memory aid by me. These pictures and videos are also stored on a password protected device.

All audio recordings, video recordings and pictures will be deleted upon completion of the dissertation.

Please provide initials below if you agree to have your interview audio recorded or not. Your may still participate in this study even if you are not willing to have his or her interview recorded.

_____I do not want to have the interviews recorded.

_____I am willing to have the interviews recorded.

This data may be used again at a later date; however, data will not be used once a you turn 18. Please initial below indicating if this information is allowed to be referred to in future publications.

_____I do not want my transcribed record to be used in future publication,

beyond the current.

_____I am willing to have my transcribed record used in future publications.

Privacy/Confidentiality:
As with any research, there is always a risk of breach of confidentiality. All data that is collected will be analyzed using codes and no real names will be used (all participants mentioned will be done so by their pseudonym). As stated in the previous section of this document, security measures will be taken to ensure all information is protected. All audio recordings will be saved on a password protected device. All transcriptions of those audio recordings will be saved in a password protected document, which is saved on a password protected device. All observation field notes are saved in a password protected document, which is saved on a password protected device. All video recordings and pictures will be stored on a password protected device. Upon completion of the dissertation, all data will be deleted.

Researchers will not release identifiable results of the study to anyone other than individuals working on the project without your written consent unless required by law.

Taking part is voluntary:
You do **not** have to consent in the participation of the study if you do not want to *or* if your parents do not want you to participate. Your grades in school will not be affected by your participation. If you do not have the necessary consent forms on file, you will not be included in any voice or visual recording. I will not verbally engage with you if you do not have proper consent forms signed and filed, and visual pictures or recordings will not be used without proper consent. However, I will be in the room regardless of consent.

If you have any questions or concerns regarding your child's rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at 706.542.3199 or irb@uga.edu.

You can ask any questions you have about this study at any time before, during or after the process. If you have any questions you can email me at anneroselbaker@gmail.com or call me at 404-337-1424.

Please return this form AND the parent consent form by the requested due date

---

Name of Child: _____**Parental Permission on File:** ☐ Yes ☐ No

(For Written Assent) **Signing here means that you have read this paper or had it read to you and that you are willing to be in this study. If you don't want to be in the study, don't sign.**

Signature of Child: _____   **Date:** _____

Methodology Chart

Edited Title: A case study of a secondary PBL classroom: exploring students' cultural capital and higher order literacy skills.

Type of Study: A classroom case study with selected specific student cases

Research Questions & Methodology:

Research Questions	Methodology	Justification
ow are students applying higher-order literacy skills within their participatory projects?	Classroom observations and informal student interviews	The classroom observations will allow me to examine the literacy skills present in students' projects, particularly in accordance with the higher-order literacy skills defined by the CCSS. The student interviews will allow me to explore the presence of these higher-order literacy skills by asking students questions regarding what skills go into the project process and the breadth and depth of those skills.
How are student projects a projection of their identities? *students researching on their own. *collaboration - give and take. sometimes you have to * not necessarily their identity but the identity that is created within the field of the pbl classroom.	Classroom observation and informal student interviews	The classroom observations will allow me to examine these projects through a Bourdieuian lens, looking specifically for signs of students' cultural capital in their chosen project path and project creation. The student interviews will allow me to gain insight into the role the PBL classroom plays in relation to students' chosen project path. Such purposes and influences include: family influences, exploratory and curiosity purposes, peer-pressure, etc.

How can students provide their own opportunities for social mobility through their participatory projects?	Classroom observation and informal student interviews	The classroom observations will allow me to explore students' cultural capital in relation to their participatory and literacy centered projects and whether the literacy experience/project process in the PBL classroom provides an opportunity for possible exchange of capitals.
		The student interviews will provide personal accounts of students' project experiences, and whether the PBL classroom has a role in shaping those experiences, particularly focusing on whether new opportunities arise because of the participatory nature of the projects.

Changes that may have an impact on my study:

A lot is changing at my current site school because it is also becoming an Academy High School. For starters, all academies will employ PBL, so the entire school will now follow a PBL model rather than just having a PBL route. With that change occurring, in order to not favor the existing PBL program, which is the one I plan on observing, the school has decided for all PBL programs (both Academies & the established PBL program) to start their first project in October. Normally the established PBL program would begin student projects at the start of the school year. So, I can still begin my observations in August, however, no projects will begin until October. I'm not sure whether I should still begin my data collection in August and continue through October, which would give me a data collection period of about 12 weeks, or if I should wait to begin collecting data in September and keep my original 6 - 8 week data collection timeline. I would love to hear everyone's thoughts on this.

Secondly, the PBL program I plan on observing is a certified STEM program. I'm not sure if this clouds my study at all. I have no interest in STEM or plan on focusing on the STEM portion of the program any more than just including it in my class description; however, I thought it important to bring up to you all specifically because we spoke about purposes of students choosing their project path. If the program is a certified STEM program than these students are obviously interested in the technological aspect of the program. If this program being STEM certified does indeed cause some potential issues or weakens my exploration of students' cultural capital in relation to their chosen project paths, then I can consider changing my site to one of the Academies. The potential issues with observing an Academy over the established PBL program is that this coming school year will be the first year for these Academies, as well as the first year many or all of these teachers and students have ever participated in a PBL program. There are definitely potential risks in this move, but there could also be some great rewards. I too would love to hear your thoughts about this.

Lastly, there is the potential issue with IRB approval through the county. The county only meets once during the summer. If my IRB is denied, they will tell me as soon as it is denied - around the beginning of July. However, if it is accepted, they do not release that information right away, and I could be waiting for acceptance until the beginning of August. Just wanted to give everyone the heads up of the potential wrench in the plan. If it is denied, which hopefully it will not be, it could push back my entire study.

Updated Demographic information/Changes to PBL structure (I just found this out yesterday!):

2011–12 Student Data

Enrollment 1162
American Indian/Alaskan Native* 0%
Asian 8%
Black/African American 21%
Hispanic or Latino, any race 27%
Multiracial, two or more races 4%
Native Hawaiian/Pacific Islander* 0%
White 41%
Special Education 13%
ESOL 4%
Free/Reduced Lunch 45%
Average Attendance 96%

Beginning the 2014-15 school year, major changes will be implemented to the school structure of the research site. This particular school, along with two to three other schools within the county, will become an Academy. This transition has had some effect on the current processes of the PBL program(s). While the classes used to be in a block schedule form where students remained in one location during the PBL periods, the students will now transition from class to class similar to a traditional classroom setting. However, the students' schedules will most likely be created in a way where the PBL content areas are in succession so students can easily continue work on cross-curricular projects from one period to the next.