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Building Teachers' Cultural Capital in the Classroom: Using Funds of Knowledge to Support Multilingual Learners

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BUILDING TEACHERS' CULTURAL CAPITAL IN THE CLASSROOM: USING FUNDS OF KNOWLEDGE TO SUPPORT MULTILINGUAL LEARNERS

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ABSTRACT

With the increasing number of Multilingual Learners (ML) entering schools in the United States and specifically South Carolina, the access and support that the students receive has become a focus for school and district leaders. This increase in Multilingual Learners (ML) is especially pressing, as teachers struggle to provide the necessary classroom supports from both an academic and cultural perspective, which may ultimately be reflected in student achievement. While teachers are certainly the first resource for students, their lack of training is compounded by general misconceptions and generalized teaching practices. These barriers only add to ML students' difficulties when beginning their education in South Carolina schools. This qualitative study has a collaborative focus and blends improvement science with Design Thinking to first understand teachers' perceptions of their ability to serve ML students and second, how the utilization of the Funds of Knowledge (FoK) can assist teachers in serving ML students. The purpose of this study is to use the Funds of Knowledge to build the capacity of teachers to connect with students through their lived experiences. A protocol for creating FoK lesson plans was intended for use in the academic summer program at an elementary school in South Carolina. Data collection included interviewing teachers, reviewing lesson plans, observing lesson delivery, and providing feedback through professional development. Through collaboration and reflection, this study investigated teachers' perceptions and focused on increasing teachers' ability to serve ML students utilizing a framework intended to connect students' backgrounds to the classroom.

DEDICATION

I dedicate this text to my family. There is no greater gift than the love of family, and they have certainly shown me that throughout this whole process. Joe, Emerson, Jensen, and Presley, I love and appreciate you, and this is dedicated to you. Also, my parents and friends, who have been unwavering in their support, I appreciate you.

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CHAPTER ONE

BUILDING CULTURAL CAPITAL IN THE CLASSROOM

The number of English Language Learners entering schools in the United States is climbing, and the access and support that the students are receiving has become a focus for school and district leaders. The significant growth and change in the population within the United States has resulted in a need for educators to think differently about meeting the needs of a diverse population of students. Looking specifically at the increase in multilingual learners (ML) in both the United States and South Carolina in 2020, The National Center of Education Statistics (NCES) detailed that approximately five million public school students in the United States were ML in 2018. Compared to 4.5 million ML students in 2010, this number shows that the overall growth of the ML population is increasing year-by-year nationwide (NCES, 2019). South Carolina has also seen tremendous growth with the ML population. NCES (2019) reported that South Carolina has seen over a 200% growth from 2000 to 2018, with the number of ML students served now over 45,000**.** As the number of ML students grows, educators need to be empowered to understand how to differentiate services to meet the needs of both students and teachers, which includes preparation and training.

From a teacher preparation, retention, and training perspective, South Carolina lags behind other states in recognizing the need for specific training and support for mainstream teachers working with ML students. Additionally, there is a general issue with retaining quality teachers across the state. According to the 2020 South Carolina Annual Educator Supply and Demand Report from the Center for Educator Recruitment,

Retention, and Advancement (CERRA), around 6,000 teachers from the previous 2019-2020 school year did not return to a teaching/service position in the same district in 2020-2021 (a 10% decrease from the previous year). Additionally, South Carolina saw a 26% increase in teaching positions that were vacant at the beginning of the 2020-2021 school year, reaching a total of approximately 700 vacancies (CERRA, 2020). The need to retain teachers to have consistency in schools is vital to building a strong foundation for ML learners.

Digging deeper into the training and preparation of teachers, South Carolina is one of the states that does not require a teacher to have an English as a Second Language (ESOL) teaching credential. While the add-on certification is "encouraged by the South Carolina Department of Education (SCDE)" (SCDE, 2018), it is not required. This lack of required credentials means that any certified teacher in kindergarten through twelfth grade can teach ESOL classes. While this practice may give more flexibility to the state as a whole, it negates the vast number of students who need individualized support from appropriately trained educators.

This issue further exacerbates South Carolina educators' ability to connect with students, as many lack the appropriate training. "The fact that the nation's teachers are and will increasingly encounter a diverse range of learners requires that every teacher has sufficient breadth and depth of knowledge and range of skills to be able to meet the unique needs of all students, including those who struggle with English" (Samson & Collins, 2012, p. 1). The job of serving multilingual students is not limited to the ESOL classroom and involves an entire faculty's preparedness to serve ML students. However,

according to a study by the National Clearinghouse for English Language Acquisition (NCELA, 2010), while most “traditional teacher preparation programs require some training in working with English language learners for general classroom teachers, only 20% have a stand-alone course focused on MLs, and fewer than a third of teacher preparation programs require field experiences with MLs" (p.15). Assuming quality teaching practices will be adequate in meeting the needs of the multilingual learners is, in fact, not enough for MLs, as it does not address the need for linguistic and cultural diversity (de Jong & Harper, 2005).

Notwithstanding the growth and gaps in training and preparation of teachers, the academic success of the ML population is still measured by accountability measures established by the No Child Left Behind (NCLB) Act of 2001 and the Every Student Succeeds Act (ESSA) of 2015, which was preceded by a lengthy legal evolution where ML students were not well-represented. In terms of the national achievement of ML students via the National Assessment of Educational Progress (NAEP), the reading scores for 4th grade ML students was 33 points lower than the score for non-ML students. Similarly, for 8th grade, ML students were 45 points lower than the score for their non-ML peers (NCES, 2019). There is a gap between ML students and non-ML students that is not specific to one grade span. Nonetheless, accountability for ML students creates a sense of urgency, angst, and frustration for teachers, who may not be equipped to address the complex needs of their students yet may be evaluated on student outcomes.

The achievement of ML students is multifaceted. It begins with understanding who ML students are and what identifiers may help explain how to support them as a

heterogeneous group. Out of all ML students, Spanish is the most commonly spoken language, at 75%, and Hispanic students represent 77.6% of the overall enrollment of ML students (NCES, 2019). However, even within the Spanish language, students "have distinct cultures and represent many countries. They also speak different dialects" (Zacarian, 2011, p. 8). Assuming that serving the ML population can be achieved by employing general strategies related to language and instruction is not in the best interest of students. It is necessary that even within the majority population of MLs, educators recognize the unique differences that students bring to the classroom.

While language is one factor to consider with ML students, other characteristics frame MLs. One variable is the impact of poverty, as many of the ML students, approximately 66%, come from families whose income is 200% below the poverty level (Coleman & Goldenberg, 2010). Additionally, many multilingual learners come from various background experiences, have limited or interrupted schooling, limited exposure to languages, and different levels of parent involvement. As teachers embrace the challenging needs of the emerging multilingual population, coupled with their perceptions, bias, and self-efficacy, much can be said about how we can begin to shift the mindsets of educators and provide appropriate structures of support for students.

Harper and de Jong (2009) echoed this complexity and lack of differentiation with multilingual learners: "In spite of the fact that MLs vary tremendously in age, country of birth as well as in the linguistic, cultural, economic, and educational background, many inclusion efforts have resulted in a one-size-fits-all approach to instruction" (p. 138). This one-size-fits-all approach emphasizes a deficit mindset and ultimately has led to the

general misunderstanding of the ML population, and in some cases, the misidentification of ML students in the special education setting. World Class Design and Assessment (WIDA, 2017) noted that fifty percent of ML students have been classified as having a learning disability related to language and literacy, while thirty-nine percent of the general population have been identified. Misidentifying MLs as having a disability presents a much larger issue in the realm of equity, and "the cultural and linguistic resources they bring are framed as deficits, rather than differences" (p. 3). Even with the best of intentions, unless teachers are willing to understand the differences that students present and truly see the differences as assets, it is likely that placement decisions will continue to be inaccurate.

WIDA (2017) outlines several considerations for improvement in how MLs are served, including a focus on environmental factors, building evidence using guiding questions inclusive of the whole child, and considering student strengths, via asset-based pedagogy. The general misconception of solid teaching practices being enough to serve the ML population can undermine the more significant focus, which should be on holistically learning about the students. Meeting ML students' instructional needs, which is critical, requires a focus on culture first. Ladson-Billings (1995) notes that "culturally relevant teachers utilize students' culture as a vehicle for learning" (p. 161). Ensuring that teachers focus on the fact that all cultures matter, in turn, "students' cultures can be positioned as strengths and as the foundation of empowering, rigorous, and innovative learning" (New York State Education Department [NYSED]), 2019, p. 11).

Deliberately working to understand students' backgrounds, experiences, and dispositions, teachers can capitalize on ML students' abilities by utilizing their funds of knowledge and life experiences as assets, not deficits. In turn, this will allow teachers to incorporate relevant, appropriate, and familiar content to students (González et al., 2005). The idea of applying a method developed to serve as a vehicle for helping teachers connect their classroom practices to students' cultures led the research to the Funds of Knowledge (FoK). The FoK, applied as an education tool in Tucson, Arizona by Gonzalez et al. (2005), draws on aspects of and focuses on how educators can serve as researchers of students and families. The FoK is based on the premise that

> With accurate knowledge of students, teachers can draw on student experiences and priorities in schooling, thus validating student knowledge and life values and enabling them to scaffold student learning from the familiar. In this way, long-term possibilities are widened by starting with the familiar. (Hogg, 2011, p. 667, see also Gonzalez, 2005)

The implementation of the FoK can be a powerful tool to bridge the gap between teachers' lack of training and the knowledge needed to serve ML students successfully. In essence, "he potential of this approach lies in its ability to identify what is, rather than what is not; and to engage with individuals, rather than assumptions and stereotypes" (Hogg, 2011, p. 2). The use of the FoK, coupled with an understanding of the "why" behind the use of the tool, may help teachers build the foundation for solid instructional practices and appropriate integration of student experiences into lesson planning and classroom activities.

Research Question

The research question for this study is:

1. How does using Funds of Knowledge impact teachers' perceptions of their ability to build cultural capital with ML students?

Rationale for Evaluation Research Question

This research sought to explore more about using the FoK tool, specifically during an elementary summer program, to provide teachers with appropriate and relevant connections to support ML students in their classrooms. Understanding the overall perception of teachers concerning their ability to support ML students in the classroom can aid in better and more targeted professional development and improved school-based practices for leaders. Identifying the information needed for teachers to provide culturally appropriate instruction for ML students will help to fill in the necessary gaps as teachers build lessons. Finally, the research sought to analyze the use of the FoK as a tool that can be used in an ongoing way to support students' social-emotional and academic progress and build the capacity for teachers to serve ML students successfully.

Theoretical Framework

Framing the research around the theories of constructivism, self-efficacy, and deficit thinking, there is a clear link between involving students in the learning process and understanding why teachers may lack confidence in teaching ML students, ultimately contributing to the academic achievement gap of ML students. Each of these theories provides a framework for understanding behaviors and impacts how educators may better be able to support ML students. Using a singular theory to unpack the nuances of both the

teacher and student needs was insufficient to ground the research with the complexities presented, yet combined, provide a solid rationale.

Constructivism

The focus of constructivism is that students actively create knowledge in their minds based on what they already know, or construct, based on their experiences. At the same time, there are multiple constructivist theorists, such as Piaget, Vygotsky, and Freire, who have various viewpoints within the realm of constructivism. For this research, social constructivism was the focus, as it has played a significant role in education and focuses on the idea that students create knowledge from their social experiences and culture. The premise of the social constructivist theory was explored by Vygotsky (1968) and impacted Dewey's (1938) research. Social constructivists ascertain that the learner creates this knowledge through social interactions, not simply by processing information. Vygotsky focused on the impact of language and culture and how they play a role in human development; he also focused on how these experiences build on one another and create an understanding for students of the world around them. Students are transformed into active participants in their learning, focusing on co-constructing the knowledge they acquire. His concept of the zone of proximal development (Vygotsky, 1968) emphasizes the difference between what tasks the learner can do independently and what scaffolds can be put in place from teachers, peers, etcetera for the learner to complete with assistance. Social constructivism also plays a meaningful part in understanding that teachers bring their knowledge to the classroom, creating perceptions and constructing meaning. Gordon (2008) noted that teachers bring

experiences, viewpoints, cultural backgrounds, and perceptions into the classroom, influencing interactions and instructional practices. Likewise, ML students bring their own unique experiences and backgrounds to the classroom. Utilizing the constructivist approach is beneficial for both teachers and ML students. The knowledge and experiences that both groups bring present opportunities for connecting and expanding instruction in the classroom.

Self-Efficacy

The theory of self-efficacy, specific to educators, was a critical theory to consider when thinking about ML students. The idea of self-efficacy is the individual belief in one's ability to complete specific tasks (Bandura, 1977). The socio-cognitive lens, a broader theory encompassing the self-efficacy theory, has been used for close to 50 years to examine the idea that teacher beliefs impact their ability to teach students (Bandura, 1977). The research has shown that teachers' self-efficacy impacts how they serve their students, especially those who may be more complex to serve. Ultimately, the improvement of teacher self-efficacy can have an impact on both teacher mental health and job satisfaction, as well as students' academic performance (Bandura, 1977). Gibson and Dembo (1984) discuss the impact of teacher self-efficacy and its positive correlation to student achievement. Ultimately, they found that teachers who remained confident and focused on their ability to impact student learning, through solid and meaningful instruction, despite students' home factors, social influences, and other factors, may improve student performance.

The utilization of the FoK as a tool presented an opportunity to positively increase teachers' self-efficacy when working with ML students. Expanding on the information that teachers collected about students, the FoK can be utilized to create deeper connections to lessons, strengthen the relationships within the classroom, and expand teachers' knowledge of students' cultures. Durgunoglu and Hughes (2010) focus on how a lack of understanding of different cultures, a lack of experience with ML students, and training can lead to low teacher self-efficacy. Therefore, by increasing teachers' understanding of different cultures and expanding on the experiences with ML students, self-efficacy can be positively impacted.

Deficit Thinking

The premise of this theory, focusing on Valencia's (1997, 2010) theory of deficit thinking, emphasizes the "blame the victim" mentality held by many educators. This mentality, predicated on the idea that many educators have deficit views of students, has vast implications for educators and students. Within this theory, the cause of students' failure is the result of students' deficiencies, including poverty, rather than determining whether the school is structured to support students. This theory emphasizes that the institution is not to blame, but the personal, cultural, and other student factors contribute to the achievement gap for ML students.

Deficit thinking implications are vast for educators who may use students' backgrounds as a reason for failure. This thinking also shifts the focus away from actual teaching practices, and as a result, attributes student failure and disengagement of families to the students' social, cultural, or economic environment (Solorzano, 2001). The

FoK serves as a tool that can impact teaching practices and allow teachers to see beyond the typical student data that may lead to a deficit mindset. Examining the assets that students bring to the classroom may allow teachers to eliminate the deficit mindset and capitalize on student experiences.

Rationale for Research

With the expanding population of MLs at the forefront of many discussions in schools and districts, the focus of supporting teachers and their understanding of ML students is imperative. Teachers are charged with mitigating bias, understanding perceptions, and increasing self-efficacy to better meet the needs of their diverse group of students. Additionally, with teachers' lack of training and certification, a history of changes within the legislation, and preconceived notions about a one-size-fits-all approach to successfully teaching ML students, a mindset shift is necessary to change things significantly. Utilizing the connection of students' experiences and leveraging students' backgrounds is one way to bridge the gap between teachers' lack of training and knowledge and students' academic engagement and achievement. This research focused on identifying the history, the characteristics, and the diversity of MLs, misconceptions and misunderstandings of MLs typically held by educators, and the importance of a culturally responsive classroom relative to the achievement of ML students.

Legal Evolution of Serving Multilingual Students

The legal evolution of ML students is a lengthy yet essential part to consider regarding how some educators' mindsets have been formed over time. This evolution also lends itself to understanding why schools have struggled to find a framework for

serving ML students. Historically, while the Federal Government has provided guidance for serving ML students, states are ultimately given the responsibility and autonomy regarding how and what that looks like. This autonomy includes the duration and in what capacity ML students are served throughout the school day. This identification does not specifically disaggregate the data based on ML subgroups but gives general guidance. Looking back on the path that has been paved to serve ML students, it is predicated on decades of legislation focused on meeting their needs, yet not intentional enough to meet them. It is also essential to examine the legislation surrounding ML students, as it demonstrates the lack of intentionality in serving ML students that we still see today.

As the climate began to shift across the nation, the U.S Supreme Court ruled via *Brown v. Board of Education* (1954) that school segregation based on race was unconstitutional. While this case did not specifically reference ML students, it created opportunities for additional legislation that ultimately impacted ML students. Through the Civil Rights Act of 1964, in a memo from the Office of Civil Rights (OCR) in 1970, ML students were finally addressed, although not specifically.

First introduced in 1968, the Bilingual Education Act, Title VII of the Elementary and Secondary Education Act of (1965), provided more guidance regarding ML students. The bill encouraged serving ML students via teaching Spanish, integrating English, and focusing on programs where culture and ancestral languages were important (NCELA, 1988). The Bilingual Education Act worked to provide grants to school districts, yet little guidance was given surrounding what programs and processes should be employed. The Act was also voluntary, which negated the importance of states participating. Ultimately,

while this Act was the first among many others that comprised the Elementary and Secondary Education Act (ESEA), civil rights activists argued that it violated the rights of ML students.

These rights were contested in *Lau v. Nichols* (1974*)*, which serves as a powerful case relative to the rights of ML students. In 1974, the U. S. Supreme Court upheld the OCR memo of 1970. This case is significant because it outlined that simply giving students who do not speak English the same access to information, teachers, and resources as their peers did not constitute equality. The focus here was on receiving a quality education, which cannot happen using a one-size-sits-all approach. "There is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum; for students who do not understand English are effectively foreclosed from any meaningful education" (*Lau v. Nichols*, 1974, p. 566). The case prompted Congress to pass the Equal Educational Opportunity Act (EEOA), which ensured that all students were guaranteed equal education and prohibited discrimination against students. According to the NCELA (2006), this “was an important piece of legislation because it defined what constituted a denial of educational opportunities” (para. 10). The EEOA also required states and districts to remove language barriers for ML students and develop language programs.

Over the next few decades, reauthorizations were made to Title VII multiple times, including increasing state funding, and ultimately leading to the discontinuation of the Bilingual Education Act in 2001. In the Elementary and Secondary Education Act (ESEA): Title VII was reauthorized as NCLB, which stressed the need for accountability

for all learners by setting annual targets focused on the percentage of students who achieve proficiency on the state summative assessments. In NCLB, ML students were referred to as Limited English Proficient (LEP) under Title III of this Act; with the previous focus on bilingual education, the approach here, expanding the federal role in holding schools accountable, was results and accountability.

NCLB required LEP students to be accounted for in state accountability systems just one year after arriving in the United States and focused on mainstreaming LEP students as quickly as possible. Requirements included content exams in both mathematics and English language arts, and LEP students were also required to take an English Language Proficiency test to demonstrate English language development in reading, writing, listening, and speaking every year (Abedi, 2004). While funding was more readily available through NCLB, the per-pupil dollars for LEP students were less because they were spread out over many more schools. Under Title III, the program for LEP students had to meet two requirements to receive funding: teach English and teach the state content standards (Wright, 2005). Simply put, Title III gives State Education Agencies (SEA) the final authority in determining what constitutes an approved program, with the focus on learning English:

> Absent from Title III are any recognitions of the benefits of bilingual education and bilingualism, issues of cultural differences and the needs for multicultural understanding, and acknowledgment of factors which have negatively impacted the education of LEP students (e.g., segregation, improper placement in special

> education, under-representation in gifted and talented education, shortages of bilingual teachers, etc.). (Wright, 2005, p. 23)

The autonomy in decision making under Title III did not provide consistent supports for ML students.

From an accountability perspective, NCLB focused on measuring progress "regardless of race, income, zip code, disability, home language or background" (USDOE, 2015, para. 4). However, what was put into place via the NCLB exposed achievement gaps in traditionally underserved students, as states were charged with setting Annual Measurable Achievement Objectives (AMAOs) and focusing on the progress of LEP, and all student subgroups, attaining proficiency. If districts failed to meet the Adequate Yearly Progress (AYP) for two years, there were serious consequences, and schools were at risk of being labeled as failing. Therefore, there was a renewed urgency to understand how to teach LEP students due to the immense focus on reporting the AYP of special populations, including ML students, and a race to get students exited from ESOL programming.

However, Abedi (2004) discussed discrepancies in the LEP designation of students and how "different states and even different districts and schools within a state use different LEP classification criteria, thus causing inconsistencies in LEP classification across different education agencies. This directly affects the accuracy of AYP reporting for LEP students" (p. 1). This accountability mindset under NCLB had serious implications on opportunities for teachers to place relationships at the forefront. Likewise, suppose teachers were carrying a deficit mindset regarding ML students. In

that case, NCLB may have further exacerbated the issue due to the federal demands, and the frustration felt to meet those demands, and thus may have played a role in developing a deficit mindset among educators.

Following the implementation of NCLB, a new education law was signed by President Obama in 2015, reauthorizing the Elementary and Secondary Education Act (ESEA) and renaming it the Every Student Succeeds Act (ESSA). This shift focuses on states holding districts and schools accountable for the progress of ML students. ESSA focuses on standardizing processes across the state for the entry and exit of ML students (USDOE, 2016). Additionally, whereas NCLB had a major focus on strict accountability, ESSA provides states with the discretion and flexibility regarding federal funding, accountability, testing, and teacher quality. Under ESSA, states must now focus on setting long-term and interim goals, with other factors considered, such as grade, age, time in the program, or being recognized as having limited or interrupted education (USDOE, 2017). This new reauthorization does not shirk the responsibility of accountability for ML students. Still, it prioritizes the need for accountability while giving states and districts more autonomy in the process.

As evidenced by the considerable changes over the last century regarding ML students, our country has struggled to define students' needs, provide adequate resources, and outline appropriate frameworks. Additionally, there have been mixed messages within the legislation, resulting in inconsistent protocols and a sense of urgency without thought. The question of how to best educate ML students remains one that requires further research, thought, and analysis.

Diversity of Multilingual Learners

The ML student population encompasses various subgroups, experiences, backgrounds, and levels of connectedness to education. There are vast differences noted within the multilingual group, which can lead to greater connectedness in the classroom, especially when teachers seek to understand those differences. Throughout the research surrounding different ML subgroups, it is clear that the multilingual population is not a monolithic group; there are special populations that include, but are not limited to: Newcomer students, Students with Limited or Interrupted Formal Education (SLIFE), MLs with Individualized Education Plans (IEP), Unaccompanied Children, Refugee Children, and Long-Term English Language Learners. Many of the subgroups of the multilingual population are intertwined and may be identified in various capacities; nonetheless, the differences of students may impact their connectedness to the classroom. They also represent different starting points for accessing and applying knowledge.

While the assumption may be that ML students are new to the country, the opposite is often true. As a whole population, roughly 85% of ML students in pre-Kindergarten to fifth grade were born in the United States, while the remainder come from various countries (Zong & Batalova, 2015). Within the ML population, 41 percent are considered LEP. Presently, and due to the word "limited English" presenting a deficit mindset, these students are more commonly referred to as MLs, without differentiating between the two. The LEP/ML subgroup includes "anyone above the age of 5 who reported speaking English less than 'very well,' as classified by the U.S. Census Bureau" (Zong & Batalova, 2015, para. 1). Students in the LEP/ML subgroup, when compared to

the overall ML population, are more likely to live in poverty, have limited schooling, and are close to 80 percent immigrants. The students have zero to three years of schooling and would technically be classified as Newcomers. While in many cases, it is assumed that Newcomers means new to the country, this group is comprised of students who have recently arrived in the U.S. and those who may be born in the U.S. and are transitioning in their own progress of learning English.

SLIFE Students

Another factor to consider concerning ML students is whether they have had consistent education prior to enrolling in school in the U.S. While some ML students come into the classroom with previous education experience, other ML students have had disruption to their education. They lack consistent formal education even in their native language. These students are referred to as Students with Limited or Formal Education (SLIFE).

While they represent a small percentage of the overall number of ML students, SLIFE students are certainly a subgroup of the ML population. The support needed for SLIFE students may look different from a typical ML student. SLIFE students may have experienced significant interruptions to their education, related to poverty, the unavailability of schooling, political unrest, and other cultural reasons (DeCapua, 2016). However, they "often come to school with a wealth of experience in non-academic settings. Some of them have experience contributing to their household economies by working or have participated in their communities in a variety of ways" (New York State Education Department, 2014, p. 1). Initially, there appears to be limited data on the

number of students who are identified as SLIFE, as districts and states vary in how they identify these students. However, in 2000, Ruiz de Velazco et al. estimated that 20% of MLs in high school and 12% of MLs in middle school had missed two or more years of some sort of formal schooling.

Specifically, in South Carolina, there is limited information on SLIFE students publicly available from the South Carolina Department of Education. SLIFE students are not disaggregated from a data perspective when ML students enroll in school unless the student or family communicates this circumstance. This lack of data demonstrates the need for accurate reporting from districts and states to support typical ML students and SLIFE students in their foundation and growth. The number of SLIFE students in South Carolina is increasing and meeting the needs of this subgroup is critical and complex.

Decoding the Subgroups

While schools and districts may struggle in identifying specific subgroups within the multilingual population, understanding that the needs of MLs are vastly different is what is important. This identification begins at the school and district level upon enrollment, but oftentimes, there is a lack of understanding about how students are identified and placed in subgroups, which leads to assumptions about students.

When educators lack the information about students necessary for their success, we are setting them up for failure. The need to be aware of students' backgrounds and histories is not only specific to SLIFE students, but also critical at every level and within every subgroup:

According to the Migration Policy Institute (2015),

> Many school districts have reported that they lack the resources and capacities to meet the needs of newcomer students, particularly given that many have limited or interrupted formal education, low or no proficiency in English, physical and mental health needs due to migration conditions or poverty, and families with little knowledge of American school systems. (Sugarman, 2016, p. 4)

Based on the differences in students walking through the classroom door, it is not surprising that schools and districts struggle to find ways to support students, as some teachers and students require more support than others. Teachers' abilities to innately know and understand how to connect with the broad spectrum of students in their classroom make training and preparation even more difficult due to the overwhelming needs of each subgroup. Conversely, students are coming into a new environment, experiencing a range of emotions. These feelings may range from excitement to frustration and several in between. Helping students adjust to an unfamiliar culture is not an easy task.

The process that these youth go through while adjusting can be referred to as acculturation (Berry, 2003). The goal of acculturation is for students to find ways to adjust to their new environment while still maintaining connections and pride in their own country. Berry (2006) notes that "acculturation at the individual level requires adaptation to behaviors, customs, values, and tasks that are typical of another cultural group – for the immigrant" (p. 420). To consider what it truly takes for a student to adapt to the differences from one culture to another is overwhelming. Schools play a critical

role in helping students transition successfully, but educators must know how differences within students will lead to varied acculturation experiences. Berry (2006) also noted,

> Students with a minority cultural background differ widely in the extent to which they are able to adapt to culture-specific requirements for social participation within the family, in school, and with peers. Each setting requires different patterns of adaptation. Most students have no problems at all, but some show severe problems of adaptation and become isolated or marginalized at school. (p. 422)

These students who struggle in the process of acculturation may act out in different ways, shut down completely, or lack the ability or motivation to move forward.

Impacts of Poverty

Educating ML students who are also experiencing poverty is a separate yet complex and important issue, as the sheer number of ML students who are experiencing poverty is so high. Understanding that with over 66% of ML students living in poverty (Goldenberg & Coleman, 2010), teachers must deconstruct both the impacts of teaching students in poverty and those students who have the barriers that come with being an ML student. Working with students of poverty adds another dimension to the support necessary in connecting with students.

As Gorski (2018) describes, educators working with students in poverty need to understand the role they may have in supporting students who live in poverty. This understanding cannot happen, and "chances are none of this will alter our views on poverty or our attitudes towards economically marginalized people unless we have the

humility to make our views vulnerable to new ideas" (Gorski, 2018, p. 41). Other barriers come into play for ML students who are also experiencing poverty. These barriers, including language, impact every level, but these barriers may be more challenging to overcome with limited resources and training.

Teacher Self-Efficacy, Perceptions, and Misconceptions

Throughout the evolution of educating ML students in the U.S., educators have been exposed to various methods, terminology, and accountability as a result of different expectations, lack of training, and policy changes. When we look specifically at ML students in South Carolina, we know that teachers are not required to be certified to teach ML students, yet they are responsible for meeting their needs daily. It is also clear that with the diverse needs within the ML population, teachers face their own journey of understanding, examining perceptions, and self-efficacy, which are significant to unpack. It is important to explore how educator behavior may impact the classroom and students.

Teacher Self-Efficacy

Whereas MLs represent a unique and heterogeneous group, conversely, teachers do not. In fact, in South Carolina, according to the Profile of the South Carolina Teacher Workforce (2019), the majority (79%) of teachers in the 2018-2019 school year were White, and 15% were Black/African American. With the marked difference of diversity comes different experiences, practices, and values. Durgunoglu and Hughes (2010) discuss how this can lead to low teacher self-efficacy due to a lack of understanding of different cultures, a lack of experience with ML students, and training. The use of the self-efficacy theory spans decades. Still, at its premise, it is the idea of teachers' beliefs

about their effectiveness and their own ability to impact their students and attain a desired outcome (Bandura, 1997). Bandura continues to explain that the self-efficacy held by teachers influences how different tasks are created and introduced, which appears to have an impact on teaching practices and student achievement. This belief that teachers' own understanding and beliefs can impact student achievement and other behaviors and attitudes within the classroom is noteworthy to consider as we navigate how to work with students who are unfamiliar to the traditional educator.

The socio-cognitive lens has been used for close to 50 years to examine the idea that teacher beliefs impact their ability to teach students (Bandura, 1977). The research has shown that teachers' self-efficacy impacts how they serve their students, especially those who may be more complex. Soodak and Podell (1993) found that when teachers were faced with making placement decisions for their students, those with higher self-efficacy were more likely to seek placement of difficult students in the regular education classroom. Conversely, when teachers were looking at students with both learning and behavioral problems, those with lower self-efficacy were more likely to suggest placement in special education. Soodak and Podell (1993) "present findings indicat[ing] that when teachers feel they can have an effect, they are more likely to believe that atypical students belong in their classes. Evidently, teachers need both the skills of their profession and the belief that their skills can make a difference" (p. 14). The impact of teachers understanding their students coupled with the belief that their skills can influence student outcomes begins with looking more deeply at how to build connections with students.

Teacher self-efficacy combined with common misconceptions of ML learners only contributes to the complexity of serving the population and does not bode well for continued student success. Educators must be willing to examine how their own beliefs, coupled with their assumptions, values, and life experiences, may play a role in their ability to educate their students. According to a study conducted by Tong and Perez (2009) in large urban schools in Texas, teachers are much less confident in teaching ELL students versus non-ELL students. They found a correlation between teacher experience and self-efficacy, whereas the more exposure teachers had with ELL students, there was an improved sense of self-efficacy (Tong & Perez, 2009). Additionally, Tellez and Waxman (2005) found that when teachers participate in appropriate training and utilize pedagogical tools specific to ELLs, along with professional development, they develop a higher sense of efficacy working with ELLs. When teachers believe they can be successful in their work, they are more likely to have the capacity to serve students of all backgrounds. However, many teachers have reported feeling inadequate when teaching students with diverse backgrounds.

Teacher Perceptions and Misconceptions

Perceptions held by educators of ML students are interwoven throughout every grade span, Kindergarten through high school, and these perceptions are important for teachers to examine. As McSwain (2001) notes, "teachers' perceptions of cultural and linguistic competency as they relate to helping children achieve academic and social potential play a very critical role in the type of educational services provided to culturally and linguistically diverse children" (p. 54). This leads to general deficit-based thinking,

which is sometimes so ingrained in individuals that they may not even know it is happening.

When working with students of poverty, both in general and students who are MLs, Gorski (2018) details the impacts of this deficit mindset on students and families. Gorski (2018) describes how the deficit mindset is, unfortunately, the primary mindset of educators, especially when making assumptions about students. These assumptions range from parent involvement, language, absences, behaviors, and beyond. Specific to ML and SLIFE students, the deficit mindset is pervasive for educators, as "the lens of formal education identifies and labels SLIFE on what they do not have: no or low English Language proficiency, no or low literacy skills, significant gaps in subject-area knowledge, and not knowing how to 'do school'" (DeCapua, 2016, p. 226, see also DeCapua & Marshall, 2011; Suarez-Orozco, 2000).

In 1995, in order to better understand why the Hispanic achievement gap was so prevalent, Richard Riley, the Secretary of Education, created a team of researchers and experts to study the causes of this gap. Over the course of two years, the researchers found that cultural bias, perceptions, and stereotypes contributed significantly to the number of Hispanic students who dropped out of high school (Lockwood & Secada, 1999). This panel highlighted the assumptions mentioned above, reporting that educators believed that Hispanic students were not interested in learning English, lacked care for school, likely belonged to gangs, and unfortunately, did not deserve help.

Teachers may feel overwhelmed and underprepared to serve their students. Even those who are invested and committed "may truly believe in, and despair of, their

students' perceived constraints; but tragically this deficit theorizing mindset ultimately leads to expectation and acceptance of low academic achievement" (Hogg, 2011, p. 1). To bridge this gap, one must seek to understand this deficit thinking and place it at the forefront of all instructional practices.

Along the same lines of misconceptions that come with students in poverty, there are general misconceptions that educators have adopted over time with ML students. Upon examining the legal evolution impacting ML students, one could argue that federal and state legislation has contributed to these general misconceptions. Even with the best intentions, these misconceptions can permeate classrooms and require acknowledging them to defy them. "These unspoken theories, if not properly unpacked, explored, and rectified, will continue to affect and shape how mainstream early childhood teachers instruct their ELL students" (Carley Rizzuto, 2017, p. 183). Gil and Bardack, via the American Institute of Research (2010), focused on compiling assumptions held by educators to call to light the reality of these assumptions and their impact on a classroom.

One assumption is that good instruction for all students is good enough for ML students. While sound instruction is essential, ML students should receive more explicit language instruction. Teachers need to have enough knowledge of second language acquisition to anticipate the possible struggles and barriers that ML students may face as they work toward comprehension (O'Day, 2009). While differentiation may be a standard practice, unless a teacher understands how ML students comprehend texts, that differentiation will not be effective (O'Day, 2009). This generalized application of teaching practices, coupled with discomfort in serving diverse students, leads to the

notion that teaching practices do not recognize students' needs in learning. “The achievement gap between MLs and their non-ML peers widens over time and could be exacerbated by teachers who do not know how to focus on and support MLs in their oral and academic language development in the later grades” (Samson & Collins, 2012, p. 10). Teaching practices that reflect students' interests and are differentiated to meet the needs of all learners are critical but must extend beyond what is considered simply good instruction.

These misconceptions of teaching ML students can ultimately lead to misidentification of ML students as needing special education services or not receiving the appropriate services. Due to assumptions of English proficiency issues, students may not be referred or be inappropriately referred because of the assumption that their problem is English language proficiency in development and not content misunderstanding (Haager, 2007). In fact, the average time that it takes for an ML student to gain language acquisition is four to seven years (Hakuta et al., 2000), and therefore, because of this slower development, students have been mislabeled. The overrepresentation of MLs in special education programs is disproportionate and requires attention: “this is likely occurring due to educators’ lack of training, familiarity, and preparedness to teach diverse populations. That is, students who are ‘different’ from their teachers are all too often regarded as having disabilities” (Zacarian, 2011, p. 131). Finding a balance requires knowledge of students and ongoing training to support both the needs of teachers and students, considering their acculturation process as well.

There have been multiple frameworks proposed outlining what is needed to serve ML students. de Jong et al. (2013) proposed a framework that includes three dimensions when looking at the expertise required by mainstream teachers who are teaching ML students. There are three dimensions to the framework: first, understanding MLs both biculturally and lingually, including student experiences and background; second, seeking to understand how language and culture serve as vehicles for student learners; and third, understanding how policies impact learning opportunities for ML students. These three dimensions lean first on the understanding of students, including their backgrounds and experiences, both at home and in prior schooling, to "understand how bilingual learners' linguistic and cultural experiences can influence their participation, engagement, and learning in the classroom" (de Jong et al., 2013, p. 3). It is clear from the literature that the emphasis must first be on the background of students in order to make significant changes in the classroom.

Building Connections

Analyzing the need to improve outcomes for ML students while providing support for teachers, we must look at how we can build connections with students. A common thread through much of the literature regarding this diverse population, both how to teach ML students and how to avoid misconceptions, is rooted simply in getting to know who the students are as people. Understanding students' backgrounds and experiences, making them a priority, and making real connections to the instructional practices in the classroom has the potential to have profound impacts. While the struggle to meet the accountability requirements may feel like an insurmountable task, one could

argue that instruction cannot happen without first seeking to understand and connect with students.

Over time, education reform has focused on curricula and standards, which has caused educators to place emphasis on these factors above building relationships with students. As noted in close to 200 interviews of teachers in New York City, Crocco and Costigan (2007) discovered that teachers felt that their ability to connect with students, have the ability to think with autonomy and creativity, and build relationships was all but diminished due to the accountability in the district, which was a factor in their overall job satisfaction. The necessity of reframing teacher mindsets goes back to a few of the basic principles that were instrumental in shaping the notion that student experiences are compulsory to learning.

Over 100 years ago, Dewey focused on the idea that schools should be representative of real-life and adopt instructional practices based on students' experiences. Dewey (1916) argued, “If we teach today’s students as we taught yesterday’s, we rob them of tomorrow” (p. 167), which has resonated with educators over the years, especially those who yearn for a student-centered classroom. Interestingly, we are still struggling to find the student at the center of the classroom, specifically those minority groups who bring so many experiences with them.

Leaning on the work of Vygotsky (1978), whose theory of Sociocultural Theory of Mind (SCT) of learning includes one of the most commonly used terms in education, “Zone of Proximal Development” (ZPD), one can further connect the need to capitalize on students’ experiences with an asset-based mindset. He defined the ZPD as “the

distance between the actual developmental level (of the student) as determined by independent problem solving and the level of potential development as determined through problem solving under guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). This work is important for ML students, as it is based on the idea that a student's potential is just waiting to be developed by educators. Walqui and van Lier (2010) discuss this potential:

> English language learners, like all students, arrive in our classrooms with immense potential, strengths to build on, and dreams for their future. It is our job as education professionals to help them realize that potential and to provide them with the right learning opportunities so that they can address rigorous academic content in a language they have yet to master. (p. 1)

Vygotsky also emphasized that learning is a social process and urged that all forms of learning focus on social interaction, including those social experiences that students have experienced in their worlds. This theory supports the importance of focusing on providing access to instruction content and opportunities for social interactions with their peers. By using scaffolding, students can build on prior knowledge and make connections with just the right supports and interactions with peers and teachers. While the typical approach may be for teachers to wait for students to establish language proficiency prior to expanding instruction for ML students, in this case, by using scaffolding via building on background knowledge, the onus is on both the teacher and the student.

By teachers understanding the potential for students, it takes creating opportunities for interaction, communication, and a focus on the ZPD of each student. This, however, will not be sufficient alone. The added focus for educators in finding and capitalizing on the ZPD involves understanding how to allow students the opportunity to dive into their own experiences and integrate them into their own learning. The focus on students maintaining a connection to their own culture while adapting to the new one may have successful outcomes related to their acculturation.

Importance of Building Cultural Capital

While the idea of capital is typically associated with currency, in the context of building cultural capital, the focus is on capitalizing on the assets students bring to the classroom. The term cultural capital was coined by sociologist Pierre Bourdieu in the 1970s. He identified cultural capital as the cultural knowledge or skills that act as currency and can alter ones' experiences and opportunities. As explained by Brown and Szeman (2000) regarding Bourdieu's work, cultural capital "can take objective form in cultural goods, artifacts, books, and so on; beyond the family, it is accrued through social associations and formal and informal schooling" (p.192). The cultural characteristics that students bring to the classroom are important considerations for educators to understand and utilize as a resource, and they should not be seen as limiting factors.

For the purposes of this research, cultural capital is defined as the assets that students bring to the classroom and how those assets can be used as valuable components, or capital, in expanding students' understanding of the world around them. Furthermore, this research focuses on how those assets can be collected and used by

teachers to create lessons recognizing and connecting to students' culture to the classroom. With this asset-based approach, building cultural capital takes into account the idea of the skills, knowledge, education, and mannerisms that people acquire from their families' backgrounds and how understanding those can play a role in enhancing the students' experience in the classroom.

In order to explore the notion of teachers creating opportunities for student experiences and backgrounds to be integrated into the classroom, we have to take into consideration the simplistic way that culture has sometimes been viewed. When one considers the ability to connect with students via culture, some of the first thoughts are typical cultural celebrations, basic questionnaires, and nights to celebrate various minority student groups. While these efforts are laden with positive intention, going beyond the simplistic view of infusing culture into teaching takes an understanding of a culturally responsive pedagogy. As Nykiel-Herbert (2010) points out, "One of the major reasons why minority students in general, and immigrant newcomers in particular, perform poorly in schools is that their home cultures, while being 'celebrated,' are not sufficiently utilized as a resource for their own learning" (p. 2). Truly integrating culture into classrooms takes a student-centered approach, avoiding assumptions about cultures and capitalizing on students' unique strengths and experiences in a way that does more than scratch the surface. Ladson-Billings (1995) discussed this idea of culturally relevant pedagogy decades ago. This concept focuses on engaging students whose experiences and cultures are not represented in the majority of students. Her research centered on three goals: teaching must yield academic success, students must maintain cultural

integrity, and students must develop a broad sense of understanding cultural norms and citizenship. Ultimately, instructional practices will not matter if there is not an intention to move to a deeper understanding of students' cultures and experiences. This is an asset-based approach to looking at students, coupled with an understanding that it takes consistency, unlearning of practices, and relearning of practices, can be a powerful tool. Teachers need to use "the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively" (Gay, 2002, p. 106). Gay (2002) emphasizes the need for "cultural scaffolding", which digs below the surface and ensures that teachers have a specific understanding of student cultures, including unique similarities and differences (p. 109). Ultimately, teachers need to be aware of how MLs may have been schooled in their home country to better understand aspects of classroom participation and other schooling experiences that may have shaped their current reality.

Teaching English to Speakers of Other Languages (TESOL International Association) (2018) developed a core set of principles focused on helping teachers successfully teach ML students. These six principles are connected to the first and most central principle, "Know your learners." This principle focuses on understanding ML students' backgrounds, cultures, languages, and experiences to create engaging and connecting lessons for students. TESOL outlines practices that epitomize this first principle, including gaining information about students and embracing and leveraging this information in order to better serve students. Within these practices, teachers are encouraged to think about the learners' intentionally when planning lessons and "try to

determine what gifts and talents students bring to the classroom, what interests motivate them, what life experiences they have had that are curriculum-related, and what else in their backgrounds has influenced their personalities and beliefs" (TESOL, 2018, para. 3). These practices outlined by TESOL also translate to school and district leaders, specifically with curriculum directors, who are encouraged to take the cultural differences of their students into account when making decisions regarding curriculum.

Relating cultural responsiveness to student achievement is meaningful, as the outcomes are beneficial. As noted by Bryd (2016) in a study examining whether culturally relevant teaching works:

> When teachers use real-life examples and try to connect to the interests of the students in the classroom, students are more engaged and feel more connected to their schools. In sum, when asking whether culturally relevant teaching works, the answer from the current study is a qualified yes. Teaching methods that connect with students' real lives and interests and promote understanding of other cultures are associated with better academic outcomes. (p. 7)

These teaching methods that connect with students' real lives are also something that The New York State Department of Education (NYSED) has prioritized due to their impact on student achievement. Through the assimilation of decades of research regarding Culturally Responsive Pedagogy, the NYSED created a framework for stakeholders called the Culturally Responsive-Sustaining (CR-S) framework. The CR-S framework intends to help education stakeholders:

> Create student-centered learning environments that affirm cultural identities; foster positive academic outcomes; develop students' abilities to connect across lines of difference; elevate historically marginalized voices; empower students as agents of social change; and contribute to individual student engagement, learning, growth, and achievement through the cultivation of critical thinking. (NYSED, 2018, p. 7)

It is the hope that other states will adopt a similar approach to prioritizing cultural responsiveness to place students at the center of the learning and provide teachers with the appropriate support to do so.

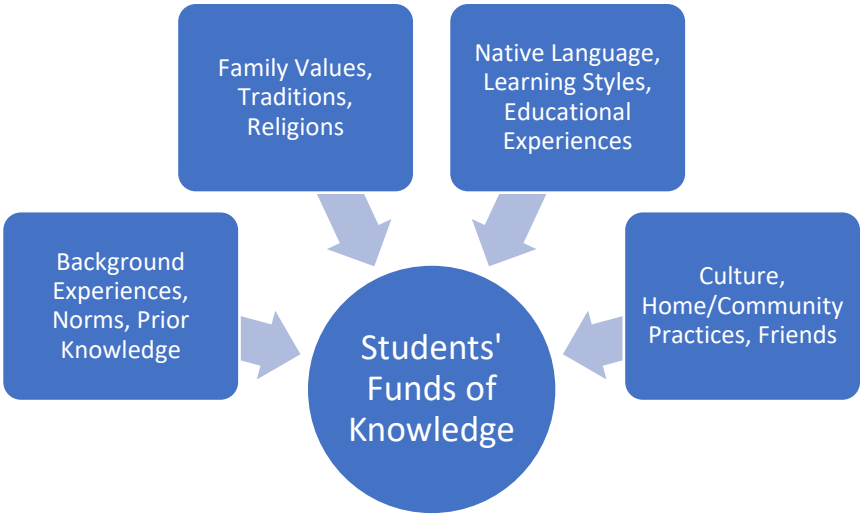
Funds of Knowledge

Examining practices in South Carolina, including reviewing the general lack of teacher training supporting ML students and inconsistent practices and expectations among educators, a tool to bridge the gap is the FoK. The FoK focuses on the teachers serving as ethnographers and emphasizes building deeper relationships and understandings of students and their families through their knowledge and experiences. These FoK (Figure 1) include students' and families' cultural practices, including those that are part of the daily routine, inner culture, work experience and "refer to the historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being" (Moll et al., 1992, p. 133). Drawing on Vygotsky's (1978) idea that learning takes place socially, the FoK considers the possible perspectives that children bring to the table due to their social

practices and experiences. Connecting teachers to these experiences blends at-home learning to in-school learning.

Figure 1

Funds of Knowledge Components



Note: Components of the Funds of Knowledge that may be represented in lesson planning. From González, N., Moll, L., & Amanti, C. (Eds). (2005). *Funds of knowledge: Theorizing practices in households, communities, and classrooms.* Erlbaum

While the term FoK dates back decades and draws on anthropological roots, Gonzalez et al. (2005) focused on the idea of teachers as researchers. Through their work, they called out the importance of going beyond the basics of learning about surface-level

culture and "allows the possibility of seeing beyond the classroom and glimpsing the circulating discourses and shifting fields of power that shape students' lives" (p. 44). The concept of teachers' empowerment in understanding and connecting communities to the classroom is a powerful notion. The FoK represents a resource for teaching and learning in classrooms, asset-focused and giving meaning to inquiry. Students need to know that their experiences matter. Working to incorporate these experiences into the classroom shifts the concept of students simply receiving the instruction, to students becoming part of the instruction.

Multiple education organizations support the idea of supporting ML progress through learning about students. As evidenced in the World Class Instructional Design and Assessment (WIDA) standards framework, a tool developed as an approach to language development across all contents and grade levels, the first component is the Can Do Philosophy.

> WIDA's Can Do Philosophy is based on the belief that all students bring established knowledge, skills, and ways of seeing and understanding the world from their homes and their communities. WIDA believes that as educators, our role is to craft instruction that capitalizes on and builds upon those funds of knowledge. (WIDA, 2017, p. 1)

Additionally, the National Council of Teachers of English (NCTE) outlines its position statement in supporting ML students. This position statement includes eight beliefs about this support and the importance of each of them. The second belief is regarding FoK, and the NCTE denotes how important it is to consider students'

knowledge that they bring with them, not make assumptions about what they do not know. NCTE (2005) outlines specific activities that teachers can use in the classroom and focuses on the fact that:

> Teachers need spaces to learn about the communities in which they will teach. This includes opportunities to explore and experience the contexts in which students live and form their cultural identities. Educators also need to learn more about sociolinguistics both in teacher preparation programs and in ongoing professional development. (para. 13)

The use of the FoK tool requires a clear understanding of the "why" behind the use. This "why" cannot be surface level and involves clear professional development for teachers. The FoK is also not a tool to be used and discarded; when used consistently, this tool has the potential to truly bridge the gap between improving teachers' self-efficacy and creating positive classroom environments for students.

Research is abundant surrounding the use of FoK in classrooms around the globe, as evidenced by a study conducted by Moll (2019), where he examined the use of the FoK through unique applications. Beginning in New Zealand, Hedges et al. (2011) documented the importance of understanding children's interests via interviews and observations. In this study, they determined that "through children's funds of knowledge-based interests, culturally valued conceptual knowledge such as literacy, mathematics, and science begin to develop, as children engage with teachers and families, without the need for didactic teaching approaches" (Hedges et al., 2011, p. 198). Even at an early

age, the priority of establishing an understanding of students leads to a greater understanding of academics.

Examining immigrant families in Spain, Staubich and Esteban-Guitat (2011) focused on their use of the FoK and making curricular modifications by assigning tasks to families rather than observing and documenting. The purpose of this study was to focus on the storytelling of the family and how "identity can be understood as a cultural and social process, a product of family and community socialization. Hence, when a teacher is studying the funds of family knowledge, he/she is studying their funds of identity as well" (Staubich & Esteban-Guitat, 2011, p. 84). This idea of diving deeper into the individual perspectives of the FoK has been expanded upon to examine the unique ways individuals process their own experiences. These funds of identity have drawn on the fact that children have "their social world, underestimating that children/students create their own social world and funds of knowledge, which may be independent of the social life of the adults surrounding them" (Subero et al., 2017, p. 4). Deepening the understanding that educators have of students blends both familial and individual aspects in order to create a viable and beneficial learning environment is what is important.

Throughout time and the literature, many different approaches surround the implementation of the FoK. Hogg (2011) compiled an overview and analysis of the different uses for the tool and how the researchers employed the definition of the FoK. Hogg (2011) acknowledged that the tool had been applied in many ways and to various groups of people. For the purposes of this research, the focus was on the use of FoK in the classroom, encouraging teachers to "direct their gaze at students' lives, looking

beyond assessment data to identify prior knowledge…it encourages teachers to have a wide vision of the sources, scopes, and depth of students' FoK, and consider how they may develop awareness of this resource" (Hogg, 2011, p. 673). Looking at the different uses of the FoK and the possibilities for use, it is clear that there is not just one definition, nor is there an attempt to yield one. There is also varied research analyzing whose FoK are being considered, including household members, students, teachers, and other members of the community. It is fascinating to observe the different and unique ways in which the FoK has been applied, with the ultimate goal in mind of gathering cultural capital from students and families.

Conceptualizing the use of the FoK and how it can be utilized to support, and in some cases, supplant teacher training, is a crucial step in connecting the students to the classroom:

> Therefore, student FoK can usefully inform both what is taught and how. The first may be achieved by means of inclusive practice in terms of the contexts drawn on for teaching content and skills. The second involves supporting different ways of being in the classroom, including different social interaction styles; by setting tasks which put academic knowledge and skills to use for lifeworld goals, such as designing a statistics project to improve one's sports performance; and encouraging discussion of learning in home languages. (Hogg, 2011, p. 674)

It is useful to consider other ways the FoK may expand teachers' knowledge and practices in the classroom, whether through interests, experiences, rituals, or a combination of all. Utilization of the FoK may also play a role in demystifying

assumptions and improving self-efficacy among educators while preserving students' culture and encouraging pride in the sharing of experiences and knowledge. The idea of integrating the FoK into classrooms is something both the U.S. Department of Education and the Washington Office of Superintendent in Public Instruction (OSPI) have emphasized utilizing as lessons are constructed. The U.S. Department of Education created the Newcomer Toolkit that specifically discusses the use of the FoK. "Knowing that their family and community culture(s) and language(s) are valued in school developed newcomers' confidence in their new schools, their teachers, and their own learning" (U.S. Department of Education, 2017, p. 67). The value that Newcomer's FoK can bring to the classroom is critical to their development and connection to the new surroundings.

Additionally, the FoK concept is one of Washington State's guiding principles for working with ML students, and their plan for integrating FoK into classrooms is used in this study. The OSPI has provided the Funds of Knowledge Toolkit, outlining the way the FoK can be applied to teaching and learning. The Toolkit provides a framework for teachers to collect, categorize, and integrate students' FoK into lesson planning. For example, teachers can begin collecting students' FoK by having them write essays about their backgrounds, create projects that have a personal focus, and share their interests. Through the collection of students' FoK via projects, informal conversations, and other collection methods, an inventory matrix, similar to Appendix A, is where student FoK data is organized into the FoK categories, such as economics or traditions and values (Figure 2).

Figure 2

Sample Funds of Knowledge Matrix with Classroom Application from Washington Office of Superintendent in Public Instruction in Washington State

Funds of Knowledge	Home/Community Practices	Classroom Application
Economics	When Ruby's parents lived in El Salvador the currency was different. They had saved their old money in a small box.	We could use this in math, money in math is very common but using different currencies would bring in their funds of knowledge, especially if we have other cultures in our classroom that we may not know about.
Geography	There were a lot of maps around their home. I saw a large world map of South and North America. I also saw small maps on key chains of El Salvador. Ruby's mother also brought out a towel that resembled the Salvadorian flag.	This could be used in social studies. We could look at cities in Washington and take it a step farther and move from each continent and have table groups look closer at cities in specific continents or regions.

Note: An example of data collected utilizing the Funds of Knowledge and possible classroom applications embedding the Funds of Knowledge. From Washington Office of Superintendent of Public Instruction. (n.d.). *Funds of knowledge tooklit*. https://www.k12.wa.us/sites/default/files/public/migrantbilingual/pubdocs/Funds_of_Knowledge_Toolkit.pdf

This matrix can serve as a "reservoir of information and examples available to help guide lesson development when needed" (OSPI, 2021, p. 3). Once the matrix is compiled, teachers connected with students by integrating components from students' backgrounds and experiences into lessons throughout the summer program and ultimately, the over the course of the school year. This integration provides relevance to students and helped teachers see the unique aspects that students bring to the classroom. This shifts the focus in the classroom, as:

> School-based practices, curricula, and behaviors are based on mainstream, middle class norms and perspectives. By integrating patterns of learning, knowing, and doing that are familiar to culturally and economically diverse students, academic content becomes easier to connect to their lives and is understood on a deeper level. (OSPI, 2021, p. 1)

In the future, the FoK data collection can be organized over time, and the use of students' FoK can be integrated into lesson plans across all content areas. The OSPI toolkit provides sample teacher lesson plans, including gleaning individual experiences into an elementary mathematics lesson, focused on selling corn by the pound versus by the ear. The power of the FoK is demonstrated through the ability to continuously use students' experiences as lessons are created, creating spaces where students feel that they are acknowledged and proud of those experiences.

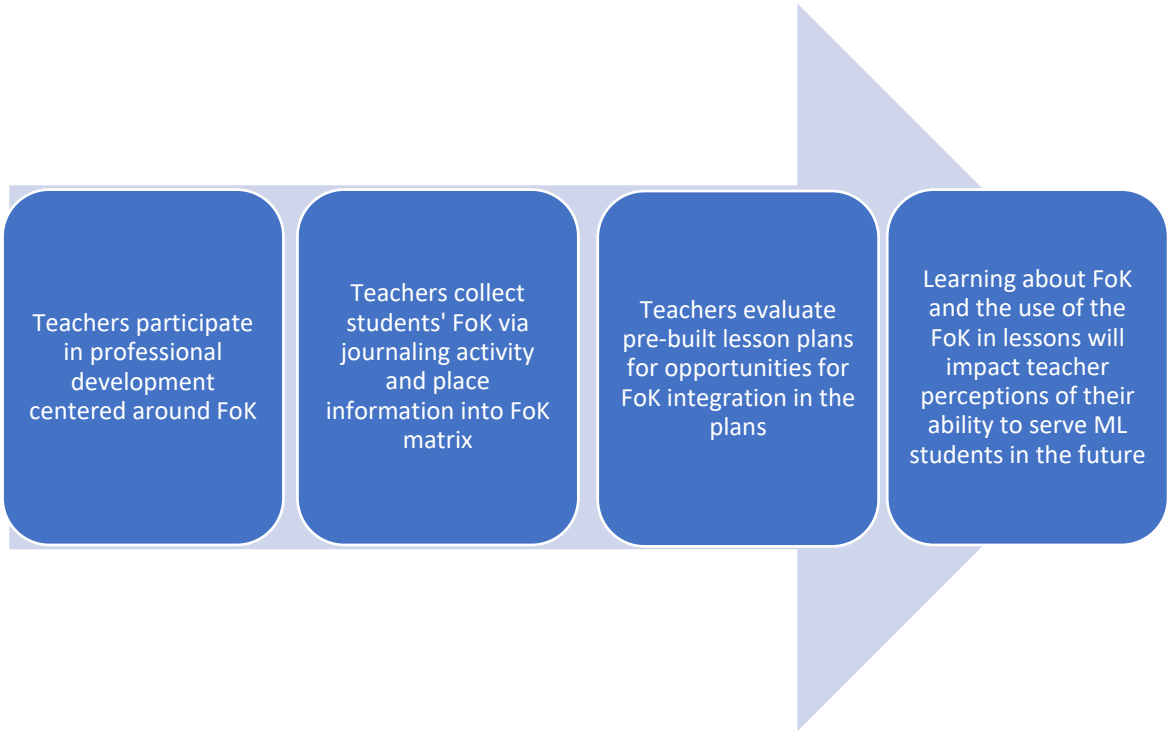
Improvement Science

Examining the need to positively develop teachers' self-efficacy, coupled with bridging creating classroom spaces that holistically support ML students and their

identities, was pivotal to initiating change. However, these improvements cannot take place quickly, and they require widespread reform to happen. By looking at making small, consistent adjustments, helping teachers examine their own viewpoints, and providing them with the training and tools to make connections throughout the year, systemic change can take place. This theory of action outlines the progression that focuses on understanding teacher perceptions of their ability to serve ML students in the summer program and how those perceptions may have shifted upon using the FoK.

Figure 3

Theory of Action



Utilizing improvement science, educators can focus on the process of evaluating protocols and establishing methods to initiate change. As Bryk et al. (2015) explained, improvement science focuses on:

> The specific tasks people do; the processes and tools they use; and how prevailing policies, organizational structures, and norms affect this. Applying improvement science to education would direct greater attention to how better to design and fit together the many elements that shape the way schools work. The latter is key to making our educational institutions more effective, efficient, and personally engaging. (p. 8)

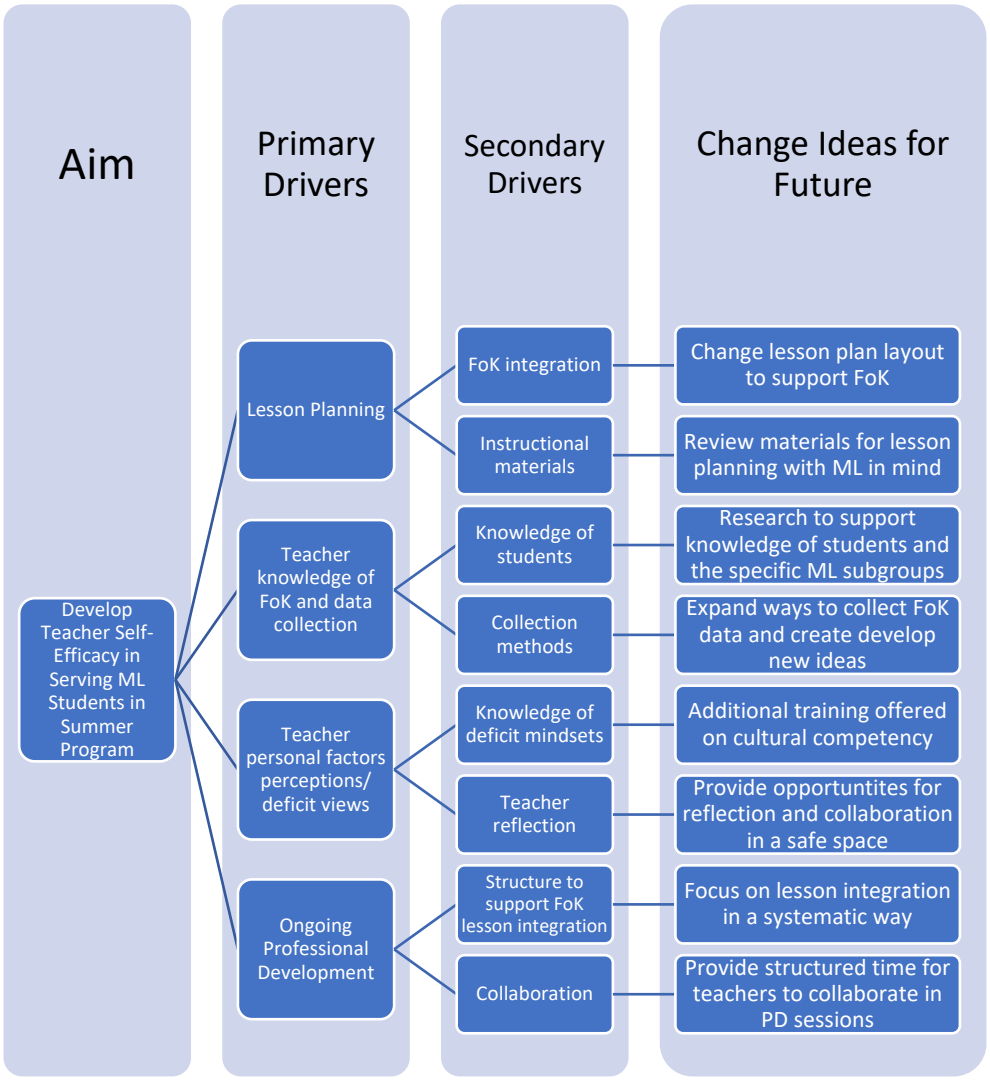
Analyzing the focus of improvement science, with a goal of creating institutional change, is important in this process. Improvement science "is a methodological framework that is undergirded by foundational principles that guide *scholar-practitioners* to define problems, understand how the system produces the problems, identify changes to rectify the problems, test the efficacy of those changes, and spread the change" (Hinnant-Crawford, 2020, p. 1). One of the essential components of improvement science is that it is focused on the participants learning and engaging throughout the process, a critical component of initiating change in the field of education. Bryk et al. (2015) point out that improvement science and the idea of learning through the process of improvement "demands the active, full engagement of educators. This provision challenges prevailing arrangements in which researchers study schooling, design interventions, and analyze policies; and then teachers, principals, and education leaders are cast as users of this research in their work" (p. 9). The active participation from educators in the process, coupled with an understanding that change takes time and commitment, led to better opportunities for true change to take place.

Focusing on the change and the why behind the change is critical in improvement science. This theory of improvement, as Hinnant-Crawford (2020) explains, the why and the how "a particular intervention considering the systems that is producing the problem, the knowledge of those who will implement the intervention, and general theories and empirical research on the problem" (p. 117). Understanding the nuances of the people, organization, and intervention being proposed are outlined in Figure 4. This driver diagram outlines how the change was implemented and "it contains your desired outcomes, key parts of the system that influence your desired outcome, and possible changes that will yield desirable results" (Hinnant-Crawford, 2020, p. 119). The driver diagram has four components: the aim statement, the primary drivers, the secondary drivers, and the change ideas (Figure 4). Each of these components focused on the organization, people within the organization, and proposed intervention to ignite change.

The driver diagram (Figure 4), a hypothesis, was an important first step in moving toward the iterative research cycle. Improvement science in education focuses on providing educators with opportunities to examine practices and generate tailored resources based on the nuances of the school, district, and state. The next step was taking the driver diagram and looking at the cycle of change. This study utilized a combination between elements of Design Thinking, as proposed by the Hasso-Plattner Institute of Design at Stanford (d. School) and the *Plan-Do-Study-Act* (PDSA) model and more intentionally at the work of Bryk et al. (2015) and Hinnant-Crawford (2020). It is evident that a combination of elements in both Design Thinking and the PDSA model can reshape classroom practices in support of students.

Figure 4

Theory of Improvement: Driver Diagram

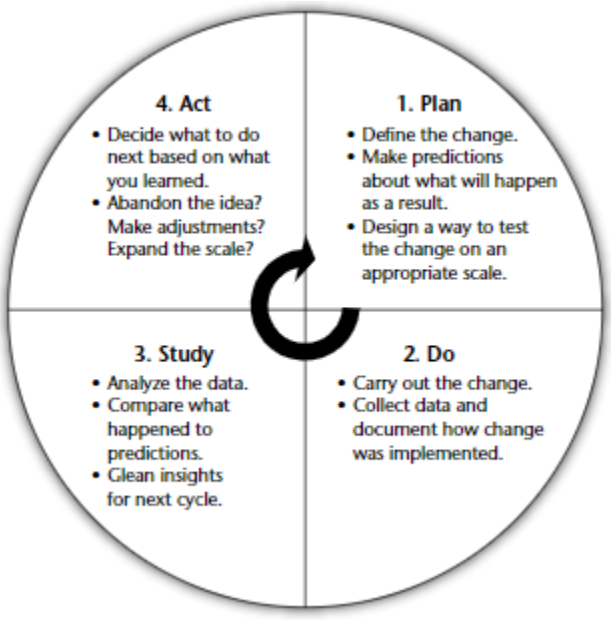


Note: Adapted from: Hinnant-Crawford, B. N. (2020). *Improvement science in education: A primer*. Myers Education Press.

The PDSA model is a flexible tool that focuses on continuous improvement, but "unlike traditional forms of research, this is localized theory, unique to a specific system, and narrowly focused on how to improve that system" (Hinnant-Crawford, 2020, p. 153). The PDSA model helped to provide additional knowledge at each of the cycles, based on the outcome of the previous one. "One of the advantages of the PDSA cycle is that it is a very flexible tool to guide learning at different stages-- from a good idea to a quick prototype to something that may work in a few places and, finally, to a robust large-scale improvement" (Bryk et al., 2015, p. 122). The PDSA model (Figure 5) provides a logical framework, with opportunities for ongoing revisions and reflection throughout the process.

Figure 5

The Plan-Do-Study-Act Model



Note: Outline of the PDSA model focused on continuous improvement. From Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). *Learning to improve: How America's schools can get better at getting better*. Harvard Education Press.

Design Thinking (Figure 6), rooted in various disciplines, includes a creative problem-solving approach that is focused on a human-centered design process, which is crucial when it comes to understanding how change can occur within people and organizations. Design Thinking can be described "metaphorically as a system of spaces rather than a predefined series of orderly steps" (Brown, 2008, p. 4). The use of Design Thinking in education, while not yet widely adopted in the field, has potential, is gaining traction, and is a useful and encouraging new paradigm to solve problems across many disciplines (Dorst, 2011). With its human-centered approach, Design Thinking focuses on collaboration, optimism, and experimentation, with the end goal of generating ideas that meet the needs of the participants and the organization. There are five phases within

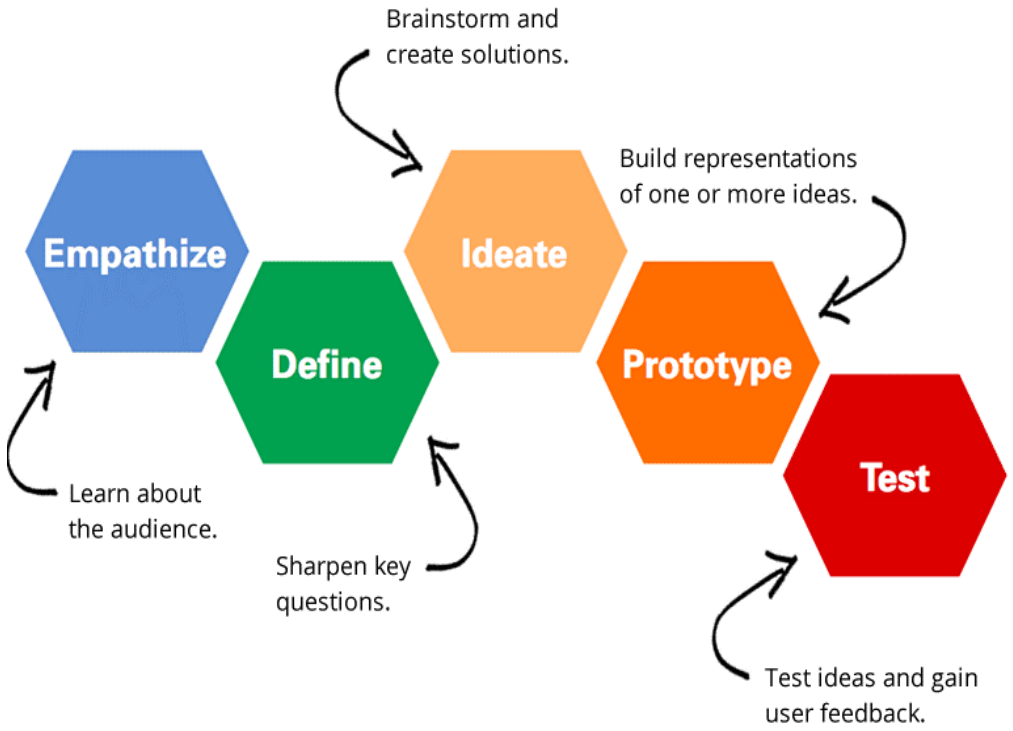
Design Thinking: Empathize, Define, Ideate, Prototype, and Test, and the cycle is non-linear.

Each of the five phases of Design Thinking are important to consider, yet as a fluid process, can be adjusted throughout the research. The research surrounding Design Thinking:

> Triggers an experiential learning process that ultimately supports the development of organizational cultures defined by a user-centric focus, collaboration, risk-taking, and learning, which in turn support the further use of design thinking tools. Importantly, the physical artifacts and emotional experiences that result from the use of design thinking tools provide sources of reflection that help organizations to build strong cultures. (Elsbach & Stigliani, 2018, p. 2301)

Figure 6

The Design Thinking Process



Note: Design Thinking process with notes for each part of the process. Adapted from Stanford University. (2021, July 6). *Design thinking bootleg — Stanford d.school*. In Stanford d.school. https://dschool.stanford.edu/resources/design-thinking-bootleg

The emphasis on building creative solutions through Design Thinking has the potential to support the organizational culture. When people feel comfortable expressing problems, ideas, and solutions, there is a sense of appreciation and ownership of the process and a sense of connectedness to the organization. The ability to truly collaborate, reflect, listen, and adapt processes that are supported by both the participants and the organization is critical to the work of Design Thinking. The work of Elsbach and Stiglani (2018) evidenced that:

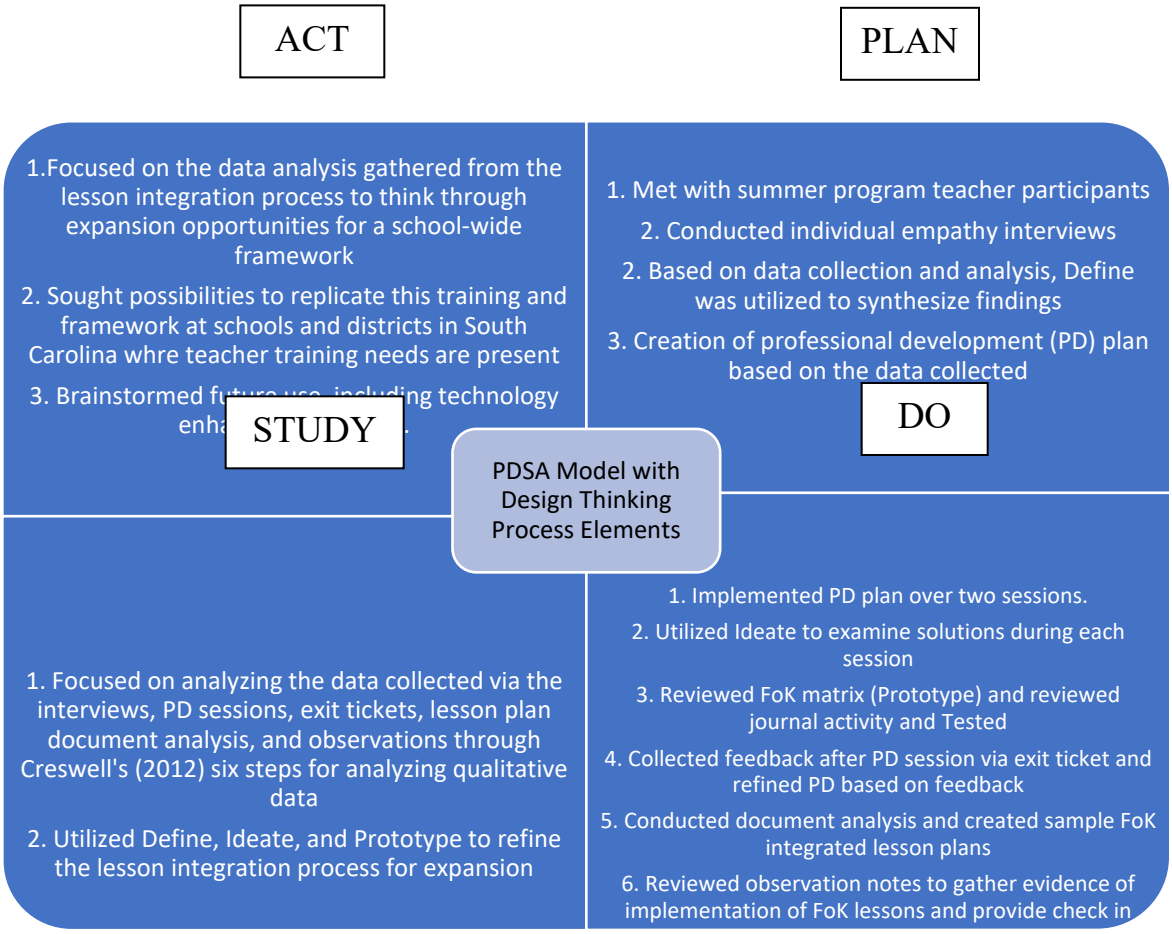
> Design Thinking tools produced both physical artifacts (e.g., prototypes, drawings, design spaces) and emotional experiences (e.g., the experience of empathy or surprise/delight), and that reflecting on these artifacts and emotional experiences helped organizational members to understand why and how design thinking tools were effectively used in their organization. (p. 2279)

This impact that Design Thinking may have on the organization, through the use of the tools mentioned, has the opportunity to create processes to support widespread change.

Integrating the Design Thinking process with the PDSA Model (Figure 6), included merging both frameworks into one non-linear process. This integration focused on a repeated series of interviews, teacher feedback during the planning sessions, lesson document analysis, and observations, in order to build a true framework for improvement in serving ML students in the school. These cycles of improvement, when combined, provided the opportunity for creativity, collaboration, and reflection. Utilizing aspects of both frameworks and taking a deeper look at the research question, the collection of data was integral to understanding the needs of teachers who are serving ML students and how practices can be adapted to better serve the students.

Figure 7

Components of Design Thinking Interwoven in the Plan-Do-Study-Act Model



Note: The PDSA model outlining the research process and embedding the different aspects of the Design Thinking Process.

Cycles of Improvement

Considering each portion of the PDSA model and the Design Thinking process helped guide the improvement process in this study. Examining where and how the Design Thinking tools could be embedded into the PDSA model was a process that helped to blend the two frameworks and the strengths that each brings to improvement science. Overall, the PDSA model provided the structure, while the Design Thinking

elements further emphasized the aspects of reflection and creativity throughout the process (Figure 6). Many elements of Design Thinking can be represented at each of the phases of the PDSA model and overlapped at multiple points.

Plan

The planning phase of the PDSA model consisted of outlining the change, making predictions, and designing how to test the change (Bryk, 2018). The planning phase focused on establishing what is trying to be accomplished (Figure 5). Based on the research surrounding teachers' perceptions related to serving ML students and knowing the nuances of the research site, there was a need to develop and utilize a tool to better serve ML students and build connections. This planning phase was critical, as the remaining elements of the cycle relied on successful planning, which began with learning more about the participants and the site.

Understanding the current reality of teachers began with identifying the participants and learning more about who they were as teachers. Considering that all participants teaching in the summer program were identified for participation in the study, the next step was conducting semi-structured interviews to collect data and diagnose the specific next steps within the PDSA model. These semi-structured interviews allowed the researcher to expand on questions that are asked and allowed for follow-up. Creswell and Poth (2018) emphasize the advantages of qualitative interviews and that they provide opportunities for participants to give historical information. Additionally, the interviews, when semi-structured, are intended to "elicit views and opinions from the participants" (Creswell & Poth, 2018, p. 190). Integrating elements of

Design Thinking, specifically, Empathize, the focus was on building empathy for those participants and understanding what was important to them (d.School, 2018). In this stage, empathy interviews (Appendix B) served as opportunities to learn more and gain a deeper understanding of teachers' perception and self-efficacy, how background knowledge of students is collected and used in the classroom, as well as what teachers wished they knew about their students. All of this was done in a non-judgmental way, with conversation and relationship building at the forefront. As Stanford d.School (2018) notes:

> Engaging with people directly reveals a tremendous amount about the way they think and the values they hold. Sometimes these thoughts and values are not obvious to the people who hold them, and a good conversation can suppose both the designer and the subject by the unanticipated insights that are revealed. (p. 1)

Based on data collected from the empathy interviews, the problem was further refined by studying and coding the information collected. Utilizing Creswell and Poth's (2018) qualitative method of ensuring that the participants' meanings remain at the forefront was an important consideration throughout the interview and data collection process. Throughout the collection and analysis of the semi-structured interview data, the Design Thinking approach of Define was utilized, which is when "you unpack and synthesize your empathy findings into compelling needs and insights and scope a specific and meaningful challenge" (d. School bootleg bootcamp, 2018, p. 2). During this collection of responses and data collected, a professional development plan was created and delivered during two of the summer program planning sessions. During these

summer planning sessions, the professional development plan targeted the use of the FoK matrix (Appendix A) tool in lesson creation for use in the summer program based on the outline provided in the FoK toolkit by OPSI in Washington State.

Do

The Do phase of the PDSA model focused on carrying out the change and collecting data in order to document how the change was implemented (Bryk, 2015). While gathering data from teachers via empathy interviews, the professional development plan was being formulated to meet their specific needs. This professional development plan is important, according to Darling-Hammond et al. (2009):

> More than two-thirds of teachers nationally had not had even one day of training in supporting the learning of special education or limited English proficiency students during the previous three years, and only one-third agreed that they had been given the support they needed to teach students with special needs. (p. 47)

The goals of this professional development plan were to better understand the different subgroups encompassing the ML population, specifically at the school site, examine deficit mindsets, and provide a basic understanding of the research of the FoK and the opportunities for connections it may provide in the classroom through lesson integration. Professional development has shown to be an effective method for improving the self-efficacy of teachers. As Garet and colleagues (2001) uncovered, teachers who have the chance to do work that is hands-on, including expanding their knowledge of content and how to teach the content, including alignment to standards and curriculum, reported a greater sense of self-efficacy.

Over the course of the two planning sessions, content was refined based on the feedback following the use of an exit ticket (Appendix D). This exit ticket was administered at the conclusion of the first session to refine the plan and ensure that the needs of the participants were being met. Casteel and Ballantine (2010) emphasized, "To develop a successful model, the needs of the learners (in this case, educational personnel, and most likely teachers) must be determined, and appropriate modalities for knowledge transfer must be utilized" (p. 10). This exit ticket was in the form of open-ended responses selected and responded to anonymously by the participants. Outcomes of the professional development included focusing on explaining the FoK Matrix (Appendix A) and planning curricular integration opportunities based on the data collected by participants for use in the summer program.

Throughout the two planning sessions, the goal was for teachers to have the opportunity to share and focus on learning how to use the FoK in the classroom. Through student data collection via a journaling activity, the goal was to understand students' FoK and give teachers an opportunity to integrate student information into lesson plans for the summer program. Once the FoK matrix was introduced and data was collected via the journaling activity, teachers were given an opportunity to brainstorm ways that the FoK data could be infused into prebuilt lesson plans that were created for the summer program.

In the summer program, lessons were provided to the teachers that were written by the district. These lesson plans were analyzed for areas of possible integration and used as sample documents in the professional development. By analyzing the prebuilt

lessons, Kelli Jo and I were able to see the ways in which the lessons were designed, so that we could understand how to display the sample lessons for teachers. We shared ideas as to how to integrate the FoK into the pre-built lessons, with examples spanning different grades and subjects. While analyzing the documents, we focused on the idea that the researcher "should consider the original purpose of the document—the reason it was produced—and the target audience. Information about the author of the document and the original sources of information could also be helpful in the assessment of a document" (Bowen, 2009, p. 33).

Short observations were conducted during the second and third weeks of the summer program, following the journaling activity, and served as check ins to ensure that teachers were given the necessary support. Acting as a non-participant observer (Creswell, 2012), these observations were intended to serve as opportunities to gather firsthand information regarding the use of the FoK matrix and provided the researcher with additional data points. Creswell and Poth (2018) note that observations can be used to help the researcher collect information that may not be reported by the participant and data can be recorded immediately. Additionally, "observation in a setting requires good listening skills and careful attention to visual detail" (Creswell, 2012, p. 214). Utilizing an observation template (Appendix C), data was collected into categories of descriptive and reflective fieldnotes during the observations. Descriptive fieldnotes recorded what happened within the observation and reflective fieldnotes "recorded personal thoughts that researchers have that relate to their insights, hunches, or broad ideas or themes that emerge during the observation" (Creswell, 2012, p. 217). Observations were integral to

understanding how the teachers were processing the information from the professional development and if there was evidence of use of the FoK.

While the summer program served an opportunity to pilot the FoK matrix and lesson integration, the hope is that by testing the prototype, conversations were ignited that will lead to further integration of the FoK in lesson planning with a regular cadence during the school year. Testing is explained in Design Thinking as refining solutions to make them better, continuing to learn about the participants, and reviewing the prototype to adjust as needed (d.School bootleg bootcamp, 2018). Reflection, collaboration, and revision are all important parts of the testing phase.

Study

The third phase in the PDSA model was Study. The next steps focused on analyzing the data collected and analyzing how the data compares to the predictions (Bryk, 2018). Within this study, there was an opportunity to analyze the data collected at multiple points, including the semi-structured interviews, each professional development session, via the exit ticket (Appendix D), lesson plan document analysis, and during the observations. The data was deconstructed and analyzed using Creswell's (2012) six steps for analyzing qualitative data and Saldaña's (2013) First and Second Cycle coding process. Coding is important in qualitative research, as it is "a researcher-generated construct that symbolizes and thus attributes interpreted meaning to each individual datum for later purposes of pattern detection, categorization, theory building and other analytic processes" (Saldaña, 2013, p. 3). Utilizing multiple types of coding, the data analysis followed a systematic process. The various data sources allowed the researcher

to draw inferences and conclusions from the data, which is important as individual texts are analyzed and interpretations are gleaned from the data.

Act

The final phase in the PDSA model was Act. This step focused on taking in what was learned throughout the process and deciding what to do next (Bryk, 2018). While this phase focused on the participants, their perceptions, and the use of a tool to support in the integration of FoK into lesson planning, the possibilities for expansion are viable and encouraging. This study focused on piloting the FoK matrix into lesson plans for the summer program but has the opportunity to be expanded to a year-long framework for schools and districts that understand the need to make cultural connections but are not quite sure where to start. Additionally, with the lack of requirements in South Carolina for teacher training regarding ML students, this tool can serve as a bridge between the insecurities that teachers face, and the support students deserve.

Conclusion

It is noteworthy to examine further the idea of sufficient breadth and depth required to meet the needs of MLs that go beyond the academic and demographic identifiers. As noted, educators are likely to encounter MLs in their classrooms, as close to 88% of teachers are serving ML students in their classrooms (Karabenick & Noda, 2004), but their ability to connect on a deeper level culturally with those students can prove difficult for many. Examining teacher self-efficacy related to serving ML students, unpacking misconceptions and bias, working to understand the diversity within the ML population, including a deep understanding of students' cultures, and utilizing tools to

connect culture to the classroom all are crucial components to creating classroom spaces for ML students.

Strong teachers can impact student outcomes, yet many resort to standard teaching practices with ML students because they are not equipped with the basic knowledge required to serve their students (Karabenick & Noda, 2004). Integrating the use of the FoK framework in order to go beyond the typical professional development and allowing teachers to make connections to students in meaningful and different ways is paramount. The study represented positive progress in the right direction, which involved creating welcoming and inviting environments for students. The goal initially was about creating opportunities for teachers to gain a deeper understanding of students via the FoK, and eventually, it will be about reframing the way we think about educating students in general.

This problem of practice can impact schools across the State of South Carolina, as evidenced by other states who have integrated and advocated for the use of the FoK in all districts and utilized the FoK as guiding principles. Connecting classroom practices to the experiences students bring to the classroom, teachers are encouraged to apply these experiences as regularly as possible to the standards-based curriculum.

As teachers are entering classrooms with the noted misconceptions and bias, yet may have good intentions, it is time to open up the conversation about how we can take small steps in supporting teachers and their classroom practices surrounding ML students. This shift cannot happen overnight, yet with the use of the FoK and the possibilities of

expansion, it is undoubtedly possible to ignite the conversation and create the change necessary for improvement.

CHAPTER TWO

METHODS

Local Context

Overview of School Site

The school site, hereto referred to as the School, is an elementary school located in a District, hereto referred to as the District, which according to the National Center for Education Statistics (2020), is classified as a large suburban school district in South Carolina. The School serves students in the grade spans of Pre-Kindergarten (K4) through fifth grade, and the enrollment is roughly 600 students. The School has two administrative staff members, approximately 50 teachers, and 30 support staff members. Demographically, the school composition is approximately 50% Hispanic, 35% African American, less than 10% Caucasian, and 5% two or more races (South Carolina Department of Education [SCDOE], 2021). As defined by the South Carolina Department of Education (SCDOE), the percent of students in poverty is greater than 90%, and the school is classified as Title I. According to the SCDOE (2021), the School retained 75% of teachers in the 2020-2021 school year, down from more than 90% the previous year. The percentage of inexperienced teachers instructing core classes is approximately one-third, down from roughly two-thirds the year before, and the classroom ratio of students to teacher is approximately 12 to 1.

From a resource perspective, the School is a technology one-to-one school, with every student given a computer. Additionally, classrooms are outfitted with Promethean Boards, wireless internet and laptops, Chromebooks, and document cameras (School Portfolio, 2018). As noted, the School is a Title I school. According to the U.S. Department of Education, Title I is a component of the ESEA, and reworked under the

ESSA. Title I provides federal funding for districts and schools with large numbers or percentages of students from low-income families. The School's Title I plan focuses on reducing the student-teacher ratio in the classroom by adding additional teachers, adding Reading and Mathematics Interventionists, and adding an Instructional Coach. Instructionally, the Title I funds are allocated to adding to classroom libraries, professional development, and paying for substitutes to give teachers time for professional development (School Title I Plan, 2021).

The annual report card for South Carolina districts is a federal requirement for districts, per ESSA. These report cards provide "information about each school and district, including test performance, teacher qualifications, student safety, awards, parent involvement and much more" (SCDOE, 2022). The report cards rate schools on a scale using the following terms: Excellent, Good, Average, Below Average, and Unsatisfactory. The School was rated as "Good" on the SCDOE annual report card in the 2017-2018 and 2018-2019 school years. This rating of Good indicates that "School performance exceeds the criteria to ensure all students meet the profile of the S.C. Graduate" (SCDOE, 2022). In both 2020 and 2021, ratings were not given to schools due to COVID-19, yet the data from the 2021 summative assessment is still available to disaggregate.

One factor on the SC Report Card is the South Carolina College and Career Readiness Assessment (SC READY), a statewide assessment taken in grades three through eight in English and Mathematics. As referenced by the SCDOE (2022), the SC READY test "items are aligned to the standards for each subject and grade level.

Standards specify what schools are expected to teach and what students are expected to learn" (para. 7). Students receive a Does Not Meet, Approaches, Meets, or Exceeds as an indicator of performance on the SC Ready Assessment concerning how well they mastered the standards. Between 2018-2019 and 2020-2021, the School saw a sharp decline in both English and Mathematics and the percent of students who Met or Exceeded on SC READY (Table 1). These percentages were below both the state and district averages. There were factors such as COVID-19, new leadership, and a decline in teacher retention between this time frame.

Table 1

SC READY Two-Year Comparison of Meets/Exceeds at the School

School Year	English Percent Meets/Exceeds	Mathematics Percent Meets/Exceeds
2018-2019	39.2	51.6
2020-2021	22.1	29.3

Note: South Carolina Department of Education. (2022). *S.C. school report card*. South Carolina Department of Education. [URL redacted for identification purposes]

Multilingual Learner Support

The ML student population at the School represents over half of all students. MLs, referred to as ELL students on the SC Report Card, are assessed based on their performance on the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS) test, another requirement of ESSA that meets the U.S. federal requirements "for monitoring and reporting ELLs' progress toward English language proficiency" (WIDA, 2021, para 1). With ML students, specifically

those who are learning English, the goal is English proficiency within five years of their enrollment. According to ACCESS data that was available for three years, there was a sharp decline in ML students at the School who met progress toward proficiency from 2019 to 2020 (Table 2).

Table 2

Three Year ACCESS Data for the School

Year	Percent of Students Who Met Progress Toward Proficiency Goal
2018-2019	47
2019-2020	46.7
2020-2021	31.8

Note: South Carolina Department of Education. (2022). *S.C. school report card*. South Carolina Department of Education. [URL redacted for deidentification purposes]

The School set goals for its ML population, disaggregated by proficiency level. WIDA (2022) assesses students on the four domains of Reading, Writing, Speaking, and Listening, and "students' scores reflect proficiency levels ranging from Level 1 (Entering) to Level 6 (Reaching)" (para. 5). The School outlines the services of ML students based on the ACCESS scores. According to the School, students scoring at Level 1 on ACCESS, considered "Entering" by WIDA, are served via the pull-out model, which focuses on the District Newcomer Curriculum. Students who scored level 2.0-3.4, identified as "Emerging" and "Developing" by WIDA, receive services through the inclusion and the coteaching model. Those students with ACCESS scores of 3.5 or higher, considered in levels of "Developing", "Expanding", "Bridging", and "Reaching"

by WIDA, receive consultative services. Teachers engaging in coteaching of ML students participate in coteaching professional development guided by the ESOL department.

Due to the large number of ML students, coupled with the high percentage of students in poverty, the School represented an ideal location for this study. Based on the recent decline of ML students' performance on ACCESS at the School, this study was beneficial for ML students and their teachers, with a future goal on improving student achievement. Additionally, this site provided an essential opportunity for implementing the FoK and how the use of the tool may provide an opportunity to bridge the gap between teachers' and students' cultural experiences.

As a research site, the School was chosen as an outcome of collaboration between Lowe and me. This collaboration converges on the use of the site and the professional development delivery, including the development of the prototype. In this collaboration, Lowe, identified herself as operating within “reciprocal collaboration” (Perry et al., 2020, p. 112), having had experience with the system, while I served as an “outsider collaborating with insiders” (Perry et al., 2020, p. 112). Due to collaboration on the delivery of professional development, and the construction of the FoK tool, this site served as a central point for the studies to converge. This collaboration diverged during the findings and results phase of the study. Prior to conducting interviews, professional development, and observations, we met with the summer program lead teacher to ensure that our vision was aligned for the summer program. The objective was to ensure that the information presented during the professional development supported the plan of the

summer program and successfully serving ML students. Permission to conduct this study was obtained by the principal.

Collaboration

Discussions about ML students and teacher preparedness in South Carolina with Lowe, another Clemson University student, sparked a collaboration focus for this study. Our interests, while parallel in the aspect of changing the way we support ML students through teacher training, focused on different populations. Utilizing a collaborative research focus that combined both the PDSA and Design Thinking, Lowe and I focused on different populations. Specifically, Lowe focused on students' perceptions of their teachers' ability to serve them, and I focused on the teachers' perceptions of their ability to support ML students. Through reflective dialogue, we determined what points of our study would converge and what parts would diverge. Our collaborative plan focused on understanding teachers' perceptions, which began with creating interview questions together for the first teacher interview and conducting a collaborative interview process with teachers at the beginning of the study. We also created a professional development plan, including a journaling activity that teachers used to collect student information. We worked to code the first interview together and discussed themes and we coded the additional interview data individually.

Furthermore, we discussed and analyzed documents to support professional development, analyzed the exit ticket from the professional development session one to alter session two, and explored and discussed Lowe's field notes from observations. Our study diverged in conducting the second teacher interviews, student interviews, data

analysis and key findings, interpretations of the data collected, and implications for policy and practice. We reflected on each study to note where findings were similar, what was unexpected in our studies, and what future research and opportunities may evolve as an outcome of this study.

Positionality

Positioning myself as a researcher at the School, I needed to acknowledge how my experiences shaped my perceptions. As a public school educator for 18 years, I have served as a teacher, assistant principal, and principal in one county and multiple grade spans. While I have moved to the private sector, I still work with large school districts across the country to problem solve and focus on data. This has allowed me to see how many other districts and schools operate, which is an advantage after working in one county. Additionally, while not physically in a building for the last year, I needed to reaffirm my understanding of any new protocols and biases that I may have carried with me after leaving my previous position. Furthermore, because my experience has been primarily in grades six through twelve, my perception and understanding of elementary school required reflection to mitigate any judgment and improve openness relating to varied perspectives from research participants. As an outsider, keeping information confidential and anonymous was critical while building the foundation for a relationship that is necessary to engage in true change.

Research Methods and Design

Qualitative research uses the participants' insights and experiences to help solve the problem. The researcher holds a vital role in the study, working as the data collector

to gather information, documentation, observations, and synthesize the information. Additionally, by utilizing the data collected, the researcher generates open-ended questions to elicit authentic responses via semi-structured interviews and throughout the professional development (Creswell & Poth, 2018). In this study, examining teacher perceptions surrounding their ability to support ML students, and implementing a prototype with the pursuit of consistency in the use of the FoK in lesson planning for the summer program was the overall purpose, or central phenomenon of the study (Creswell, 2009). Utilizing the PDSA model, along with components and characteristics of the Design Thinking framework, as proposed by Stanford d. School (2021), this qualitative research intended to focus on the human elements of Design Thinking and the grounding work of the PDSA (Figure 7). Combining the two frameworks put the participant at the center of the study and used the insights, feedback, and collaboration to learn about the prototype, test the prototype, and ultimately build a framework for consistent use in lesson planning with the use of FoK (Figure 1).

The driver diagram (Figure 4) outlined the proposed drivers who were integral to the study and the change ideas for the future. From there, the PDSA model (Figure 5) and Design Thinking (Figure 6) elements were interwoven to emphasize each part of the change process. The PDSA model is a cycle of continuous improvement and focused on clarifying the problem, implementing a change, collecting data based on the change, and then diagnosing the next steps. This protocol is widely used in education and is a systematic approach to defining change and prescribing the next steps targeting a

solution. The PDSA model provided a solid structure and allowed the research to stay focused and on track.

Design Thinking process is a human-centered approach. Design Thinking, as noted by the Stanford d.School, focuses on creative confidence, which has similarities to Bandura's (1977) theory of self-efficacy. The idea that what is holding people back is fear "fear of failure, fear of being judged. Something about Design Thinking—that it is human centered and focused on helping others, or that it thrives on experimentation and small steps—gives people permission to try new behaviors despite the fear" (d.School, 2012, para. 3). This method kept the participant involved in all parts of the process, allowing for adaptability and flexibility to maximize the participants' contribution and collaboration throughout the study.

While both protocols (i.e., PDSA and Design Thinking) may stand alone, the intersection of the two was useful in this study because they each bring important components to the process (Figure 7). While the PDSA model provided a structure and cyclical process, Design Thinking embedded components at each point in the framework that kept the participants at the center, allowed for creativity, and relied on interpersonal connections. The consistent focus on the participants' thoughts, ideas, and reflections provided opportunities for conversations and modifications to the process, with the goal of small changes over time. The Design Thinking elements were not defined to one area of the PDSA, but represent a non-linear approach based on the feedback from the participants.

Participant Recruitment

As a component of the School's professional development focus on ML students, this research focused on participant recruitment of teachers participating in the summer program. All teachers who were instructing the summer program were invited to participate in already scheduled planning sessions to focus on integrating the FoK into their lesson plans, which represented convenience sampling (Creswell & Poth, 2018). During the summer program, there were approximately eight teachers. Roughly 95 students participated in the summer program, who represented multiple grade levels and ability levels. Many of the students who attended the summer program needed additional assistance academically, and 45 of them were ML students.

Since teachers met to plan for the summer program and were given planning time each day, this study did not require additional meeting time. Additionally, teachers' participation in the summer program was voluntary, but they received a daily stipend for serving students during the summer program. During the planning sessions and interviews, conversations with participants were informal, with the participants' comfort in mind. Participants were assured that data collected as part of this study would have no impact on their performance evaluation or employment status. Thus, supervisors were not present during the professional development or any data collection activities. The students who participated in the summer program were not necessarily assigned to teachers who they had previously. Therefore, the teacher-student relationship was more at the beginning stages for most of the participants. The opportunity for the use of the FoK was timely, as teachers were seeking ways to get to know their new students.

Additionally, while we had background information on teachers' years of experience, it was not deemed relevant to the study, and we are not reporting it due to confidentiality.

Methods of Data Collection

The School coordinated a summer program, serving approximately 95 students total, including 45 ML students and eight teachers. The summer program lasted four weeks and focused primarily on students who needed additional assistance. In preparation for the summer program, teachers worked on reviewing the plans that were pre-built by the district, which were constructed in both English and mathematics. Two professional development sessions took place prior to and during the summer program, created by Lowe and me. Our focus was on learning the background of FoK and working on strategies to integrate the FoK into summer program lesson plans that were preconstructed by the district.

Empathy Interviews

Once participants who were working the summer program committed, introduction emails including the specifics of the summer program and research were sent. Following the email, individual, semi-structured interviews (Appendix B) were scheduled and served as the first meeting between researchers and teachers participating in the summer program. Overall, two individual semi-structured interviews (Appendix B) were conducted, once at the beginning of the study with Lowe and myself and again at the end of the study by just me. These interviews were conducted to better understand teachers' perceptions of their ability to support ML students, including any exposure

teachers had to the FoK. Grasping the current reality was important to triage the next steps and analyze the connection to the Self-Efficacy and Cultural Deficit theories.

These interviews embraced the Empathize phase of Design Thinking (Figure 6). In this mode,

> The focus is on engaging with the people for whom you plan to help. The problems you are trying to solve are rarely your own—they are those of a particular group of people; in order to design for them, you must gain empathy for who they are and what is important to them. (d. School, 2010, p. 1)

The semi-structured interviews intended to serve as a guide for discussion and the same questions were used with each interview participant. The interviews remained casual, yet focused on conversation, building trust, and on gathering additional information with each question. Lowe and I took turns asking questions, and this first interview generated a great deal of discussion as it included an introduction to participants, the research process, and allowed for substantial discussion surrounding basic information. As Creswell and Poth (2018) note, a strong interviewer does a majority of the listening rather than speaking during an interview. These interviews were intended to be deep-dive discussions with the participants, which allowed the conversation to move fluidly, yet remained focused on the topic of the question. There were eight interviews in the first round of interviews and five interviews in the second round of interviews.

The importance of interviews is also outlined in the d.School (2016) Design Thinking process and is essential to the framework. Objectives of interviewing included gaining a deeper understanding of the participants' values, experiences, and behavior.

Additionally, the goal of the interview was to encourage participants to tell stories and share emotions, while digging deeper and taking the lead of the participant (d.School, 2016). When generating questions, Lowe and I considered the above and created opportunities for discussion. While the participant sample size was relatively small, the intent was a small pilot that would lead to systemic change in the organization. Teachers were interviewed in their natural setting, which is an important aspect of qualitative research. This natural setting, as noted by Creswell (2009) allows the researcher to see how the participants behave in a setting where they are comfortable, and this context was helpful as data was collected and the professional development plan was facilitated. As the interviews were taking place, the professional development plan was refined by Lowe and myself and adapted to meet the needs of the participants. Considering that both interviews provided appropriate context for all components of the research question, the interviews were used interchangeably when reporting the findings.

Planning Professional Development Utilizing Define, Ideate, Prototype, and Test

While collecting the interview data, coupled with my own perceptions, conversations with Lowe regarding research, understanding of students, and knowledge of their needs in the classroom, Lowe and I created a professional development plan. This plan was intended to meet the specific needs of the teachers at the School and was implemented during the summer program planning sessions. This professional development aimed to enact change that could work systemically. Wei et al. (2009) focus on this systemic change, and they outline "when whole grade levels, schools or departments are involved, they provide a broader base of understanding and support at

the school level. Teachers create a critical mass for improved instruction and serve as support groups for each other's improved practice" (p. 6). There are many different approaches to professional development; however, as Brown Easton (2008) emphasizes, focusing on what teachers need for their own learning is critical in order to create significant learning opportunities. Easton (2008) explains:

> It is clearer today than ever that educators need to learn and that is why professional learning has replaced professional development. Development is not enough. Educators must be knowledgeable and wise. They must know enough in order to change. They must change in order to get different results. They must become learners, and they must be self- developing. (p. 756)

Creating learning through professional development opportunities involved presenting teachers with the chance to widen their views and expand their knowledge of students. This, coupled with the collaboration of teachers, will ultimately lead to a greater impact of teacher connectivity to students in the classroom.

While the data collection methods were grounded in the theoretical frameworks of Cultural Deficit and Self-Efficacy theories, the overall purpose of the professional development was individualized to the School and the needs of the students in the summer program. The Socio-Cultural theory is appropriate to ground the professional development. "Just as children acquire knowledge and behaviors specific to the familial community contexts in which they live, teachers acquire knowledge and behaviors that are a part of the context in which they teach" (Whipp et al., 2005, p. 38). Helping teachers see the importance of focusing on the ZPD of ML students and including the

FoK in lesson planning may ultimately reshape their own teaching for the range of diverse students they serve.

Professional Development Session One

At the School, teachers met to plan for the summer program over the course of multiple days. The FoK content was introduced and scaffolded to meet the needs of the teachers utilizing the Design Thinking Framework and PDSA model. Specifically, the professional development was delivered on two occasions, by both Lowe and me. Professional development, when extended over multiple sessions, rather than one–time sessions, focuses on more opportunities for active learning and the connection to content with deeper engagement, rather than one-time sessions (Birman et al., 2000). Utilizing the framework adapted from the OSPI (Figure 2) and their methods of data collection and use of the FoK Toolkit, teachers were able to see how the State of Washington currently uses the FoK as a regular lesson integration tool.

In the first professional development session, teachers participated in an icebreaker activity that helped them to get to know differences among the group that they may not have noticed previously. Following the activity, teachers were given background information on the FoK, examined student subgroup differences, and had opportunities to discuss FoK collection methods, with a focus on the journaling activity, which Lowe and I developed. Journaling is an effective communication tool for all students, as it provides opportunities for students to share and reflect in their own space and time. As Samway (2006) notes, “reflective writing can serve many purposes, including affective, pragmatic, intellectual, and academic. It is known to improve writing fluency, stimulate cognitive

growth, reinforce learning, and foster problem-solving skills" (p. 138). The importance of journaling for ML students is powerful as it gives students an opportunity to develop academically and share their experiences and thoughts. The focus on journaling as a classroom data collection tool is not just done through writing. By recognizing students' ability levels, journaling can take on different forms. As WIDA outlines, it is important for teachers to consider the multiple ways that students communicate. WIDA (2020) refers to this as Multimodality:

> The use of multiple means of communication is an essential way for all students to access and engage in the content areas. In addition to the use of spoken and written language, students also communicate through gestures, facial expressions, images, equations, maps, symbols, diagrams, charts, videos, graphs, computer-mediated content, and other means. (p. 19)

Utilizing the *Ideate* portion of the Design Thinking process, the session sought to transition from the problem to creating solutions using techniques ranging from brainstorming to uncovering new ideas (d.School, 2021). Teachers discussed their own culture, the cultures within the school, and how they typically connect to students at the beginning of the school year. Following the discussion, the professional development session shifted to the FoK and how it could impact the student-teacher connection. Furthermore, the FoK components were shared (Figure 1) and discussed as important factors to understand students. Lowe and I then introduced the FoK matrix (Appendix A), demonstrating how teachers could use the matrix once the journaling activity was complete to begin categorizing student information.

The intended outcome of the first professional development was to provide relevant background information to teachers regarding the FoK and the use of it, allow for discussion and collaboration and develop a plan for administering the journaling activity as a method of data collection method for the FoK matrix (Appendix A) during week one of the summer program. The review of the journaling activity, which was able to be adapted by teachers and provided in both paper and digitally, and the review of the OSPI method of classroom application (Figure 2) helped provide participants with the next steps. Within this session, opportunities for feedback and reflection were embedded, with an exit ticket (Appendix D) at the conclusion of the session to capture and assess the session.

Following this professional development session, teachers began data collection via the journaling activity. Throughout one day or multiple days, teachers provided students with the journaling activity that was reviewed in session one of the professional development, and some began to collect and categorize those responses into the FoK matrix (Appendix A) The purpose of FoK matrix was to allow teachers to categorize the student information and make connections between students. With multiple opportunities for check-ins and support, and in anticipation of the second professional development session, teachers reviewed the journaling data and brought some of the highlights to the second session of the professional development.

Professional Development Session Two

The second professional development session was done on a small group or individual basis with both Lowe and me. It focused on the data collected from students in

the journaling activity and how it could be utilized in lessons. Lowe and I used the exit tickets as a guide, and time was spent in this session focusing on the unique answers that students had and answering questions about how to compile the data into the FoK matrix (Appendix A) and move toward lesson integration. The second session began with discussing subgroups, specifically SLIFE students, migrant students, and refugee students. As the discussion progressed, teachers shared ways that their lessons may currently support students in multiple subgroups and ways that they could use to begin to construct lessons that connect to students' cultures.

Teachers discussed the journaling activity in detail. Most of the time was spent reviewing student answers, reflecting on how teachers were able to gather the most useful information, and thinking about possible ways to categorize the data. Additionally, with the small group, we had conversations about how to utilize the information for possible lesson integration for the summer program with a focus on the FoK matrix. With teacher reflection and discussion at the forefront, the goal was brainstorming, expanding, and enhancing lessons based on the FoK matrix, which was shared with participants. Teachers shared how they might categorize the data, including unique ways they may consider student details, discussed the time it may take to do so, and shared strategies. With the journaling activity and matrix shared, the focus shifted to how to elicit deeper information from students. Lowe and I shared an image of a tree and how it may compare to the layers of an ML student. We discussed how the branches and leaves could be seen as the surface level culture, which are likely to change, even from one day to the next. These things included basic characteristics of students: their favorite sports, family

members, hobbies, friends, and foods. These characteristics represented ways that teachers typically connected with students, specifically in word problems and books.

As the discussion shifted to deepening the understanding of students, Lowe and I referred back to the tree, this time to the trunk. Considered the heartwood, this could be compared to students' traditions, customs, body language, understanding of authority and mannerisms. By deepening the understanding of students' heartwood, teachers may be able to build a deeper connection with students. These characteristics are not likely to change; when they do, they can impact the student significantly. Finally, Lowe and I shared the root system of the tree, outlining how the roots are the system that supports the tree, both in sustenance and in physical support. These characteristics included attitudes, perceptions, worldview, assumptions, and their own understanding of themselves and the world. These aspects of students are essential yet take time and trust to understand. By sharing each of these levels of understanding, the goal was to look beyond simply the surface culture and think about ways that the FoK could be a vehicle for learning more about students.

Lowe and I ended this session by sharing the prebuilt lesson plans that we analyzed as examples for FoK lesson integration. As the district provided all lesson plans, Lowe and I were able to review the plans in advance in order to prepare for the professional development. We adapted three sample lesson plans, in three different grade levels and multiple subject areas. It was essential for us to understand the process of the FoK to support the teachers and the prebuilt lesson plans; while they did not give teachers

autonomy in the summer program, it did allow us to use neutral resources that were not those of a particular teacher in mathematics and reading.

The outcome of this session was assisting teachers with questions they had as they completed the FoK matrix and working through demonstrating how to adapt the lesson plans for the summer program to the FoK matrix based on the students in the classroom. Teachers were able to see how to shift lessons, and the discussion was valuable in that it demonstrated how current content could be amended to better meet the needs of ML students However, it was clear that more time was needed to continue the conversation about integrating student characteristics into lesson plans. The second session primarily generated discussion surrounding the journaling activity, sample plans, and the responses from students, which was helpful but limited the integration portion of the lesson planning.

Document Analysis

The analysis of the pre-built lesson plans was conducted by Lowe and me to provide teachers with samples of lesson plans that were integrated with the FoK. The analysis was done using a document analysis template created by Lowe and me (Appendix E). These plans were used to assist teachers with their own integration and were shared during the professional development session two. The initial intent of the document analysis was to focus on the teachers' lesson plans. However, due to the district providing prebuilt lesson plans, as well as the time allotted for the study, we determined we needed to shift the document analysis to focus on the prebuilt plans and provide

sample FoK integrated plans to teachers. This method of analyzing the documents also helped Lowe and I understand the process in more detail.

Document analysis in qualitative research is typically conducted in conjunction with other qualitative data collection methods. In this case, it was important for Lowe and me to understand the process the teachers were asked to complete in order to refine the process in the future The documents in this study provided the researcher with an understanding of how the FoK could be conducted and integrated into lesson plans to help support teachers.

We presented the sample lesson plans by walking teachers through the process of looking at each lesson plan first and thinking about what their ML students may perceive as they experience the lesson plans. For example, one of the plans was a reading lesson plan and the book characters appeared to be of different ethnicities. Teachers noted that this was a good connector for their students. As we progressed through the text, a child was shown playing in different types of water, such as swimming in a beach or pool. Teachers noted that some students may have never been to the beach, and another discussed that their students may have a negative reaction to seeing this image due to other factors not known. Teachers brainstormed the use of additional texts and ways to elicit information from students that may help them understand students better.

In the second prebuilt lesson plan, which was mathematics, word problems were displayed and analyzed by the teachers. We discussed the use of common names, which could be easily changed, and the ability to reorganize word problems based on the information gathered in the journaling activity. For example, one teacher discussed how

occupations listed in word problems should be considered, as they mean different things to different students. Finally, we discussed the word problem in relation to adult responsibilities, such as paying bills, as student perceptions may differ based on experiences.

Observations

The initial intent of the observations shifted in this study due to the reflection of information gathered in the first and second professional development sessions. In this case, the observation data helped to validate what we thought, which was that more time was necessary to reach the lesson integration level. However, observations were still important to this study as reiterated by Creswell and Poth (2018) as they can be used to help the researcher collect information that may not be reported by the participant and data can be recorded immediately. Observations also helped the researcher grasp more information about the central phenomenon and its implementation in multiple classrooms. The observations were documented using the observation protocol (Appendix C). The field notes were broken down into reflective and descriptive activities to glean as much as possible from the observation

Lowe and I collaboratively created an observation protocol (Appendix C) as a method to understand how teachers were utilizing the FoK in the classroom. As teachers worked through the summer program and began to understand how to implement the FoK into lessons, informal observations were conducted by Lowe and served as additional check-ins for support in the process. Initially, the observations were to be a data point for understanding lesson integration of the FoK. However, due to the progression of the

study, the prebuilt lessons, and the noticeable need for more time, the need for observations shifted and served more as check-ins for support of teachers. We felt that observations were not going to provide us with the information that we initially expected. We came to a team decision that we were not going to conduct observations in the initial manner we intended to, yet we would use them to help us validate the information collected. Furthermore, due to Lowe's study consisting of student perceptions, she continued with the observations with the hope of observing the interaction between the students and the teachers.

Lowe conducted six observations ranging from 15 minutes to 40 minutes, all in mathematics. The purpose of these observations was to collect additional data that could be shared between Lowe and me to gather evidence of the level of integration of the FoK matrix (Appendix A) into the lesson plans and triangulate with other data. Overall, we wanted to observe what the professional development looked like in the classroom and these observations centered on descriptive and reflective field notes to capture what was happening. Descriptive field notes captured what Lowe observed in the classroom, such as conversation, the setup of the classroom, and the interactions of the students. Reflective field notes captured Lowe's ideas and thoughts based on the information she was observing. These field notes were shared with me and were analyzed and discussed collaboratively but not coded. These notes also helped to determine to what degree teachers used the FoK and provided an additional data point to triangulate with other data in the study. Notes from these observations were included in the findings and helped Lowe and I understand the need for additional time and support.

Student Journaling Activity

While the participants in my study were teachers, it was integral to understand how students responded to the information presented by teachers in order to refine this study further and add to the findings. Student responses to the journaling activity were collected by both researchers but used independently to add to the individual studies. The student responses were deidentified and reviewed in order to establish an understanding of how different delivery methods that were used by teachers may yield different results. The data collected also allowed researchers to reflect on the individual questions in the journaling activity and the multimodality features, to see if they were appropriate for the students. Additionally, the data collected provided an opportunity for Lowe and me to review the journaling activity for future use and amend as needed.

Methods of Data Analysis

Following the collection of the data, the analysis phase began. Qualitative data analysis allows the researcher to understand the data to form answers to the research questions (Creswell, 2012). Following the six steps involved in data analysis proposed by Creswell (2012), the emphasis was on a systematic process to analyze the data collected. These six steps included: (1) collecting and preparing the data for analysis, (2) reading through the data, (3) coding the data, (4) utilizing coding to generate themes and build descriptions, (5) advancing how the description and themes are represented in the research, and (6) making interpretations of the findings. While the first step was preparing the data for analysis, including transcription, the six steps are ongoing and simultaneous throughout the collection period:

> The phases are also iterative, meaning you cycle back and forth between data collection and analysis. In qualitative research, you might collect stories from individuals and return for more information to fill in gaps in their stories as your analysis of their stories proceeds. (Creswell, 2012, p. 258)

The six steps represented a strong protocol for guiding the analysis, with a multitude of opportunities for deepening the analysis as themes emerge from the data. I worked on analyzing interviews of teachers, both before and after the professional development, the professional development sessions, the observations, and the student FoK journaling activity.

Empathy Interviews

The first interviews, conducted in collaboration with Lowe and me, were recorded, uploaded, and transcribed utilizing the software program Descript. There were eight initial interviews, 16 pages of single-spaced transcripts, and approximately 190 minutes of audio recording (Figure 8). For these first interviews, Lowe and I each focused on transcribing the interviews. We removed filler words such as "um" and "like" and then each of these interviews was organized and uploaded to Dedoose coding software. Once the interviews were uploaded to Dedoose an inductive approach to analyzing the data was utilized by Lowe and me, which involved building "patterns, categories, and themes from the bottom up by organizing the data into increasingly more abstract units of information" (Creswell, 2009, p. 186). In this step, we began by close reading each of the interviews and noting and identifying themes as they arose. We sought to capture an overarching picture of the data in preparation for deeper analysis.

The second teacher interviews included five interviews, 10 pages of single- spaced transcripts, and 90 minutes of audio recording (Figure 8). Teachers who did not participate in the full summer program were not present for the second interview. In the second interview, which was following the professional development sessions, it was not necessary to provide introductions, background information on the project, or other introductory information. These factors, along with others contributed to the time difference noted between the first and second interviews. First, it there was one interviewer versus two, and as mentioned, there were fewer interviewees in the second round. Two of the interviewees who did not participate in the second interview had lengthy stories in the first interviews, which were additional factors for the time differences. Finally, due to the professional development allowing for substantial small discussion with participants, the second interview helped to provide additional individual context, but served as more of a wrap-up, rather than an introduction, which also accounted for the time difference between the first and second interviews. While there are differences between the two interviews, I did not note a substantial impact on the findings due to the information that was shared in both interviews.

Figure 8

Empathy Interview Data

	Number of Teachers	Number of Audio Minutes	Number of Single-Spaced Pages
Interview One	8	190	16
Interview Two	5	90	10

Note: Data collected from interview one and interview two.

These interviews were conducted and coded solely by me and were transcribed in the same manner in Descript and then organized and uploaded to the coding software, Dedoose. From a process perspective, these interviews were coded in the same way as the first interviews. Even though the interviews took place before the intervention and after the intervention, both interviews served as opportunities to understand the research question and provided context about teachers' perception of their ability to serve their students. Therefore, because the interviews served to answer all parts of the research question, the information in the findings is not denoted as being derived from interview one or interview two. Both interviews provided an opportunity for further analysis. In this analysis phase, the de-identified data was examined via numerous cycles of coding (Miles et al., 2014) to identify overarching themes within each of the data sources. During this initial phase, or First Cycle (Saldaña, 2013), multiple methods of inductive coding were used, including descriptive coding, in vivo coding, and subcodes were created in order to capture significant themes and narrow the focus (Creswell & Poth, 2018). The multiple phases of coding were important as the interpretations of the data shifted over the course of the process. The various aspects allowed for different extractions from the data. Descriptive coding "assigns labels to data to summarize in a word or short phrase –most often a noun—the basic topic of a passage of qualitative data.

These eventually provide an inventory of topics for indexing and categorizing…" (Miles et al., 2014, p. 80). In Vivo coding utilized the participants' language as the codes and this type of coding helped to keep the participants' voice at the center of the analysis and allowed for patterns to be gleaned from the data sources (Miles et al., 2014). This was undoubtedly important as perceptions were at the center of this study.

Finally, subcodes were important, as they offered additional details about the initial code, which was helpful as the data analysis process continued to be refined. As the data analysis progressed, the content was checked alongside the codes collected in order to see where the text was not marked, and in this coding stage, "the researcher must allow him or herself to let go of the unimportant information that does not correspond to the aim of the study" (Bengtsson, 2016, p.12). Continuing the coding cycle within each data source was important, as it was important to begin to connect the themes between the data sources.

The Second Cycle of coding (Saldaña 2013) was an approach to refining and grouping the First Cycle codes into smaller pieces and further organizing the data. This Second Cycle utilized Thematic Coding and Pattern coding, which were critical, as they helped to process the information collected in the First Cycle. It was important to remain loose when chunking the information, so as not to make assumptions about the patterns. "Pattern codes can emerge from repeatedly observed behaviors, actions, norms, routines, and relationships; local meanings and explanations; commonsense explanations and more conceptual ones…" (Miles et al., 2014, p. 92). Thematic Coding was used to generate themes, which "are similar codes aggregated together to form a major idea in the

database" (Creswell, 2012, p. 245). Themes were important components to answering the research question and building descriptions. Reducing the number of codes to a small number of themes was the aim of the process. Throughout this theme development, there were multiple ways to further refine the themes. This included looking at major versus minor themes and layering themes, which involved utilizing the major themes and the minor themes and transposing them into larger themes. Based on the data collected, it was also possible to interconnect themes and begin looking for relationships, compare and contrast themes, and draw conclusions. Additionally, focusing on the theoretical frameworks of Self-Efficacy, Deficit-Thinking, and Constructivism throughout the coding process assisted in grounding the data analysis in the theoretical frameworks.

Constructing themes from the data led to building a description of what was learned and examining the themes that were developed. Creswell (2012) defines description as "a detailed rendering of people, places, or events in a setting in qualitative research" (p. 245). This description emerged from the coding process and consisted of forming an "in-depth understanding of the central phenomenon through description and thematic development" (Creswell, 2012, p. 247). In this qualitative study, the description was important, as it provided detailed information about the setting and a deeper understanding of the specifics within the setting and the participants.

Representing findings was an essential piece of this qualitative study as it provided the researcher with an opportunity to explain what was found within the research process. A narrative discussion focused on quoted information from the participants was used in order to summarize the details of the findings. This discussion

took shape based on the outcome of the data analysis, but an emphasis on vivid details and multiple perspectives was vital to convey the meaning.

Analysis of Professional Development Sessions One and Two

Both professional development sessions provided ample dialogue, reflection, and analysis opportunities. The first professional development session concluded with a handwritten exit ticket (Appendix D) that was collected and shared between Lowe and me. These exit tickets were anonymous and were used to guide the second session of professional development and provided additional context. Once collected, the exit tickets were cleaned and transcribed and organized into a spreadsheet in Excel for analysis. These exit tickets were used independently by each researcher to expand on the key findings presented and discussed by Lowe and me to focus on the second professional development session.

The first professional development session was audio recorded so it could be referenced throughout the analysis phase. The recording consisted of roughly 40 minutes and was used to further the findings and expand on the information collected in the study. Lowe and I discussed the first professional development session, reflected on things that went well, and discussed ways we might amend the professional development in preparation for session two. I also documented conversations, points in the discussion that may be useful to the study, and follow-up necessary to help clarify components for teachers. I referred to the recording to glean additional data to support my findings in the study.

Both Lowe and I conducted the second professional development. Due to the schedules of the teachers, we facilitated these sessions in small groups or individually. This allowed us to expand on conversations with teachers, take notes throughout the sessions, and focus on specific questions that teachers had related to their particular students. The conversation was organic, rich, and thoughtful, providing an opportunity for deep dialogue with teachers. The data from the second session was used to expand on the findings and provide additional detail to the study. Following the second session, we provided time and support to follow up with teachers, as we noted a need for additional time following the second session.

Observations

Lowe collected observation data, yet analyzed, discussed, and shared with me, which I used as additional information regarding the implementation of the FoK. Six mathematics observations were conducted, ranging from 15 minutes to 40 minutes, and Lowe utilized the observation protocol (Appendix C) to report her findings in both descriptive and reflective field notes. The decision was made to observe only mathematics, as it provided the opportunity to look for similarities in the same subject. Furthermore, the decision for me not to conduct the observations with Lowe was due to the change in use of the observations, upon reflecting on the second professional development session. Additionally, we determined that due to the prescribed lessons, it made implementation extremely difficult. Lowe continued with the observations due to her participants being students and wanting to see interaction among teachers and students. Additionally, due to my proximity to the study site, we felt that the notes and

discussion were appropriate due to the factors listed above. We took this opportunity to engage in analysis and reflective dialogue, which we felt was substantial enough to contribute to the study. The entire analysis of the observations was centered around this reflective dialogue and discussion, which led to future thoughts about the study and was impactful for reflection.

Student Journaling Activity

The student journaling activity was collected by researchers and examined and reviewed by both researchers independently. Thirty-nine student journals, totaling 156 pages were collected, deidentified, and examined, looking for specific characteristics that may help provide context for the findings that emerged through the study. The student journaling activities had a wide range of responses and due to the data being deidentified, it was not clear from what teacher the students' activity evolved. However, it was clear when the teacher sat with the student and transcribed their answers as the answers were very detailed compared to other responses. This data provided context as to how collection methods impacted responses and helped to yield a deeper understanding of how the journaling activity could be expanded. The journaling activity also led to reflective discussion and analysis around future developments of the study, as it was clear from the student responses that more information could be gathered in specific areas.

Making Interpretations of the Findings

In the final step of data analysis, I utilized interpretive methods in order to make sense of the findings. As described by Creswell (2012), making sense of the findings included summarizing the findings, citing personal reflections, comparing the findings to the literature, and providing suggestions for future research surrounding the topic. When it came to determining whether the perceptions of teachers' ability to serve ML students was impacted by the FoK, it was critical that the interpretations were gleaned from the systematic data analysis process. In order to determine whether these interpretations were accurate, validating findings was paramount.

Validity and Trustworthiness

Ensuring that the interpretations that were derived from the data collection and analysis were accurate, validation techniques were deployed. Validation of the research is explained by Creswell and Poth (2018) as assessing the accuracy of the results, as determined by the researcher. Creswell and Poth (2018) presented eight strategies for addressing validity in qualitative studies. Evaluating the accuracy of the findings, which focused on building accuracy and confidence in the study, multiple procedures were selected. The intended focus was to work through "corroborating evidence through triangulation" (Creswell & Poth, 2018, p. 260) and yielded "coherent justification" for the themes (Creswell & Creswell, 2018, p. 200). Corroborating evidence through triangulation, evidence from different sources was gathered to focus on an idea or theme that emerged. It was important to corroborate each data source in the triangulation, to support themes and make sound interpretations. Additionally, by utilizing rich, thick descriptions, where the researcher reported in detail the participants and the setting, the

focus was on providing detailed descriptions spanning activities in the study (Creswell & Poth (2018). Finally, peer debriefing was used, as it related to the collaborative nature of this qualitative study. Lowe and I reviewed and corroborated the data, as each researcher was collecting data based on different research questions while invested in the study.

The trustworthiness of the data ensured that the focus remained on consistency throughout the data collection. Lincoln and Guba (1985) examined the importance of trustworthiness and evaluating that trustworthiness through strategies. These strategies included: establishing credibility, which is confidence in the findings within the research. In this study, credibility was established by ensuring that participant feedback was at the center, including the format of the interviews, setup of the professional development, and use of an exit ticket, as well as the supplemental support provided. Additionally, transferability, demonstrating the application of the findings in other areas parallel themes were noted in the study and in research, demonstrating the need for additional training for teachers to better serve students. Furthermore, dependability, reviewing the findings and their ability to be repeated. While the findings were based on the short cycle of the study, the expansion of the study may demonstrate a deeper understanding of how teacher perceptions may be shifted using the FoK. Finally, confirmability, understanding the neutrality of the study and avoiding researcher bias. All information remained anonymous, and the integrity of Lowe and I remained at the forefront of the study. Participants were integral to the study and feedback from participants also ensured validity.

Limitations

The study's limitations included a small sample size of teachers based on convenience sampling. With the sample size, the aim was to initiate greater change, beginning with a core group of teachers. Furthermore, as an outsider, the previous relationship between the researcher and participant was limited, and trust was critical to this study. This limitation could also have been a positive, as it allowed participants to open up the opportunity for reflective and honest conversation. Additionally, with each of the data sources collected, there may have been limitations, such as the researcher's presence creating a biased response in interviews and observations (Creswell, 2012).

Conclusion

With a focus on the collection of multiple data sources and the analysis of the data in the steps outlined, the aim was to demonstrate if teacher perceptions were impacted by the use of the FoK. Adopting the practice of reframing lesson plans to meet the needs of ML students was not limited to just the summer program and the hope is that it is a process that can continue at a more regular cadence throughout the year. Ensuring that teachers saw how the practice of learning more about ML students through the FoK tool could reshape their lessons was a powerful opportunity. By using the FoK tool and focusing on teacher collaboration, there is a chance for this process to expand to other teachers and schools, with a true framework for teachers to support ML students.

CHAPTER THREE

FINDINGS

In this chapter, I discuss the findings based on the qualitative study that focused on how using the FoK impacted teachers' perceptions of their ability to build cultural capital with ML students. Utilizing a collaborative research focus that combined both the PDSA and Design Thinking, Lowe and I conducted teacher interviews, designed a professional development plan focused on the FoK, sought feedback from teachers, and helped them take steps to implement the FoK in the lessons built for the summer program. Following this process, I interviewed teachers again and analyzed the results of the data collected, identifying a few key findings that emerged through the analysis process. Utilizing interrater reliability, Lowe and I coded the first interviews together using Dedoose coding software, discussed and analyzed additional data points, then diverged when coding and interpreting the remaining pieces of data. The findings address the research question in two parts: one, what are teacher perceptions of their ability to serve ML students and two, how using the FoK impacted teachers' perceptions of their ability to build cultural capital with ML students. First, I focused on findings related to teachers' perceptions and identified themes. Second, I focused on how the FoK impacted those perceptions when it came to building cultural capital in the classroom and identified themes.

Teacher Perceptions of Their Ability to Support ML Students

In this first part of the findings, I wanted to capture the variations in teachers' perceptions of their ability to support ML students. Through the analysis of multiple data

sources, various perceptions emerged relative to supporting ML students. Perceptions varied, as in some cases, teachers felt as though they were able to support ML students, mainly at the relationship level in the classroom, and others felt less confident in their ability. Acknowledging the diverse responses, teachers generally felt more could be done to support their ML students from both a curricular and relationship perspective. There were three themes that emerged related to teacher perceptions. First, teachers felt like they needed additional information earlier in the year about students to understand them better and avoid assumptions. Second, teachers felt the training and support provided to further support ML students was typically at the compliance level yet see the value in additional support in the classroom. Finally, many teachers struggled to connect regularly with parents, without additional bilingual support, due to the language barrier, which further exacerbated the struggle to connect with students. These themes represent the array of responses and dialogue relative to establishing an understanding of teacher perceptions of their ability to support ML students and considered specific details presented throughout the study to support these key themes.

Teachers Need Additional Information About Students

The first theme that emerged is that teachers wished they had additional information about students sooner in the year to avoid making assumptions. While teachers felt like they worked to connect with students, they recognized that they had opportunities to learn more about them. From the aspects of both curriculum and personal information, teachers acknowledged that the information they receive about students is typically information that is located in the permanent record. This information is

characteristic of basic database information and does not typically focus on the personal attributes of students. Multiple teachers mentioned that having additional information about students sooner in the year would help avoid making assumptions. While some participants shared examples of how they learn more information about students, such as asking a lot of questions, chatting at the playground, and sharing about themselves to create opportunities for students to share, the overall sense was that knowing more about students prior to them coming into the classroom would be helpful.

Specifically, one teacher discussed how time is a factor and that having more detailed information about how ML students learn would be impactful in avoiding guesswork:

> Honestly, I mean, you don't really know what method is best for them until your months in. I wish there's some kind of documentation, you know, is this a hands on learner? Is this somebody that [has to] have some movement going?... That would save me three months of trial and error.

Another teacher, when asked what additional information would be helpful to know about ML students, focused on not assuming information about students and how having more information would be beneficial. More specifically, they explained that when looking in the permanent record, judgments may be made about students that are not accurate:

> Probably the way that they learn would probably be helpful… They could be a totally different person than what I see in your permanent records. So, I would

> love to learn how they learn and a little bit more about them before I get them, that would definitely be a game changer.

Another teacher echoed the need to have additional information earlier, precisely due to the time it can take to learn the nuances of both students and parents and their personalities:

> I wish that sometimes I would know it earlier, rather than later. I think sometimes it takes them a little bit to open up or it takes parents a little bit sometimes even to be honest, maybe about their education. So, I think the earlier I know the better I can help, and that can sometimes be difficult because it just it's personalities. And I think if I were to have more information on them since day one, I think that would really help.

During the professional development sessions, a discussion about this lack of information was shared, as well as how to support students who do not feel comfortable sharing. In these discussions in professional development, participants shared how it may be easier not to address some information relative to students' culture because it may come across as disrespectful to the student. The idea of avoiding the conversation generated dialogue regarding how to elicit more information from students, and teachers shared strategies that are currently used in the classroom. These strategies included: allowing students to draw pictures to understand more detailed information, utilizing student and sibling names in word problems, utilizing multicultural and multilingual books, and referencing students' countries in social studies. To summarize, teachers need additional information about ML students to avoid judgments and assumptions sometimes generated from data

that is included in a student's permanent record. While many tactics are used to elicit information from students' personal life, there are times that teachers will avoid asking students personal questions for fear of being seen as disrespectful or ignorant about a student's culture. Additionally, many of the current practices of embedding student culture in lesson plans are focused on the surface-level culture of the student.

Teachers Need Additional Training and Support

The second theme is that teachers felt like the training and support provided to further support ML students was typically at the compliance level yet see the value in additional support in the classroom. This theme focused on the training and support teachers were exposed to, and perceive as necessary in supporting ML students, and the need to expand on the support provided to teachers. Training and support were discussed at multiple levels, both what is annually required of teachers and what would be helpful to support them further. At the training level, teachers explained that the training the school and district provide is typically repeated annually and mainly focused on compliance. While the teachers who elected to take a separate ESOL endorsement or had taken a class to serve ML students felt as though they were more equipped to serve ML students, those who relied on the training provided felt as though there was more support was needed.

Furthermore, those teachers who worked with an ESOL teacher, such as in a co-teaching model, reported feeling they could address the needs of ML students more successfully because the co-teacher. In some cases, the supporting teacher could help communicate in Spanish, and assist with the specific needs of the ML students. Overall,

teachers felt that their need to speak Spanish to support ML students was necessary. Many discussed using particular translation devices and their own Spanish experiences from childhood and beyond. Specific examples of the variations of support are outlined below.

One teacher shared the training that she had been exposed to when asked about what training she had had to support ML students:

> Just what [the training] we've done here, which every training that we've had here is to me, very redundant and common sense oriented because. Before I took any ML training, I was already doing the things they're telling me to do.

Another teacher shared that the training provided should focus on understanding the culture of the students, otherwise, the training isn't necessarily helpful, "I'm not greatly prepared at all. We've had some training, but until you really understand like the culture of your students, it's hard to know exactly how to teach them".

A teacher discussed the positive impact that getting her ESOL endorsement as well as co-teaching has had on her teaching practices:

> I feel like my ESOL endorsement and working with the ESOL teacher has really helped, I think definitely just putting it into practice. So, I think having that extra certification and going through that course definitely helped… I think that extra work that I did definitely helped me think about how to approach them and how to modify assessments and work and different things within the classroom.

In a discussion about co-teaching, teachers seemed genuinely excited about the opportunity to co-teach, as they felt as though the opportunity to have assistance in

working with ML students was helpful. The co-teaching model utilized at the School placed two teachers in the classroom with a variety of students and the co-teacher may or may not have Spoken Spanish, but the co-teacher was certified in ESOL. Multiple respondents shared that the year they had a co-teaching experience was their most successful year serving ML students. Additionally, having a co-teacher helped provide context for communication with students. In one instance where the co-teacher was bilingual, they were able to speak to students in Spanish and help support their learning in Spanish.

One teacher shared how this past school year was one of the best, due, in part, to the co-teaching model that was implemented:

> I feel like each year you just get better and better as a teacher and more so I would say this past year has probably been the year that I have been, or my students have been the most successful. And I would say part of that is because I had some ML support in my room. I had the ESOL teacher in my room every day and also I feel like because I've learned to really encourage the kids to speak in Spanish and English and to not just speak in English.

While the support and training varied, the general sense was that teachers felt more supported with ML students when there was additional assistance in the classroom. This assistance made teachers feel more comfortable in serving ML students, both because of the co-teacher's understanding of the students learning and because they could help provide specific assistance to struggling students. When teachers were trained outside of the school-based training, the sense of their ability to support ML students was

different than those who relied solely on the school or district-level training without added support.

Teachers Need Support in Creating a Family Connection

The third theme is that teachers struggled to connect regularly with parents, without additional bilingual support, due to the language barrier. Connecting with families is critical to deepening the connection with students, especially in elementary school. While it was clear from the second theme that teachers felt more successful with ML students when they could converse in Spanish or had additional support in the classroom, this third theme extends the support and connection to families. In general, teachers felt it was a struggle to connect with families, especially to speak with parents, due to the language barrier, which impacted teachers' overall sense of their ability to support ML students. Multiple respondents discussed the use of translators that are either purchased or free online as a way to engage with parents. Additionally, without the sense of regular communication with families, teachers felt that there was a lack of authenticity in their connection to families. However, when there was bilingual support in the classroom via the co-teaching model, teachers reported feeling more engaged with parents, as the second teacher could communicate authentic experiences, having been in the classroom and knowing the students each day.

As one teacher pointed out when asked how well she felt like she knew the families of the ML students:

> Not enough, like not well enough. I wish that I could know the parents more, but because there's such a language barrier and we have to do everything through a translator, it just doesn't feel as authentic as I wish it would.

A teacher, who is bilingual, shared the unique opportunity that she had being able to communicate with parents regularly:

> I think, I know, I think it's easier for me because I am bilingual. So, I'm able to communicate with parents, I'm able to ask questions and I feel because of that parents feel more comfortable with sharing or telling me. So, I always find myself creating those relationships with parents, which I think helps me understand my students and helps me understand where they come from, how long they've been in the United States and a lot of those just simple questions that just are stated in a conversation.

They also mentioned how clarity is sometimes needed in order to help parents understand information that goes home, even when it is in Spanish, as there are differences within the culture. The teacher was able to relate to parents, as it reminded her of her own household growing up:

> I always try to be very honest… I feel like they might not understand a paper that went home, I might call them and be like, hey, this went home and sometimes parents will be like, oh, can you explain it? And sometimes even if it's in Spanish, I feel like they still don't understand. And I kind of know that because that was kind of like my household, even if papers were sent home in Spanish, some parents still were just like, I don't quite understand what it is. Building the

capacity for parents to understand information and stay connected to the classroom is important in building the relationship with families.

The teachers' focus on wanting to build a connection with families was evident at multiple points throughout the study. Multiple participants noted that if they spoke Spanish, they may be able to better communicate and build connections with parents. For example, through the exit ticket following the professional development session, a teacher communicated that they wished there was time to get to know the parents better, "I wish I had the time to get to know the parents of my students more. I hate that there is a language barrier. I wish I hadn't quit my Spanish lessons when I was in elementary school". Teachers wished that they had an easier way to communicate with families, which would likely lead to a stronger connection overall.

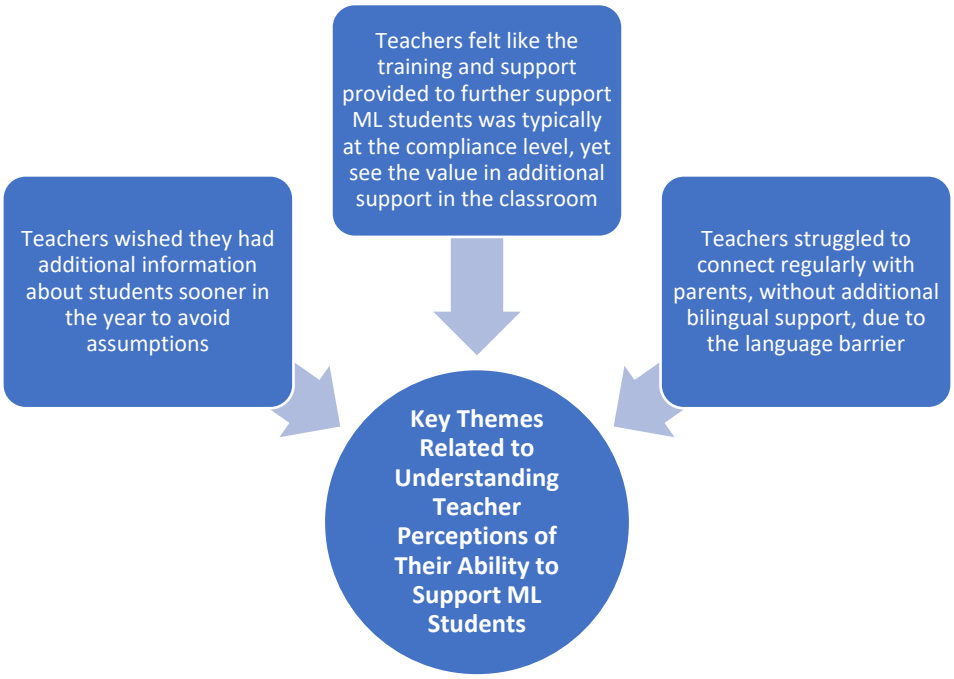
In some cases, parents were not responsive to teachers or were quiet and unwilling to share information, yet teachers still attempted to communicate with parents through various mediums. One teacher discussed sending home pictures to communicate what is happening, and another teacher discussed working with the school social worker to understand the needs of the family better. Overall, the sense from the teachers is that they wished they had an opportunity to work more closely with families but felt the language barrier prevented them from doing so. A common theme noted that teachers felt more successful in connecting and communicating with families with bilingual support.

In conclusion, teachers' perceptions of their ability to support ML students varied, yet common trends were noted, specifically increasing opportunities for deeper connections with students and families. These trends focused on teachers' support in the

classroom and their ability to individualize their support for ML students further when that support is present. Furthermore, teachers generally felt that there could be additional training to support their understanding of ML students and that having information related to more deeply understanding ML students would enhance their ability to serve ML students in their classrooms.

Figure 9

Key Themes Related to Understanding Teacher Perceptions of Their Ability to Support ML Students



Note: Key themes from the research question: How does using funds of knowledge impact teachers' perceptions of their ability to build cultural capital with ML students?

The Impact of Funds of Knowledge on Teacher Perceptions

The second part of the findings addresses using the FoK and the impact that the FoK had on teacher perceptions of their ability to serve ML students. While it wasn't entirely evident whether overall perceptions were truly shifted as a result of the FoK, due in part to the time provided for the study and scripted lesson plans that allowed for little variance, there were positive outcomes, reflections, and brainstorms as noted outcomes of the FoK that generated key themes. The FoK helped teachers to see opportunities for the student background information collection and the importance of integrating the information into lessons, rather than avoiding the culture conversation altogether. There were three key themes related to whether teacher perceptions were impacted as a result of the study. First, the FoK helped to prioritize changes for next year and the need to get to know students early and often to embed information in lessons. Second, the FoK created opportunities for brainstorming ways to connect to students' culture in both lesson plans and other school activities. Finally, the FoK demonstrated that there are a variety of ways to collect student data, including small group, one-on-one, and through parents.

FoK Prompted Changes for the Future

The first theme is that teachers saw the value in utilizing the FoK and the FoK helped to prioritize changes for next year and the need to get to know students early and often in order to embed information in lessons. Many teachers mentioned using the FoK activity to start the school year in Fall 2022 to gather data early and repeating similar activities at other points throughout the year. As noted in the previous key findings, teachers generally felt they did not have enough information about students. This FoK

activity, specifically the journaling activity, generated additional information about students that teachers could use in their lessons. While many teachers felt like they knew information about their students, many were surprised at the information they shared in the activity, which teachers shared in the professional development session.

A Teacher noted that she intends to start early with the use of the FoK. When asked what changes will be made for next year, "Starting earlier. I love the assessment of getting to know all about them a little bit earlier because I feel like I do more academic than personal." Teacher discussed what was learned from students via the FoK was surprising:

> It was how much we share in common and even between them, how much they share in common and realities. Thinking about their prior knowledge, they know of a concept, they just might now know it in English. So, understanding that idea that, they probably know what it is, they just don't know how to interpret that in English, or they don't know how to express that in the English language.

As reported in the exit ticket, teachers discussed how they liked that the FoK looked at their family rather than just the student because it opens up the familial and cultural backgrounds of the student.

One teacher talked about the surprising information that was learned about her students by creating conversations about the activity in the classroom:

> I let them share a little bit more about themselves with each other and when that happened, of course a few did share and then when everybody got into it, the ones were strong, they kind of opened up and wanted to share. To me, this took the

coldness off because we became more of a family because people knew a little bit more about each other. They were able to relate and kind of talk about the things they had in common, so that was a good thing. Also, the family makeup, some of them, I said, "wow, I didn't know that", so I am glad I know that so I can figure out why other things are happening.

One teacher, while bilingual, was surprised at the amount of information that could be compiled into lessons:

> Just the different aspects, I don't think I realize, even though I am bilingual, just how many different components you can actually bring into the classroom. So that was a big surprise to me, like very simple, and the organization, being able to organize it and put it together… just the different elements you can incorporate.

Participants were generally positive about the use of the FoK as the goal of the FoK journaling activity and FoK matrix was to build additional information for teachers to have about students to expand into lesson plans. Teachers felt that the information gathering technique was appropriate and that they would use it in the future, possibly repeating it throughout the year to serve as a building block for lesson integration. Teachers shared the opportunities for lesson plan integration, yet, the reflection centered mostly around the journaling activity and reflection, as additional time was needed to expand on the categorization of the data and lesson plan integration.

Additionally, one barrier was the prescriptive lesson plans that were developed by the district for reading. Due to the prescriptive nature, there were limited opportunities to embed the FoK into those lessons, as the texts were pre-selected, talking points were

outlined, and the activities were scripted. However, through observations, the mathematics lessons were noted as opportunities for integration due to the autonomy held by the teachers to create activities based on students' FoK. For example, one teacher created an activity where all students were able to create their perfect birthday party for $200. Based on their interests, the students could create a menu, guest list, share music, and select the perfect cake. Despite the barrier of autonomous lesson planning, the information gleaned from the data collected from students was surprising, allowing teachers to learn more about students in ways they had not previously.

FoK Created Opportunities for Brainstorming Cultural Connections

The second theme is that teachers saw that the FoK created opportunities for brainstorming ways to connect to students' culture in both lesson plans and other school activities. Following the FoK activity, teachers were shown examples of integrated lessons and thought about ways to utilize the information collected in the FoK both in lesson plans and outside of the classroom for future use. Teachers felt that the FoK process allowed them to think more intentionally about lesson planning and mentioned the opportunity to personalize learning for students by utilizing the information collected, yet in most cases were not able to get to the lesson integration level. Additional time and training were necessary to refine this portion of the process. However, teachers noted that the information gave them ideas for ways to connect clubs and activities to culture as well. In one case, upon reflecting on the FoK and the process, a teacher wanted to start a garden club for the next year where the fruits and vegetables grown were not just the typical ones seen in the cafeteria, but that are grown in their own culture as well. In

another case, a teacher wanted to highlight student musicians each week to capitalize on a student's love of music and showcase them in a way they may not be otherwise recognized.

A teacher focused on using the FoK in future lesson plans based on how it was received this time. She noted the students' excitement when attributes from the FoK were used in lesson plans:

> They were super excited to see their name and then the fact that I put it up there, like one little boy loves his big sister, so I put [in the lesson] that him and her went to the store and she bought him something and he was just grinning the whole time.

Another teacher discussed being more meaningful in lesson planning in the future following the use of the FoK. Overall, teachers learned a great deal of information about their students and were generally able to connect the information to the lessons, as the students opened up and shared more about themselves and their families.

Expanded Methods of Collecting Student Information

The third theme is that teachers found that FoK demonstrated a variety of ways to collect student data, including small group, one-on-one, and through parents. The FoK activity allowed students to share information about themselves with teachers. In some cases, students were not willing to share a great deal of information; in other cases, teachers were surprised at how students were willing to share. The teachers who seemed to get the most detailed responses were those who sat down with students in a one-on-one setting or in small groups. This information that was collected from students was done in

a packet form with responses generated either via writing or drawing. The teachers who were most successful at collecting beyond surface-level data sat with their students and conferenced about each of the answers, allowing students to expand on their responses. In this model, teachers were also able to ask deeper questions and allow students to expand on their answers.

One teacher noted that when she completes this activity next year, she plans to have students sit with her and explain each answer. She also talked about asking students questions based on what was drawn or written to elicit more information. Another teacher talked about creating lunch talks with students in a one-on-one setting to encourage deeper conversation and expand their understanding of what they wrote. One teacher talked about repeating the activity multiple times throughout the year to see what changed with students.

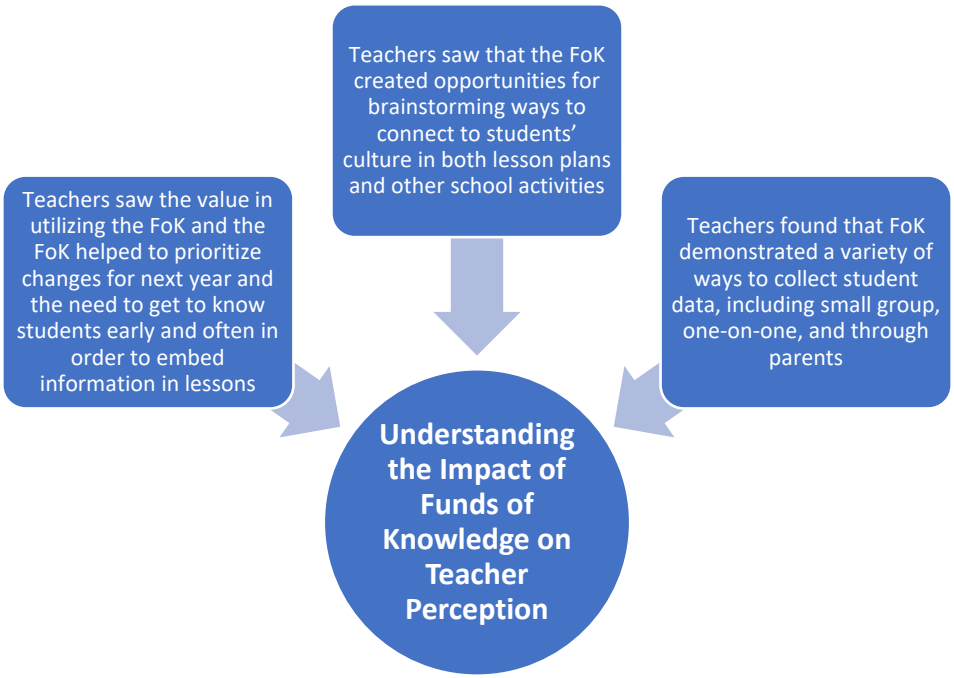
One teacher thought about the opportunity that small groups could represent when it comes to students having things in common and getting to know one another. She talked about the idea of meeting with small groups on rotation so that she could get more time with students and allow them to share. Additionally, another teacher talked about creating small groups with more intentionality in the future so that she can glean more from her students in the classroom setting.

Overall, eliciting more information in a small setting was a common theme mentioned by teachers regarding the data collection. They were interested to see the data collected when students were willing to share and felt that it represented an opportunity to embed the responses in lesson plans. However, additional training, with a more

personalized approach, including ways to categorize the FoK data and approach lesson plan integration, is necessary to help teachers further understand the process.

Figure 10

Key Themes Related to Understanding the Impact of Funds of Knowledge on Teacher Perceptions



Note: Key themes from part two of the research question: How does using Funds of Knowledge impact teachers' perceptions of their ability to build cultural capital with ML students?

Summary of Findings

This study aimed to determine how using funds of knowledge impacted teachers' perceptions of their ability to build cultural capital with ML students. Teachers presented both common barriers to serving ML students as well as the individualized barriers that

they faced. Through purposeful data analysis, findings emerged related to the themes presented in both components of the research question. First, when analyzing teacher perceptions of their ability to support ML students, it is clear that teachers care and genuinely desire to get to know their students on a deeper level. However, there are barriers to teachers feeling as though they were able to support ML students fully. Key themes impacting teacher perception included learning more about students, expanding the training and support provided to teachers, and creating opportunities for supportive family connections. The information that teachers hoped to gain about their students is information that can be used to guide lesson planning and create more profound, more intentional connections.

Secondly, as to whether perceptions were impacted due to the use of the FoK, while it was not entirely clear whether perceptions shifted, there were notable shifts in teachers' responses and added confidence to their answers when talking about the future and the use of student information. Through this process, teachers were able to see the value in using the FoK, as it helped to create opportunities for dialogue, reflection, and planning that may help teachers continue to meet the needs of their ML students and expand on their connections with students. Furthermore, teachers were prompted to think about other ways to create cultural connections with students through clubs and activities beyond lesson plans by utilizing the FoK. Additionally, teachers learned information about their students they did not expect, which helped teachers think more methodically about gathering information from students, whether in a one-on-one or small group setting, or via reaching out to parents. Finally, teachers noted that due to the time needed

to execute the FoK, they need more personalized training to support the data collection and lesson integration portion of the process and time to collaborate with peers.

In summary, prior to the intervention, teachers noted more commonly researched barriers related to their ability to serve ML students. These barriers cannot be specifically addressed during a short period and require systemic work to address. During the FoK activity and following the intervention, teachers developed new strategies that they can use to support ML students and thought about ways that they could increase their ability to serve ML students in the future. Furthermore, they noted that they needed additional time and resources to support the lesson integration portion of the FoK activity and time to categorize all of the information from the FoK. The FoK did bring to the forefront the need for teachers to consider the assets that students bring to the classroom and make changes to their instruction based on the information collected.

In conclusion, information gleaned from both before and after the intervention, the teachers, and through analysis of the data collection yielded the following overall findings: teachers need a clear process for collecting and disseminating additional information about students earlier in the year and from year to year, teachers need ongoing, consistent, and personalized training to support ML students and the use of the FoK and lesson integration, and teachers need additional support to communicate with parents so that they can feel more connected to them.

CHAPTER FOUR

DISCUSSION AND RECOMMENDATIONS

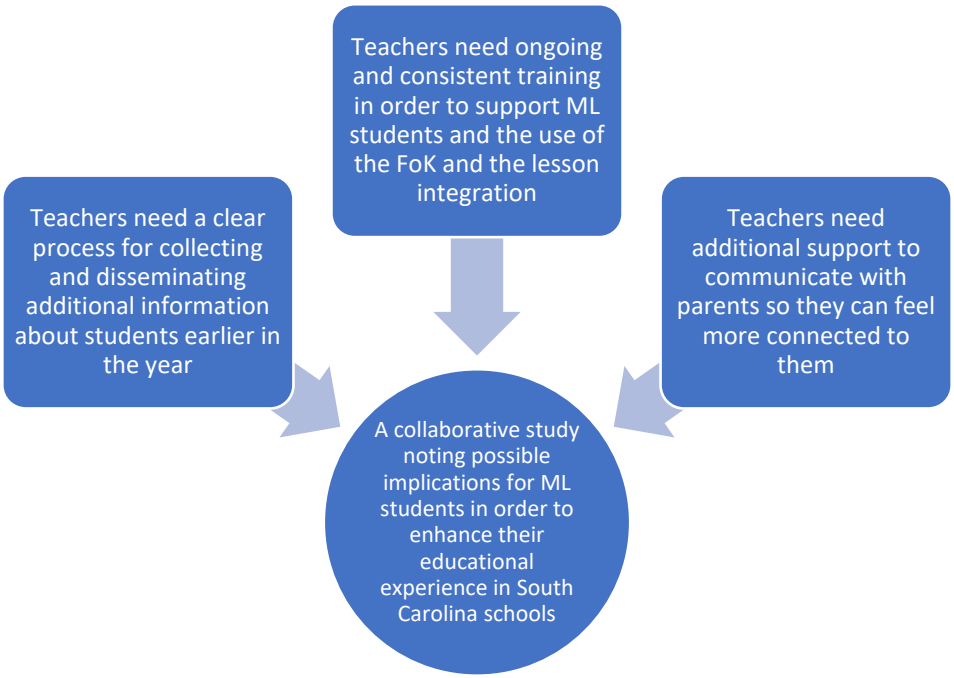
This final chapter focuses on summarizing and reflecting on the research study which sought to understand how using Funds of Knowledge impacted teachers' perceptions of their ability to build cultural capital with ML students. Examining the components of improvement science and reflecting, assessing, and understanding the effectiveness of the study, future research, recommendations, and reflections were developed. Utilizing elements of Design Thinking, coupled with the PDSA model and various data collection methods, I gained an understanding of teacher perceptions of their ability to serve ML students and focused on how using Funds of Knowledge impacted teachers' perceptions of their ability to build cultural capital with ML students.

Through the implementation of an intervention via multiple sessions of professional development, which focused on FoK data collection and lesson integration, and through additional data collection and feedback, an understanding of the impact of the FoK was constructed. Additionally, focusing on information gleaned from the teachers, the intervention, as well as the multiple themes that emerged from disaggregating the research question into two components, overall findings were generated. First, teachers need a clear process for collecting and disseminating additional information about students earlier in the year and from year to year. Second, teachers need ongoing, personalized, and consistent training to support ML students and the use of the FoK and lesson integration. Finally, teachers need additional support to communicate

with parents so that they can feel more connected to parents and their students (Figure 11).

Figure 11

Summary of Findings



Note: A collaborative study noting possible implications for ML students in order to enhance their educational experience in South Carolina schools. How does using Funds of Knowledge impact teachers' perceptions of their ability to build cultural capital with ML students? FoK?

These interpretations of teachers' perceptions and impact were predicated on the use of improvement science, and a focus on future research was determined, along with suggestions for refining the process. As noted by Hinnant-Crawford (2020) regarding problems of practice in the field of education, the problems are complex and the

"solutions are not linear and straightforward" (p. 204). She also emphasizes that when looking at educational disparities it:

> requires iterative cycles. The iterativeness advanced here is not an endorsement of slow, incremental change – that has historically been a signifier of change. To the contrary, the small rapid tests of change, and the adjustments to the programs and interventions as a result of these tests should accelerate improvement. Improvement science is not asking you to wait, but asking instead that you rev up your efforts and get results sooner rather than later. Our students do not have time for us to be slow about improving. (pp. 204-205)

This study helped to demonstrate that small rapid tests of change and adjustments may begin to accelerate change. As noted in the key findings of this study, which was a pilot during the summer program, the small changes led to teachers brainstorming and reflecting on how to serve their ML students more consistently and intentionally and brought to light the needs of ML students. As noted from the study, additional time and training was needed to meet the needs of students in the classroom and through lesson planning. Through this, teachers saw opportunities for integrating student data into lessons that may not have been taken previously, as well as the need to collect and reflect on student data in various ways.

Discussion of Findings

Teachers shared a wide range of experiences and perceptions relative to their ability to serve their ML students and how the FoK impacted those perceptions. As current research suggests, McSwain (2001) noted that teachers' perceptions of their

students play a critical role in the type of support culturally diverse students receive. Reflecting on the support of ML students, a common theme that developed as the study progressed was that assumptions sometimes guided an understanding of students when information about students was not readily available. These assumption-based practices were precipitated by teachers feeling that they needed additional information about students earlier in the year, due to the time it takes to learn about students and the amount of information necessary to make sound instructional decisions. While teachers noted having practices and activities based on getting to know students, they mentioned that additional information would be useful, including background knowledge of students, students' multiple intelligences, and learning styles. They sought information that spans beyond typical information found in a student's permanent record.

Teachers Need a Clear Process for Collecting Student Information

Teachers need a clear process for collecting and disseminating additional information about students earlier in the year. The FoK provided teachers with a variety of information, and teachers generally felt that it was a helpful way to gain supplemental information, yet more time was needed to categorize the data collected to make authentic connections in lessons. Furthermore, teachers explained that having this type of additional information included in the FoK could help them focus their attention on student needs from the beginning of the year and allow them to make more intentional decisions about students. Moreover, teachers noted that this added information would be helpful in lesson planning as the time it takes to understand deeper information about students can be lengthy and needed to happen sooner. Many planned to use the FoK

approach next year as a result of the pilot in the summer program but discussed the need for time for authentic lesson integration, including professional development and support from peers. Research supports learning more about students, the impact that it can have, and embedding culturally responsive teaching, which is defined by Gay (2000) as,

> using the cultural characteristics, and perspectives of ethnically diverse students as conduits for teaching them more effectively. It is based on the assumption that when academic knowledge and skills are situated within the lived experiences and frames of reference for students, they are more personally meaningful, have higher interest appeal, and are learned more easily and thoroughly. (p. 106)

The need to gather information about students is prevalent in the research as far as how to support ML students and build cultural capital. The emphasis on teachers gathering information about their students is represented throughout the research, as teachers need to use "the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively" (Gay, 2002, p. 106). Throughout the study, teachers discussed the need to get to know their students but struggled to understand how to gather the most helpful information. In some cases, teachers avoided specific conversations with students surrounding culture, as they were uncomfortable with how it would make students feel. As an outcome of dialogue surrounding the FoK, the urgency to share information year-over-year and gather information immediately was the focus for teachers. While the FoK provided a structured way for teachers to gather information, it is not the only way.

When used with consistency and intentionality, the FoK can serve as a vehicle for collecting student information for lesson integration continuously. Furthermore, while there were times when teachers were unsure how to collect information from students, those teachers who conferenced with students or met with them in a small group were able to collect more detailed information about students. This finding is important, as it demonstrates the value of student conferencing, which serves as another opportunity for gathering student information. As noted by an article published in 2019 by the Association for Supervision and Curriculum Development (ASCD), a teacher shared her personal experience about the impact that student conferences had on her classroom. Specifically, setting up regular times to meet with students provided students with opportunities to understand and expect more of themselves. Additionally, the teacher shared how conferences allow the conversations with students to push students beyond their own ZPD as well as allowed for feedback to be given to students individually. Finally, conferences provided opportunities for building deeper relationships and helped students learn how to navigate their own academic journey. This experience of sharing about student conferencing is important, as it strengthens the need to expand on the opportunities that come with meeting one-on-one with students. Overall, this finding highlights the need for a process for collecting and disseminating information to help teachers support ML students as soon as they walk through the door of the classroom and provide ongoing opportunities to gather student information.

In summary, to avoid making assumptions and gather data that helps create a welcoming environment for students and builds connections with families, teachers must

focus on getting to know their students with intentionality. This information goes beyond the surface level and should include a wide range of experiences, hobbies, personalities, background, traditions, and native country, to name a few. Teachers shared the need to build on their strategies and noted that the FoK allowed them the opportunity to do so with the need to further training and support to build their capacity to serve students.

Teachers Need Ongoing, Personalized, and Consistent Training

Teachers need ongoing, personalized, and consistent training in order to support ML students and the use of the FoK and the lesson integration. Teachers' perceptions of their ability to support ML students and the outcome was also based on the training and support received. A key finding that teachers shared was that the training and support provided to support ML students was typically at the compliance level and repeated annually. This impacted teachers' ability to serve their ML students. Teachers shared that as the number of ML students has grown substantially, their training has not necessarily kept up with the growth of students. The focus on training teachers to support ML students is supported throughout the research. Tellez and Waxman (2005) found that when teachers participated in appropriate training and utilized pedagogical tools specific to ELLs, along with professional development, they developed a higher sense of efficacy working with ELLs. Additionally, the training needs to be representative of the needs of the teachers and the wide range of experiences they may have, as shared by Fullan (2005, as cited in Rizzuto, 2017):

> If professional development is to be effective for classroom teachers, they much have a voice in choosing the topic(s) and become actively engaged in the process.

> In many ways, building effective professional development for teachers is similar to creating meaningful instruction for students in a classroom. A constructivist approach stresses that teachers be provided time to practice, receive feedback, and meet with a mentor or coach. If educators want to enact meaningful change for both teachers and ELL students, they must measure changes in teacher knowledge and skills and provide teachers time to self-assess and reflect. (p. 197)

Professional development is a critical component of teacher support. As noted as an outcome of this study, professional development needs to be ongoing, personalized, and consistent to provide teachers with personalized experiences, follow-up, and coaching. While the training for the FoK spanned two sessions, additional time was needed to allow for collaboration among peers, focused time to plan and build lessons for integration, and an opportunity for reflection on feedback on the lessons taught. Teachers noted that sample lessons and a sample matrix would be helpful to show the progression of student data collection to lesson integration. During each professional development session, teachers were encouraged about the content and felt confident about the data collection opportunity. Still, it was evident that the time allotted for the categorization and integration was not substantial enough for teachers. As an outcome, while many teachers continued to use names of students, siblings, and locations in word problems, teachers noted a need for support beyond the surface level. Furthermore, teachers stated that expanding these practices would be crucial to teachers feeling more equipped to work with ML students, as representing ML students in lessons can be challenging to do.

From a support perspective, teachers saw the value in additional resources in the classroom, such as an ESOL teacher or bilingual support personnel as a co-teacher. They felt more confident in their teaching abilities, and this support allowed them to collaborate and share in the responsibilities of serving ML students. The teachers who received the co-teaching support shared different experiences about how that model helped them to feel supported and encouraged in their work with ML students. Research supports this collaborative teaching, as demonstrated in a three-year study conducted by York-Barr et al. (2007) in a Washington elementary school, where teachers worked in a collaborative teaching model to serve ML students. Following the study, teachers reported a greater sense of community within the classroom and marked improvement in achievement data. Students were described as demonstrating more engagement, feeling more included, and experiencing more of a challenge.

Additionally, despite there being no training or certification requirements in South Carolina for teachers serving ML students, those teachers who had an additional ESOL certification did feel that they could use those strategies to support ML students regularly and did not seem to face the same barriers as their colleagues. Research suggests that this lack of certification requirement is not just in South Carolina and impacts ML student achievement. As reported by Lopez et al. (2013), a study was conducted to examine how teacher certifications related to supporting ML students across all states. They found that states that required ESOL or bilingual certification had greater achievement level for ML students. While this ESOL training and school-based support is outside of the realm of

individualized professional development, it demonstrates the need that teachers have for further training.

In summary, teachers expressed a need for additional support and training and felt the training was typically repeated annually and not individualized. By creating professional development that focuses on a year-long framework, meeting the teachers where they are, and providing coaching and mentoring experiences, collaboration, and feedback, teachers may feel more supported in their ability to serve ML students. The FoK provided evidence that teachers want more training specific to ML students, and this idea of creating personalized professional development for teachers and deepening their understanding specific to the FoK provides teachers with support in their ability to serve ML students.

Teachers Need Support in Communicating with Parents

Finally, teachers need additional support to communicate with parents so they can feel more connected to them as teachers' perceptions of their ability to serve ML students were shaped by their struggle to connect regularly with parents. The FoK provided additional discussion surrounding the need to connect to families. Teachers noted that without additional bilingual support, due to the language barrier, they felt generally disconnected from parents and many expressed that they lacked a strong connection. Throughout the study, teachers discussed the missed opportunities they felt by not having a connection with parents and how that impacted their ability to gather data about students. Teachers mentioned their reliance on translation services and applications that supported communication. Still, they felt that their inability to communicate regularly

with parents created a lack of authenticity and limited the full potential of connecting with students.

This communication between school and home is imperative, as noted by teachers, as the information that parents may provide to teachers can support the holistic picture of students. Teachers may learn more about the characteristics of students and their environment from parents and the impact of teacher communication is essential to establishing relationships with students and deepening their understanding of students. Research points out that despite a student's socio-economic status or background, having their parents and family members involved provides better results in school and impacts the time they spend in school (Epstein et al., 2009). Additionally, as shared by Grace and Gerdes (2018), “Research shows that teachers’ relationships with students’ parents impact outcomes across domains. This relationship is impacted by many factors as well, including teachers’ attitudes towards working with certain students and families” (p. 445). The parent-teacher relationship and parent involvement in education have important effects, notably for children.

The focus on communication is essential, as it impacts ML students in multiple ways, including student achievement. The challenge facing teachers regarding parent communication is an issue affecting many educators. In a survey of over 5,000 teachers in California by Gandara et al. (2005), they sought to understand the challenges facing teachers of ML students. They reported that the most significant challenge noted by teachers was their struggle to engage with families and connect with them. "Communication with students and their families was of utmost importance to teachers.

The inability to connect with parents, inform them of standard, expectations, and ways to help was the most commonly named challenge for those teaching K-6" (Gandara et al. 2005, p. 6). The holistic support when the school-to-home communication is present is undeniably important yet ensuring consistent practices in how that happens is complicated.

In summary, this puts into greater perspective the need to focus on creating cultural capital by building connections with families to better serve students and learn more about who they are as people. When families are engaged in the education process of their students, invaluable information is derived through conversation and connection. While teachers noted the language barrier as a primary reason for the lack of communication, providing strategies, training, and support to teachers can help uncover ways to connect with families that aren't currently employed.

Building Teachers' Cultural Capital

Taking into consideration the key findings and themes presented, the importance of building cultural capital with ML students is integral. As this study has shown, the depth of cultural capital that is built from classroom to classroom varies greatly and steps can be taken to increase the cultural capital in classrooms. As noted by Ladson-Billings (1995) and her discussion of culturally relevant pedagogy, she focused on the importance of focusing of engaging students whose experiences and cultures are not represented in the majority of students. Her research focused on three goals: teaching must yield academic success, students must maintain cultural integrity, and students must develop a broad sense of understanding cultural norms and citizenship. By deepening the

understanding of students' experiences and getting to the heartwood and root system of students, teachers can create deeper connections and build deeper relationships with students. In turn, this will allow teachers to build cultural capital in the classroom with students at the center.

Implications for Practice

This study provided an opportunity to pilot the FoK in a small group setting and provided evidence to suggest that teachers need ongoing, consistent, and personalized support to positively impact their perceptions of their ability to successfully serve ML students in their classrooms. With the significant growth of ML students and teacher training focused on the compliance level, this study presents opportunities for improvement in practice.

Implication for practice involves focusing on personalized and ongoing professional development for teachers to provide the most significant opportunity for success when serving ML students based on the FoK. Based on the range of perceptions garnered from teachers, this type of personalized professional development should involve teachers at the forefront, coaching and mentoring support, and feedback to address their needs. As teachers noted barriers to communicating with students and parents, this professional development needs to adapt to meet the needs of all teachers in the building and allow for collaboration among teachers.

The FoK provides a framework for schools and districts to replicate and should be expanded to a year-long process to provide the consistency, personalization, collaboration, and feedback necessary to help teachers integrate lessons. The framework

focuses on unpacking deficit mindsets in the beginning, understanding student subgroups within the ML population, and then shifts into the value of understanding students in the classroom. By working to unpack each portion of the FoK process, a year-long framework would allow teachers to personalize the process while providing ongoing support and feedback. Additionally, with the goal of the FoK impacting lessons, teachers would have the opportunity to integrate lessons on a weekly or bi-weekly basis and administrators and coaches can be a part of the process. As an extension of this implication, a lesson planning template should be expanded to allow for FoK integration opportunities that align directly with the school or district lesson protocol for ease of implementation. Schools and districts should use this FoK process to ensure that the needs of ML students are being met, while focusing on the needs of teachers through personalized professional development.

The focus on helping teachers understand and implement student conferencing should be examined. Conferencing on a regular basis with students can provide additional opportunities for gathering information and building deeper relationships between teachers and students. This conferencing could be an extension of the FoK collection, allow for expanded integration into lesson planning, and help teachers build the capacity to learn deeper information about students.

Finally, the FoK activity could be expanded to include technology-based tools, allowing students to share virtually, and giving teachers opportunities to listen to students, as suggested by a teacher in the study. In this expansion of the FoK, teachers could categorize students' FoK in a virtual format, allowing for a personalized portfolio

to be created for each student and shared with teachers each year. This practice would ensure that teachers receive information about their students with a pre-developed catalog of FoK. Furthermore, by teachers working to personalize lessons, a bank of lessons could be created as sample items for other teachers of ML students across the state. Students in different districts can receive more uniform support by deploying more consistent practices.

Implications for Policy

South Carolina lawmakers should consider increasing their responsibilities in appropriately serving ML students across the state more consistently. These responsibilities include expanding the requirements and support for teachers who serve ML students, outlining clear goals and requirements for districts to follow in strategic planning, providing funding for additional ML support in schools, and providing opportunities at the state level for professional development for leaders and teachers to ensure consistency.

Lawmakers should examine the requirement of teachers in South Carolina who serve ML students and provide a framework for districts that they can use that focuses on differentiated support for teachers. Certification in ESOL in South Carolina is not a requirement, merely a suggestion. By outlining professional development requirements that focus on the needs of teachers related to serving ML students, districts and schools who serve ML students would have a framework to follow to ensure that resources are similar across the state, such as the FoK. Additionally, teachers new to South Carolina or new to teaching should be required to complete at least one graduate course related to

culturally responsive teaching, with a specific focus on serving ML students. Mainstream teachers who primarily serve ML students should be required to hold an ESOL certification or be required to attend adequate yearly trainings that go beyond the compliance level.

Additionally, schools and districts that serve a higher percentage of ML students should be required to submit goals related to how they plan to support ML students as part of their strategic plans, not just in the Title III plans. The current strategic plan requirements in South Carolina focus on subgroup deficiencies based on the annual report card. Still, they do not specifically call out the need for schools and districts with high ML populations to set specific goals to support ML students. Furthermore, the SCDE does not explicitly outline how students should be serviced in an ESOL program following enrollment, which leads to varying methods across the state. As noted in the SCDE ML Guiding Principles, "the SCDE does not, from a state perspective, prescribe a specific frequency for ESOL services because these services vary from district to district and school to school based on ML population, resources, schedules, and student needs" (SCDE, 2022, p. 23). While a certain level of autonomy is important for districts, with the growth in population in South Carolina, more urgency must be taken to outline consistent policies so that zip codes do not dictate the level of services provided.

Secondly, while Title III federal funding is available to districts in the state, which includes multiple spending options to support ML students, additional guidance should be provided to districts outlining how the allocation of resources impacts ML achievement. Additionally, there should be a priority in adding support personnel, which

is an option for the use of Title III funding. Providing additional support is essential in building the capacity of teachers to serve ML students. In addition to Title III funding, schools and districts with high populations of ML students should be allocated additional Full Time Employees (FTEs) beyond what is currently allocated, focusing on serving the ML population, supporting teachers, and providing school-to-home support. Specific to South Carolina, the additional support personnel should be in addition to the current ESOL teachers, whose current caseloads reflect a 60:1 ratio as noted by the SCDE.

Finally, the SCDE should provide consistent professional development opportunities to district leaders, building leaders, and instructional coaches. As current practices and resources vary across the state, more consistent practices should be adopted. Currently, the SCDE offers limited professional development opportunities for those not serving in a Title III coordinator role. By adopting a state-wide professional development framework that districts can modify and deliver to leaders and those who support ML students, the support that students receive can be more consistent.

Future Research Recommendations

While the implications for policy and practice further this study, additional research opportunities evolved as a result of this study. Due to this study being a pilot at one school during a program, additional studies could focus on one or more schools with large populations of ML students and a larger sample size of teachers. Also, the length of time of study should be expanded over the course of a semester or year. Due to the amount of time that is needed to dedicate to integrating lessons and providing feedback, the study should be focused on small group sessions to focus on the individual needs of

the teachers. These small group sessions should work to observe lesson integration, suggest possible entry points for additional use of the FoK, and provide timely feedback to participants.

Examining teacher certification related to perception should be another topic for future research. As evidenced by the participants, those who had an ESOL certification generally felt more confident in their ability to serve ML students. This study could inform the SCDE regarding certification requirements and possible amendments to the current policy. By conducting this study, researchers would have a better understanding of the impact of certifications of the success of serving ML students. The study could also be expanded to researching those preservice teaching programs who require ESOL certifications to graduate. This analysis of certification would have the opportunity to impact the entire state of South Carolina, while also demonstrating the importance of serving ML students.

Finally, a study of schools that have provided additional support in the form of co-teaching or bilingual support in addition to the minimum to ML students should be conducted, specifically in South Carolina. This would allow researchers to see the impact of layered support for teachers and students and how that may shift teachers' perceptions of their ability to serve ML students. The study should focus on how each of the models, both co-teaching and bilingual support, impact teachers' perception. A detailed study of these models could then be turned into a framework for implementation in South Carolina schools. This would help leaders and teachers provide ML students with the greatest impact strategies to further their success in South Carolina schools.

Collaborative Summary and Reflection

This study was, in part, a collaboration between Lowe and me that sought to understand the experiences and perceptions of ML students and teachers. Through careful analysis, each researcher summarized key findings that have the opportunity to enhance the experience of ML students in South Carolina schools. By examining two populations, students and teachers, our studies focused on different participants and produced a range of perceptions from both students and teachers yet allowed for collaborative reflection. Additionally, this collaboration allowed Lowe and me to identify common themes and analyze findings and think about ways to expand on the information gathered, considering both populations and their specific needs.

Common Themes and Findings

On one hand, information gleaned from teachers emphasized the need for additional information and professional development to support their ability to serve ML students and their families. On the other hand, students recognized basic or surface-level ways that their teachers knew them and generally did not see themselves in the lessons. From both teachers and students, Lowe and I noted missed opportunities to connect with students through the FoK. We discovered that additional student information could be gleaned from the data collected and utilized in the classroom, yet these missed opportunities to expand on student characteristics generally led to a surface-level connection with students. This surface level connection was noted by both the teachers and the students throughout the study.

Lowe and I both noted that the type of FoK collection method was important in understanding the level of information students provided. Teachers who sat with students in a small group or one-on-one setting seemed to gather more data than those who simply asked students to complete the FoK. In some cases, despite teachers' collecting data via the FoK, students generally did not see representation of themselves in the lessons, suggesting that there were varying applications of the FoK tool. The teachers who expanded on the conversations with students and asked questions related to the journaling activity were able to yield more detailed responses. While the FoK may provide opportunities for student information to be integrated into lesson plans, the use of the tool must be intentional and focused on gleaning as much student information as possible so that it is relevant to the students.

Unexpected Components

There were unexpected components of the study that Lowe and I did not anticipate. Those components included the prebuilt lesson plans provided by the district, which impacted teacher autonomy, and the time necessary in order to get to the lesson integration level of the FoK. The prebuilt lesson plans gave Lowe and I an opportunity to analyze and provide as examples to teachers yet did not simulate how to alter a teacher-built lesson plan. This limited the opportunity to personalize the lesson plans but did give teachers an idea of what altering a lesson plan would look like. The hope is that teachers utilize this process with their own lesson plans in the future.

The lesson integration portion of the study was not achieved at the level expected by Lowe and me. While teachers were able to see the lesson integration examples, they

were not generally able reach the level of integration of the FoK into lesson plans. This was due, in part, to the time allotted in the summer program, prebuilt lesson plans, and the need for further professional development. In order for teachers to reach the level of integration, professional development would need to take place over the course of a longer period, allow for dialogue and collaboration in lesson planning, and focus on feedback from observers.

Concluding Thoughts

Through this partial collaboration between Lowe and me, we were each able to capitalize on our passion for improving the experience of ML students in South Carolina. Upon careful reflection and analysis, it was determined that one area teachers may benefit from is additional support in the classroom. This support, either through co-teaching or professional development, or both, may allow teachers to establish a deeper connection with students, their interests, and their parents. Furthermore, one area that students may benefit from is the opportunity to sit with teachers in small groups or one-on-one and be able to share more about their FoK and their experiences. Ultimately, to increase student and teacher connection in the classroom, time must be dedicated to building trust. The opportunities that teachers have to impact ML students in the classroom are vast yet need to be capitalized on with greater intentionality.

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APPENDICES

Appendix A

Funds of Knowledge Inventory Matrix

Funds of Knowledge	**Collected Data**	**Classroom Application**
Home Language		
Family Values and Traditions	*Holidays, beliefs, weekly gatherings*	
Caregiving	*Taking care of younger siblings*	
Friends and Family	*Family structure or location, extended family*	
Family Outings	*Shopping, vacation, church*	
Household Chores	*Dishes, cleaning room, taking out trash*	
Educational Activities	*Reading with family members, online programs*	
Entertainment	*Favorite TV shows, social media, music*	
Family Occupations	*Office, business owner, chef*	
Scientific Knowledge	*Recycling, exercising, health*	

Other		

Adapted from:

González, N., Moll, L., & Amanti, C. (Eds). (2005). *Funds of knowledge: Theorizing practices in households, communities and classrooms.* Erlbaum

Appendix B

Teacher Interview Protocol #1

Teacher Interview Protocol #1 (with notes for the interviewer)

Interviewer: _____ Date/Time (start/end): _____

Interviewee: _____

1. Tell me a bit about yourself.
    a. Setting the stage, building capacity for conversation.
2. Tell me about your teaching experience.
    a. Years of experience, experience with MLs
3. Tell me about your training and any additional education.
    a. ESOL certification, higher education, diversity training, etc.
4. Tell me why you decided to participate in the summer program?
5. Think about your most successful year as a teacher, what made it successful?
    a. Prompt for why. If a teacher is new, talk about what would make a year successful.
6. What are ways you develop an understanding of your students throughout the year?
    a. Lead to background, experiences, etc. in tangent
7. How well do you feel you know your ML students?

    a. Their culture, their language, homelife, the differences between subgroups

8. How do you connect with the families of your students? What about your families of ML students?
    a. Prompt for methods, seek to understand primary ways to communicate.
9. In what ways do you feel prepared to teach ML students?
    a. Lead to professional development, ongoing support throughout the year, school and district-level support.
10. What information do you wish you had about your ML students and the way they learn and why?
11. Tell me about how you make connections between your lessons and your students, specifically, ML students.
    a. Elicit examples
12. What questions do you have for me?
    a. Allow for additional dialogue.

Appendix C

Observation Protocol

Date:	Time:
Duration of the Lesson:	Topic of the lesson:
Number of Students:	Grade level:
Descriptive Notes:	
Reflective Notes:	

Adapted from:

Creswell, J. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Pearson/Merrill Prentice Hall.

Appendix D

Exit Ticket for Professional Development

Participants may choose one of the following questions to respond to anonymously and place on a post it as they exit:

Please explain more about…

Today, I was surprised the most by….

I wish…

Free response….

Appendix E

Funds of Knowledge Document Analysis

Funds of Knowledge	**Example of Look-Fors**	**Evidence/Notes**
Home Language		
Family Values and Traditions	*ex. Holidays, beliefs, weekly gatherings*	
Caregiving	*ex. Taking care of younger siblings*	
Friends and Family	*ex. Family structure or location, extended family*	
Family Outings	*ex. Shopping, vacation, church*	
Household Chores	*ex. Dishes, cleaning room, taking out trash*	
Educational Activities	*ex. Reading with family members, online programs*	
Entertainment	*ex. Favorite TV shows, social media, music*	
Family Occupations	*ex. Office, business owner, chef*	
Scientific Knowledge	*ex. Recycling, exercising, health*	
Other		

Adapted from:
Gonzalez, N., Moll, L. C., & Amanti, C. (2006). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. Routledge.

Appendix F

Teacher Interview Protocol #2

Teacher Interview Protocol #2 (with notes for the interviewer)

Interviewer: _____ Date/Time (start/end): _____

Interviewee: _____

1. Tell me about the summer program. How has it been?
2. Tell me about something you have changed or added to your practice since we last talked?
3. What was one take-away from the professional development?
4. Talk me through your process of gathering the Funds of Knowledge.
5. Did you learn any relevant information about your ML students throughout this process? If so, can you explain more.
6. What lingering questions do you have about the Funds of Knowledge matrix?
7. Would you use the framework of lesson integration to FOK in the future? If so why, if not, why not?
8. Has your understanding of ML students changed since we last spoke?

9. What information do you wish you had about your ML students and the way they learn now?
10. What questions do you have for me?