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A Narrative Inquiry of International Secondary Mathematics Teachers' Classroom Experiences in the United States and their Influence on Student Learning

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ACCEPTANCE

This dissertation, A NARRATIVE INQUIRY OF INTERNATIONAL SECONDARY MATHEMATICS TEACHERS' CLASSROOM EXPERIENCES IN THE UNITED STATES AND THEIR INFLUENCE ON STUDENT LEARNING, by Monisola Olubuyide, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree, Doctor of Philosophy, in the College of Education & Human Development, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chairperson, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty.

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A NARRATIVE INQUIRY OF INTERNATIONAL SECONDARY MATHEMATICS TEACHERS' CLASSROOM EXPERIENCES IN THE UNITED STATES AND THEIR INFLUENCE ON STUDENT LEARNING

by

MONISOLA IBIRONKE OLUBUYIDE

Under the Direction of Dr. David W. Stinson and Dr. Christine D. Thomas

ABSTRACT

International teachers (ITs) are increasing in numbers nationwide as federal and state governments are providing incentives to ITs to reduce teacher shortages and increase the number of high-quality teachers (HQTs) in classrooms. With data supporting an increasing trend of employing ITs in the United States, there is not a breadth of research conducted on their lived experiences in classrooms, their influence on student learning, and their path to becoming successful teachers. Although research on international mathematics teachers exists, most of the studies were conducted outside the United States (e.g., Cruickshank, 2004; Peeler & Jane, 2005).

The purpose of this narrative inquiry (see Connelly & Clandinin, 1990) study therefore was to explore how four international secondary mathematics teachers (ISMTs) navigated their classroom experiences to become successful teachers in the United States and their influence on student learning. Two research questions guided the study:

1. How do ISMTs negotiate their teaching practices relative to their teaching (and learning) experiences in their country of enculturation to become successful teachers in the United States?
2. How do ISMTs influence student learning in classrooms?

Danielson's (2013, 2022) framework for teaching (FfT) was used to identify the teaching practices the ISMTs negotiated and their influence of student learning. Cultural fusion theory (CFT; Croucher & Kramer, 2017) explained the process of the ISMTs transforming their teaching practices. Using narrative inquiry for capturing stories and the lived experiences of the ISMTs, data were collected through a questionnaire, individual and group interviews, researcher interview notes, and ISMTs' provided artifacts.

From the analysis of the data, the identified effective teaching practices from the FfT that challenged and transformed the ISMTs were: (a) knowing and valuing students, (b) using resources effectively, (c) cultivating respectful and affirming environments, (d) fostering a culture for learning, (e) supporting positive student behavior, (f) organizing spaces for learning, (g) engaging students in learning, (h) documenting student progress, (i) engaging families and communities, and (j) growing and developing professionally. The findings indicated that the success of ISMTs can be supported from the completion of a structured practicum, mentorship and collaboration, and guided professional development opportunities.

INDEX WORDS: Cultural Fusion Theory, Danielson Framework for Teaching, International Secondary Mathematics Teachers, Narrative Analysis

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in

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DEDICATION

This dissertation is dedicated to my late father Olusegun Olubuyide whose work ethics, contribution to his field, and dedication to his family have always been a source of inspiration for countless people including myself. I especially want to thank my mother and husband who supported me, encouraged me, and stood by me through the ups and downs of this endeavor. To my children, Melina and Leon, both of you have given me the motivation to push beyond mediocracy. May this dissertation serve as evidence of my perseveration and dedication to go above and beyond. Finally, I pray that my walk with GOD will demonstrate to my children that when you have faith, hope, and love that all things are possible and reinforce I’mpossible.

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LIST OF ABBREVIATIONS

AFT	American Federation of Teachers
CCSS	Common Core State Standards
CFT	Cultural Fusion Theory
FfT	(Danielson's) Framework for Teachers
HQT	High-Quality Teacher
IT	International Teacher
IMT	International Mathematics Teacher
ISMT	International Secondary Mathematics Teacher
NCLB	No Child Left Behind
RTTT	Race to the Top
SGP	Student Growth Percentile
SLO	Student Learning Objectives
STEM	Science, Technology, Engineering, and Mathematics
TAPS	Teacher Assessment on Performance Standards
TEM	Teacher Effectiveness Measure
TKES	Teacher Keys Effectiveness System

CHAPTER 1

THE PROBLEM AND ITS BACKGROUND

In this chapter, I present the problem under research, a brief background of how the problem developed, the purpose of the study, and the research questions to be explored. Then I provide the significance of the study and the theoretical frameworks to be used within the study. I conclude the chapter with short summaries of the remaining chapters and closing thoughts from a personal perspective.

Introduction

In the past decade, there has been a nationwide crisis of teacher shortages as schools are struggling to fill positions specifically in mathematics, science, and special education (Sutcher, Darling-Hammond, & Carver-Thomas, 2019). In 2018, The Learning Policy Institute estimated a shortage of over 112,000 teachers in the United States and predicted this trend will continue. Research in the United States has shown some of the factors contributing to teacher shortages are low teacher retention rates due to low salaries, lack of support, lack of student motivation, and student discipline problems as well as a decrease in teacher preparation programs (Cross, 2016; Aragon, 2016). To address these teacher shortages, states and localities across the United States, as well as federal agencies, have devised several creative solutions such as increasing teacher pay, creating alternative certification programs, and hiring international teachers (ITs) (Gross, 2018).

State task forces saw an opportunity fill this teacher shortage by tapping into the talents and experience of millions of immigrant[1] professionals who hold a bachelor's degree or higher

[1] The term *immigrant* oversimplifies and generalizes the experiences of individuals who have moved to a new country, and in the United States the term can carry stigmatizing connotations, negative stereotypes, and biases. It is important therefore to use terminology that respects the diversity of the people who migrate to a new country and their lived experiences. For my study, the terms *non-native, newcomer, international teacher, international student,*

earned outside the United States by recruiting ITs to fill teacher vacancies (Batalova, Fix, & Bachmeir, 2016). By tapping into the highly educated and skilled migrant pool with prospects of higher wages, greater access to resources, and opportunities, the United States is perpetuating the *brain drain* phenomenon. Brain drain is the unilateral migration of highly skilled individuals from a country to another country. This one-directional flow of highly skilled individuals creates an unbalanced system in which the scarcity of human capital increases for one country while the abundance of human capital of the receiving country grows. Docquier and Rapoport (2012) reviewed four decades of economics research on brain drain and concluded that the migration of highly skilled newcomers is contributing to the growing inequality across countries. As teachers are recruited from South Africa, countries in the Caribbean, India and other countries, this unilateral migration leads to significant teacher losses and has a negative effect for those countries (Bense, 2016). When qualified teachers migrate from a country, it is a compounding loss because it depletes human capital from the country, creates gaps and shortages in the education sector of the country, and in turn affects the country's potential for future economic growth and their capacity for innovation (Bense, 2016). Of teachers who migrate to the United States, 57% have a master's, professional, or doctoral degree (Furuya et al., 2019). As one of the top countries actively recruiting and receiving international students and teachers, the United States is undeniably a contributor to the brain drain phenomenon.

Overall, ITs represent about 8% of the teachers or about 300,000 teachers in the United States, with 46% serving as postsecondary teachers (Furuya et al, 2019; Startz, 2017). Between the 5-year period of 2010 and 2015 the percentage of ITs increased (see Figure 1) more than any

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and *international families* are used for individuals (and their families) not born in the United States but reside in the country.

10-year period since the 1960s (Seah, 2018). In a workforce of 3.7 million teachers, this increase equates to an additional 52,000 ITs hired over the 5-year period.

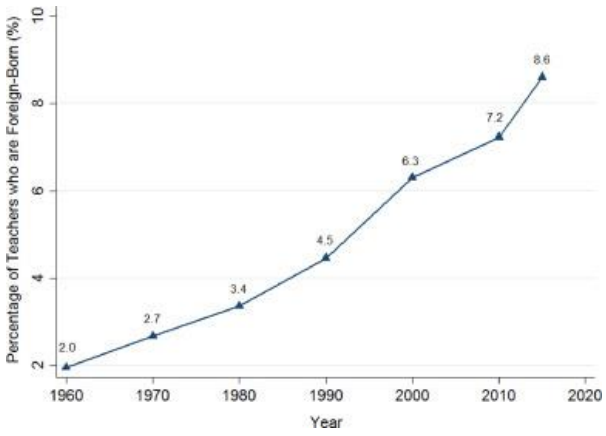

Figure 1. Percentage of US teachers who are non-native from 1960–2015. From "Immigrant educators and students' academic achievement" by K. K. Seah 2018, *Labour Economics, 51*, p. 153.

In spite of the increase in the number of ITs in the United States, limited research exists that examines their experiences in the classroom and their influence on student achievement (Hutchison 2005; Dunn, 2013). Previous research on international teachers have concentrated on their socialization and cultural adaptation (Deters, 2009; Flores, 2003), experiences gaining entry into a new country and obtaining their teacher certification (Cruickshank, 2004; Ross, 2003), the difficulties they face in cross-cultural communication and pedagogy (Hutchison, 2006; Hutchison et al., 2005), as well as their experiences with mentorship (Hutchison & Jazzar, 2007; Peeler & Jane, 2005). The focus of this study was to address gaps in literature by conducting research on the lived experiences of ITs who have been "successful" (subsequently defined) in grades 9–12 mathematics classrooms in the United States.

I therefore broaden existing studies on ITs with a targeted focus on international secondary mathematics teachers (ISMTs) who have been successful in the United States, investigating their lived experiences. Specifically, I evaluate how these ISMTs have adapted

their teaching practices to a US school culture, and also their unique influence on student learning. By investigating the lived experiences of ISMTs, I sought to understand how they negotiated their teaching practices based on their schooling and/or teaching experiences in their country of birth and the United States to become successful teachers. ISMTs here were defined as teachers who have taught outside of the United States, particularly in their country of birth, and are currently teaching or have taught secondary mathematics in the United States. Successful ISMTs were identified by using Teacher Assessment on Performance Standards (TAPS) and Student Growth that both contribute to their overall Teacher Effectiveness Measure (TEM; see Appendix A). TAPS is a component of Teacher Keys Effectiveness System (TKES; see Appendix B) that scores teachers across ten quality performance standards. Student growth is measured using two different measures: Student Learning Objectives (SLOs) for teachers of non-test subjects and Student Growth Percentile (SGP) for teachers who teach a course that takes the annual state assessment. Based on their scores, teachers can be rated as exemplary, proficient, needs development, or ineffective (see Figure 2). For this study, only ISMTs who were rated exemplary or proficient on their TEM were selected as study participants.

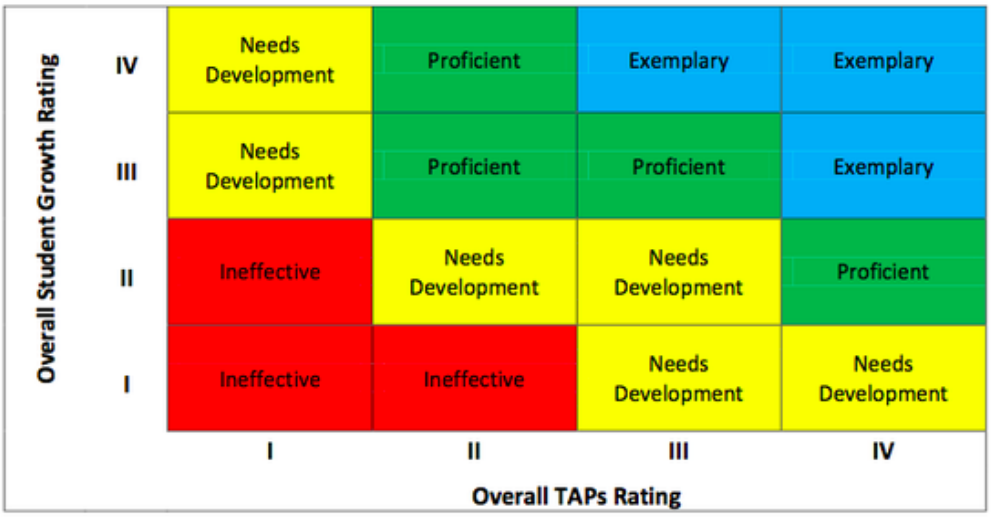

Figure 2. Teacher Effectiveness Measure Scoring Guide (Georgia Department of Education, see www.gadoe.org).

Although TKES was used as an instrument to identify successful ISMTs for this study, I address some of the weaknesses and limitations of TKES as it pertains to ITs. Anderson and Taner's study (2022) warned that when teacher effectiveness is outcome-driven there is a risk of missing valuable assets in teachers. This limitation appears in TKES because of the scope of its vision. An evaluation instrument such as TKES creates a prototypical teacher, a teacher that exhibits the desired standards based on mainstream cultural norms within TKES. For an IT, TKES is designed for a mainstream culture, a culture that ITs are yet to understand and adapt to. Furthermore, TKES does not explicitly assign value to the experiential knowledge or cultural wealth of international teachers. TKES scope of vision is also limited by the time devoted to each observation. When teachers are evaluated by administrators using TKES, the outcome is typically a result of two classroom observations lasting 10–15 minutes and a formal evaluation. Considering that a teacher teaches four or more classes each day that consists of different students, subject matter, class sizes, and so on, one can easily see that a classroom observation affords a tiny snapshot of the teacher. The limited window of time of a classroom observation does not provide an adequate opportunity for evaluators to capture the assets of ITs especially when the primary focus of the observation is to search for the 10 standards specified by TKES. These standards fail to highlight (i.e., include) the unique assets ISMTs bring to the classroom and most likely fault ITs for standards they are still learning and developing in a new culture. When school structures and administrators focus on the perceived "weaknesses" of ITs such as their accent, content knowledge, familiarity with the school system, and so on, they are reinforcing the image of the prototypical teacher and highlighting the change (i.e., assimilation) required for minorities to succeed within the educational system (Cho, 2010).

The specific selection criteria for the ISMTs in this study were that they are currently teaching or have taught secondary mathematics both outside and inside the United States, reside in the state of Georgia, and have lived in the United States for 3 or more years. By limiting participants to the state of Georgia, there was uniformity in terms of state standards and assessments. Requiring the participants to have lived in the United States for 3 or more years took into consideration the theorized time period it takes newcomers to transition through the stages of "cultural shock" (Winkleman, 1994). Culture shock, according to Winkleman, is a natural process newcomers experience in a new mainstream culture categorized by the following four stages:

1. Honeymoon stage where they are excited and have positive expectations for their new move.
2. Crisis stage when they do not understand aspects of the new culture which cause negative experiences and reactions.
3. Adjustment stage where they begin to get a sense of familiarity and comfortability with the mainstream culture and are learning how to adapt effectively.
4. Adaptation stage when they can successfully manage the new culture and resolve problems that arise (Winkleman, 1994).

Background

ITs are not new to classrooms in the United States, especially in the postsecondary education sector; however, the recent growth ITs across all grade levels is a fairly new phenomenon (Gross, 2018). The growth in hiring ITs is a result of efforts to rectify two issues plaguing education: (a) the increasing number of teacher shortages and (b) the increasing need of "high-quality" teachers in schools (HQTs) (Dunn, 2013). Some of the factors that contribute to

teacher shortages in the United States are highlighted in the findings of the Teaching and Learning International Survey in 2019 published by the US National Center for Education Statistics (NCES). The survey found that teachers in the United States worked on average 46 hours a week and taught more hours than educators in other parts of the world except for two other countries, Japan and Kazakhstan. These findings are noteworthy because the survey included more than 250,000 school leaders and grades 7–9 teachers from 48 countries. Apart from the workload, the survey identified that teachers in the United States perceived that there is a lack of value for their profession unlike their compatriots in other countries. The extended workhours and the perceived lack of value are a part of the reasons school districts experience teachers going on strike and/or leaving the profession (Schleicher, 2019). Furthermore, as teachers leave the profession and fewer professionals enter the field, teacher shortages increase, thus the driving the increase in the employment of ITs (Sutcher, Darling-Hammond, & Carver-Thomas, 2019).

The second issue contributing to the increase of ITs in the United States is the requirement to fill classrooms with HQTs. Reforms efforts and polices such as No Child Left Behind (NCLB)[2] and Race to the Top (RTTT)[3] have mandated schools increase HQTs in classrooms. HQTs according to these reform efforts and policies are defined as a teacher who has earned a bachelor's degree, a full state certification, and demonstrated competency in the core

[2] In 2001, the Bush Administration passed the NCLB Act intended to eliminate the "achievement gap" by race, ethinicity, language, and special education status. All elementary and middle schools gave mandated yearly tests and NCLB required schools to raise their achievement each year for 8 years in math and reading. The objective was for all children from all racial and ethnic groups to attain 100% proficiency in math and reading (Guilfoyle, 2006).

[3] In 2009, the Obama Administration introduced the $4.35 billion education reform grant RTTT to promote school improvement on the state and local level. The four key areas of reform were: (a) adopting standards and assessments that prepare students to succeed in college and the workplace and to compete in the global economy; (b) building data systems that measure student growth and success and that inform teachers and principals about how they can improve instruction; (c) recruiting, developing, rewarding, and retaining effective teachers and principals, especially where they are needed most; and (d) turning around the lowest-achieving schools (Weiss, 2013).

academic subject they teach by passing the state licensing exam (United States Department of Education [USDOE], 2010). Strategies to bring more HQTs into classrooms have included financial incentives, reduced certification requirements, and recruitment of nontraditional teaching populations such as industry professionals and ITs (Dunn, 2013). Noteworthy, ITs tend to be highly educated, in fact, 57% have a master's, professional, and/or doctoral degree, compared to just 49% of US native-born teachers (Furuya et al, 2019). With ITs being highly educated, they can become HQTs as well as unique assets to their new schools and communities.

Eligibility Requirements to Become an International Teacher

Although hiring ITs can remedy both teacher shortages and the demand for HQTs, ITs must complete the requirements to teach in another country. The process of getting ITs into the classroom in the United States has become fairly straightforward. There are two primary ways that an IT can gain eligibility to teach in the United States: obtaining a H-1B work visa or a J-1 exchange visa. The H1-B visa initiative was established to permit organizations in the United States to hire workers from other countries for positions that require at least a bachelor's degree in a particular field (or an equivalent level of education). The period of stay on a H-1B visa for teachers is 3 years, which can be extended an additional 3 years, for a total of 6 years. For a US school employer to hire an IT with a H-1B visa, the teacher must meet the following criteria: (a) possess at least a bachelor's degree or a comparable degree from another country (teachers lacking a bachelor's degree can count three years of teaching experience as equal to one year of higher education); (b) have the necessary teaching certification for the area in which they will be employed (should they be unable to acquire certification prior to arrival in the United States, they are required to present proof to the immigration authorities that they fulfill all the qualifications

needed for certification); and (c) obtain a completed Department of Labor – Labor Condition Application (LCA) from a potential employer.

The other way ITs can be eligible to teach in the United States is to apply for the J-1 visa, which is a cultural exchange visa. Under the J-1 visa, ITs can teach in an accredited public or private school for a maximum of 3 years. They however may apply for an extension providing an additional 1 to 2 years of teaching. Once the J-1 visa expires, the international teacher must return to their native country.[4] To qualify for a J-1 visa, the requirements for ITs are (a) teaching at the time of application or have at least two years of experience teaching full-time within the past 8 years or (b) satisfying the qualifications for teaching in their native country and possessing a degree equivalent to a US bachelor's degree in education or in an academic subject they intend to teach or directly related to their intended teaching subject.

To secure visas, employment, and training, recruitment agencies are often used by school districts and ITs. The second largest teachers' union, the American Federation of Teachers (AFT), reported there are over thirty international recruiting agencies in the United States. The largest recruiting agency is the Visiting International Faculty; they recruit ITs using J-1 visas (AFT, 2009). The US State Department reported that the number of ITs on a J-1 visa has more than doubled since 2010, from 1,197 to 2,867. With more international recruiting agencies emerging, making the pathway for getting ITs in the classroom more convenient, it is not surprising that schools across the nation are experiencing a growth in the employment of ITs.

[4] Throughout this study, I use the phrases *native country* and *country of enculturation* interchangeably to denote an individual's country of birth. I avoid (where possible) the phrase *home country* to trouble the belief that ITs possess only a single country in which they might call home.

Problem Statement and Research Questions

ITs are increasing in numbers nationwide as federal agencies and state governments are providing incentives to reduce teacher shortages and increase the number HQTs in classrooms. With data supporting an increasing trend of employing ITs in US classrooms, currently there is dearth of research conducted on their lived experiences in classrooms, their influence on student learning, and their paths to becoming successful teachers. Dunn (2013) recognized the lack of knowledge of ITs' lived experiences in classroom, stating, "we know very little about what happens during their recruitment, transition, and orientation process, and even less about what happens in their classrooms as they work to engage students" (p. 5). Collins and Reid (2012) also identified the lack of research on the recruitment of ITs, claiming that "little attention has been given to the global circulation of educational professionals including teachers and university lecturers" (p. 38). Studies such as Cruickshank's (2004) have explored how ITs can become successful teachers by reflecting on their experiences in their native country and adjusting to the contexts of the host country. But Cruickshank's study, and other similar such studies (see, e.g., Deters, 2006; Remennick, 2002), have not discussed the lived experiences of ITs who are identified as successful in their classrooms. Most current studies of ITs (see, e.g., Alberts 2008; Bense, 2014; Jhagroo, 2016; Schmidt, 2010) focus on broad overviews of ITs' transition and acculturation processes into classrooms rather than deep explorations into their teaching practices and effectiveness within classrooms. A gap in literature existed that required an exploration of international teachers' teaching experiences, how they negotiate their teaching practices in the classroom, and how they become successful teachers influencing student learning. By conducting this narrative inquiry study (Connelly & Clandinin, 1990), theoretically and conceptually framed by cultural fusion theory (Croucher & Kramer, 2017) and Danielson's

(2007, 2013) framework for teaching (FfT) conceptual model and instrument, respectively, I aimed to assist in filling this gap in literature by specifically investigating successful ISMTs lived experiences and their influence on student learning.

Participants in the study included men and women ISMTs from various countries who are currently teaching or have taught secondary mathematics in a public or private school both outside and inside the United States. Data collection included a demographic questionnaire (completed prior to the interviews), participants' TKES evaluations, three individual 60- to 90-minute, semi-structured interviews, and one 90-minute semi-structured group interview. These data collection methods provided not only insight into the ITs lived experiences but also their influence on student learning. Two questions guided this study:

1. How do ISMTs negotiate their teaching practices relative to their teaching (and learning) experiences in their native country to become successful teachers in the United States?
2. How do ISMTs influence student learning in classrooms?

Study Significance and Chapter Summaries

Although research on international mathematics teachers exists, a majority of the research studies were conducted outside the United States (see Cruickshank, 2004; Peeler & Jane, 2005). Lee (2010) confirmed that in comparison to other countries, the United States has not been active in generating research on ITs. Furthermore, existing research primarily focus on the obstacles and challenges ITs face. More research is needed that centers on the successful teaching experiences of ITs in US schools. Too much of the current research on ITs focuses either on the discrimination and challenges experienced by ITs or on initial teacher education and professional development preparation programs to recruit more prospective ITs (see Milner, 2003; Redmond,

Clinedinst, & O'Brien, 2000; Ross, 2003). In this study, I identified how ISMTs negotiate their teaching practices to become successful teachers in the United States. Martineau and Vallerand (2007) suggested that school boards and schools that hire ITs would benefit from establishing explicit procedures for their social and professional integration to maximize the contributions of ITs and thereby enhancing student success. Consequently, I provide useful implications for ITs, native-born teachers, school administrators, and school boards. For ITs and native-born teachers, analysis of the findings from this study outline strategies employed by ISMTs that led to their success in the classroom. For administrators who have or will have ITs in their schools, analysis of the findings can build on administrators understanding of the tools and resources ITs bring to the classroom as well as the tools and resources they need to be successful. Investigating pathways to success can assist administrators in creating the necessary working environment for ITs to develop and reach their full potential within the school. For school boards, analysis of the findings shed light on mentoring and professional development programs needed for arriving and working ITs within their district.

In Chapter 2, I provide a comprehensive review of literature on ITs. The review examines current research on international teachers' experiences in non-native schools, how they adapt their teaching practices, the assets they possess, and their influence on student learning. In Chapter 3, I discuss the theoretical and conceptual frameworks employed, why the frameworks were selected for my study, and how they were used to answer the research questions. Specifically, I use Danielson's (2013, 2022) framework to identify teaching practices negotiated by ISMTs to become successful teachers and how the ISMTs influenced student learning. I also utilized cultural fusion theory (see Croucher & Kramer, 2017) to describe how ISMTs transformed their teaching practices in US classrooms. In Chapter 4, I provide a brief overview

of narrative inquiry, how narrative inquiry has been employed in mathematics education research, and an outline of the research design for my study. I conclude the chapter by discussing some limitations of narrative inquiry. Within Chapter 5, I explore cross-cultural conflicts and answer the research questions by detailing the teaching practices negotiated by the ISMTs, their transformations according to CFT, and their influence on student learning based on the data collected. And lastly, in Chapter 6, I summarize the study, examine the limitations and delimitations of the study, offer implications and recommendations for future research.

Closing Thoughts – A Personal Perspective

In qualitative research, the researcher's role is participatory. The researcher in some sense is the primary instrument to collect and analyze data. Therefore, a researcher's bias(es) may influence the study's outcome (Clark & Vealé, 2018). By being transparent here, I hope to bring further credibility to the study. I attempt to explain my positionality and account for how my interests and biases might have affected this study and its findings.

Personally, I came to the United States in 1989 at the age of 7 as a newcomer from Nigeria. My father had acquired a job working in the chemistry department at Georgetown University, which allowed my family to move to the United States. I entered the public school system in the state of Maryland initially as a first grader but tested out of first grade into the third grade at the request of my parents. During this first year in the United States, it was made apparent to me how Africans (i.e., Black people from the continent) were viewed. I was taunted for being African, for how I dressed, how I wore my hair, and the food I ate. Students would ask me, did I live in a hut, were there lions and elephants in our village, did we shower? Little did they know we lived in a three-bedroom home with electricity and running water, my father drove a Mercedes, and we had a farm and grew our own produce. Their perception, although limited by

media, spoke volumes and as a child I was disappointed and at times embarrassed by the perception that Africa was viewed as a poor wildlife 'country' with uneducated citizens. I struggled with my identity, how I was viewed, and who I was. I did not want to be associated with the Africa portrayed by media and yet I wanted to prove that Africans were more than the poor starving children who lived in huts with their uneducated parents. Maryland was the beginning of my cognizance of cultural differences, clashing perspectives, and where I began negotiating to find my place in the United States.

A year later, my family moved to Clarkston, Georgia, a city where more than half of the population were non-US citizens. Clarkston was where I initially became aware of the differences in the classroom environment in the United States compared to Nigeria. Teachers in Nigeria were authority figures and students were non-disruptive and driven to do their best. From my perspective, students in my US classroom were disruptive and had little to no respect for the teacher nor were they driven to succeed. In the entire class, it appeared that an Asian boy and I were the only students who consistently worked diligently while most others were socializing. The two of us were always in competition with one another and received the highest scores on assessments.

Two years after moving to Clarkston, my family bought a house and settled in Stone Mountain, Georgia, a predominately white community that was quickly shifting demographically (i.e., white flight)[5]. Because I was accelerated academically, I began the sixth grade in Stone Mountain as a 10-year-old. I knew I was different from other students in the United States early

[5] "White flight" is a term that emerged in the mid-20th century, particularly in the United States, to describe the phenomenon where white residents moved away from urban areas that were increasingly being populated by minority groups, especially African Americans. The arrival of black residents into traditionally white neighborhoods often led to racial tensions. Many white residents perceived this demographic change as a threat to property values and the social fabric of their communities.

on, not only because of my name which teachers struggled to pronounce or the fact I was younger than my peers, but also because the competitiveness indoctrinated in me as a child raised in Nigeria was evident in everything I did in school. I wanted to win, and I wanted to be the best because as a child growing up in Nigeria, you were always compared to top achieving students and singled out if you were not achieving. I was the student who never missed a day of school, was on time to my classes, never got in trouble, and completed all my work immediately. The competitive nature instilled in me led to graduating at the top of my high school class and attending Duke University, one of the top universities in the nation, graduating with a Bachelor of Arts in Economics in 2003. Presently, I connect this competitiveness not only to how I was raised in Nigeria but also to how education was viewed in Nigeria.

Education in Nigeria was the tool to open doors that led to opportunities that could lead to a good job and an improvement in socioeconomic status. Because education was viewed differently, students behaved differently, and teachers were esteemed in Nigeria. In the United States however education was not and is not viewed the same way because there were and are more tools that could open doors for success and opportunities. When my father was teaching in Maryland and Georgia, he also experienced differences in the classroom compared to his teaching experience Nigeria. In my father's opinion, students in the United States lacked the fundamentals they needed at the university level and yet most of his students did not have a desire to learn. This experience was a vast difference from his experience in Nigeria where his students were trying to "soak up information like a sponge." Although, my father never discussed having to change his teaching practices, I am sure he did make changes as he taught over the years to adapt to the cultural differences he experienced in his classroom because failure was never an option in his book, and he strived to be an excellent professor.

I followed in my father's footsteps, and I am working as a part-time instructor of undergraduate mathematics at a local university. I purposely work part-time because I am a wife and a mother of two young children to whom I devote my time and nurture to. Prior to my university position, I taught grades 9–12 mathematics from 2006 to 2015. Across my years of teaching, I noticed distinctions in my experiences teaching in comparison to my US colleagues. Being Nigerian had always made me view things differently growing up and even in the classroom as a teacher I held different perspectives relative to my US colleagues. My viewpoint of education and my approach to teaching had been influenced by my Nigerian upbringing and was still evident in my classroom.

I am cognizant of international teachers' teaching experiences in the US classroom because of my father's experiences teaching, my own experiences as a student and an educator, and stories shared with me by other colleagues born outside the United States. My father was employed because of a fellow international teacher who assisted my father in obtaining a position at his place of employment. As brilliant as my father was, teaching in a new country was a challenge because of the differences that exist between Nigeria and the United States. Because of my father, I empathize with the discrimination ITs face obtaining and maintaining a job because of their lack of understanding of the cultural norms in a new country and being perceived as an outsider. As a researcher, I am aware that ITs in a non-native school have different experiences than native-born teachers and they must learn to negotiate their teaching practices to become effective. I am also aware that there are ITs who have adapted to their non-native school setting and are successful teachers and I want to capitalize on their stories to highlight approaches that foster the success of ITs in the United States.

CHAPTER 2

LITERATURE REVIEW

In this chapter, I present a review of prior literature on international teachers (ITs) that aimed to address the guiding research questions of this study:

1. How do international secondary mathematics teachers (ISMTs) negotiate their teaching practices relative to their teaching (and learning) experiences in their native country to become successful teachers in the United States?
2. How do ISMTs influence student learning in classrooms?

Notable contributions in literature with respect to international teachers center on two major themes: (a) the challenges of integration into a non-native school, and (b) international teachers as assets (Cho, 2010; Collins & Reid, 2012; Schmidt, 2010; Sleeter & Milner, 2011). I organized the review into two sections that expounds on both themes.

In this first section, Integration Challenges, I focus on international teachers' teaching experiences in a non-native school. I delve into ITs integration challenges with findings on how they negotiate their teaching practices in terms of content and instruction, cross-cultural differences, discrimination, and lack of support. The primary purpose of the first section is to highlight findings within literature that guided the first research question of how international mathematics teachers negotiate their teaching practices relative to their teaching (and learning) experiences in their native country to become successful teachers in the United States. In the second section, International Teachers as Assets, I focus on assets of ITs found in literature and explore how these assets can influence student learning. This section of the chapter guided the second research question of how ISMTs influence student learning. I conclude the chapter with closing thoughts from a personal perspective.

Integration Challenges

In their cross-national study, Sleeter and Milner (2011) stated ITs may experience challenges during their integration into a non-native school. Research on ITs has shown that they encounter personal, professional, and academic challenges during their process of integrating into a new country (Biegen, 2018; Hutchison, 2015; Lee, 2010). Although ITs' teacher effectiveness is hinged on the sum of these challenges, I focus here on their professional challenges. The aim of this study was to reveal how ISMTs negotiated their teaching practices to be successful teachers through the stories of their experiences in non-native schools. Keeping the scope on professional challenges therefore draws attention to a key component of this research study: to identify the challenges ISMTs encounter in their workplace and how they adapt to these challenges. It is also important to note in terms of teacher effectiveness that success is not a transferable outcome. In other words, a teacher who is successful at one school is not guaranteed to be successful at any other school (Jackson, 2013). This statement is even more evident with ITs because of the unique set of professional challenges they experience that are excluded from native teachers' experiences. The professional challenges discussed in literature experienced by ITs during their integration process in a non-native school include, but are not limited to, understanding the content and the type of instruction promoted within their new school, addressing the cultural differences that exists between their native school climate and new school climate, experiencing discrimination on multiple fronts, and lacking support from administrators and colleagues (Hutchison, 2015; Mercado & Trumbull, 2018; Seah, 2018). Nevertheless, despite these challenges, ITs do become successful teachers.

Understanding Content and Instruction

There are a wide range of adjustments international teachers need to make in a non-native school setting to ensure they will become successful at a school. In addition to the task of adapting to the school, students, and social environment, that any teacher faces in a new school, ITs in the United States have to adapt to new approaches to content and pedagogy and to a completely different instructional setting (Johnson & Kardos, 2002). The material covered in mathematics curricula and the methods of teaching and learning this subject differ greatly from one country to another (Andrews, 2007, 2014; Bishop, 1994; Campbell & Kyriakides, 2000). Makonye's (2017) study focused on Zimbabwean international mathematics teachers (IMTs) in South Africa. All the IMTs in Makonye's study agreed that South African mathematics curriculum in comparison to Zimbabwe's mathematics curriculum was limited in its content coverage of mathematics. The IMTs argued that the mathematics curriculum in South Africa was more focused on understanding concepts, in contrast to Zimbabwe's curriculum, which prioritized procedural knowledge, often stressing the memorization and correct application of formulas. The same comparison was made in Seah's (2002) narrative inquiry study of IMTs in Australia. In the IMTs' native country, students' understanding of mathematical concepts relied heavily on procedural knowledge that was developed through drills and rote learning of memorizing facts and procedures. Whereas, in Australia, students' understanding of mathematical concepts were fostered through problem solving and using investigative problems to promote conceptual knowledge. An IMT in Seah's study explained that conceptual knowledge was likewise promoted in the textbook chosen by the school. Each chapter of the mathematics textbook began with an investigative problem and then the content of the chapter would be organized by the context of the problem. The IMT routinely used drills and problem solving in facilitating student understanding and only after he had taught the relevant content would he

present the investigative problem in the textbook. Presenting investigative problems after relevant content was taught was the IMT's method of negotiating teaching practices based on the content.

Another adjustment revealed in literature that IMTs typically have to make is a shift in their pedagogical approach. Pedagogy refers to the method(s) an educator uses to teach the content that influences student learning. The pedagogical approach a teacher implements in the classroom is based on their belief about how learning takes place. Therefore, pedagogy is a relationship between learning techniques and culture. There are a variety of pedagogical approaches such as open-ended instruction, inquiry learning, and differentiated learning, but some strategies are more effective than others especially in different countries (see Clarke et al, 2006; Hiebert, 2003; Jhagroo, 2016; Zhang, 2021)

In Jhagroo's study (2016) of seven international teachers in New Zealand originally from Japan, China, Fiji, and India, an IT from India stated, "teaching in India was more about the teacher rather than the students" (p. 55); an IT from Japan stated, "teaching is almost like lecturing, teachers are always talking in front and students are writing down and listening" (p. 55). Both ITs in the study were accustomed to a teacher-centered classroom. Often, ITs have to switch from a traditional teacher-centered learning environment where they are the source of knowledge to a student-centered classroom where they are viewed as a facilitator of knowledge (Niyubahwe, Mukamurera, & Jutras, 2013). Additionally, ITs had to negotiate the questioning styles they used while teaching. In Seah's (2002) study, IMTs recognized that the questioning style they used in their native country did not work with students in Australia and they adapted by changing their approach. The IMTs in Seah's study acknowledged they were accustomed to

asking individual student questions and amended their approach by asking more open-ended questions and posing questions to the whole class.

Another finding in Seah's (2002) study was that rather than eliminating the content and instructional differences found in their non-native school, IMTs engaged in a cultural interaction to reestablish a new norm for themselves and their students. The reestablishment of a new norm supports cultural fusion theory (CFT). As discussed in detail in Chapter 3, CFT is a process in which newcomers in a new country adopt elements of the mainstream culture while maintaining elements of their native identity to create a fusion incorporating both cultures.

Addressing Cross-Cultural Differences

Teaching cannot be absolved from culture. The subject matter and pedagogical methods used in teaching reflect cultural beliefs related to knowledge, the manner of its transmission, the expected action of all participants in the educational process, and the organizational structure of schools (Mercado & Trumbull, 2018). For this reason, in classrooms in every culture, both teachers and students have an expectation about how a typical classroom operates. Consequently, when the teacher and students are from different countries with different cultures, these expectations lead to cross-cultural conflicts or differences in classroom behaviors and attitudes that can create a space for misperceptions (Zhao, 2007). The unexpected attitudes and feelings that the teacher and student(s) feel toward one another are due to the differences in their cultural norms that are underlying their behaviors. Unfortunately, the lack of awareness of these expectations and feelings can create misunderstandings and miscommunications that lead to frustration for all parties involved. The classroom is a space where communication between teachers and students is vital to student learning. Therefore, when an IT begins teaching in a non-

native school, awareness and management of cross-cultural differences is an important element of their integration process to become a successful teacher (Mercado & Trumbull, 2018).

It is also important to note that an IT's cultural identity does play a role in the cross-cultural conflicts experienced in the classroom. Cultural identities are socially constructed standards that indoctrinates a way of being and include beliefs for social conduct and action (Yep, 2002). A person's cultural identity contributes to how they view themselves and how they relate to other people. ITs' view of education, classroom practices, values, and beliefs are greatly tied into the culture of their native country (Bascia, 1996; Jhagroo, 2016). Because one's cultural identity is reinforced since birth, it is not easily changed which poses a challenge in the integration process for ITs in their non-native classrooms and schools (Schwartz et al., 2010). Mercado and Trumbull (2018) conducted a study on 12 novice international high school mathematics and science teachers born in Asia and Latin America who began teaching in California and found these teachers experienced various cross-cultural conflicts. The potential areas of cultural conflicts for international teachers in Mercado and Trumbull's study were identified as teacher and student responsibility, parents' responsibility, ways of regarding authority, and classroom management. The first potential area explores the differences across cultures when considering what teachers should take responsibility for versus the student's accountability. For example, in the United States, student learning is mostly agreed upon to be the responsibility of the teacher (Arendt & Kilcher, 2010). ITs in Mercado and Trumbull's study, however, expressed that in their native country a teacher is not at-fault if a student was failing, because culture dictates that the student did not own the responsibility of their own education. On the contrary, in the United States, if a student is failing, then the teacher is held accountable

for the student failing and it is the teacher's responsibility to make adjustments and/or concessions that will provide an opportunity for the student to be successful.

Parents' responsibility is also another area that is different across countries. Compared to the United States, eastern countries have an extremely high regard for education that is apparent in the heightened parental involvement in their children's education (Cheung & Pomerantz, 2011; Kim, 2005). It is not uncommon for eastern parents to attend their children's school to observe their child's work habits (Haynes & Chalker, 1997). Furthermore, in eastern countries, it is common for a child to have a daily scheduled homework period where the parent sits with the child and they work together (Henderson et al., 1999; Kim, 2005). Because parents are highly involved in their children's academic performance, ITs in Mercado and Trumbull (2018) study noted it is the parent's responsibility if the child is failing. For instance, in the United States, teachers must contact the parent if a child is failing their class. In China, this responsibility does not lie on the teacher, it is the parent's responsibility to call the teacher.

Student behavior is another area that parent responsibility differs in across cultural groups. An IT from Mexico communicated that in her native country, parents unconditionally supported teachers but in the United States, parents were not as supportive because again the parents did not view their child's behavior or success in the classroom as their own responsibility (Mercado & Trumbull, 2018). When a child misbehaves in a school setting, parents in the United States tend to scrutinize the school's or the teacher's ability to manage and maintain discipline in the classroom. Conversely, eastern parents will support the teacher by working with the teacher to address the child's misbehavior (Haynes & Chalker, 1997). Whereas, in Mercado and Trumbull study, several ITs complained that parents did not support them as the figure of

authority in the classroom and the parents often sided with their child when behavioral or academic issues arose.

Unlike the United States, in studies of eastern cultures, teachers hold a superior position (Darling-Hammond, 2017). Therefore, students' lack of respect for authority is an area that creates cultural conflicts for ITs in the United States. In their native countries, ITs reported that respect is given purely on hierarchy. Meaning, the teacher does not have to demand respect from their students but were automatically given respect as a figure of authority (Nguyen, 2008). Parents in eastern countries also tend to yield their authority to teachers in order for their child to put in their best efforts in school as they do at home (Nguyen, 2008; Sorensen, 1994). ITs' experiences of respect in the United States however are that respect must be earned by the teacher in term of their students, administrators, and parents (Nguyen, 2008). The cultural conflict exhibited in how respect is given to a teacher as the authority figure in a classroom is also intertwined with an IT's ability to manage their classrooms.

Aforementioned, the last area of cultural conflict for ITs when teaching in a non-native school is classroom management. Mercado and Trumbull (2018) defined classroom management as "steps taken by the teacher to maintain order and keep students engaged in learning" (p. 48). ITs often find themselves placed in disadvantaged, under resourced schools where higher teacher vacancies exists and on top of that ITs are most often assigned the difficult classes their colleagues would avoid (Garcia & Weiss, 2019; Seah, 2018). Classroom management therefore is a huge hurdle for most ITs as they work to gain the respect and attention of their students. ITs' effectiveness in the classroom depends on how they can instill discipline and students' perception of their competency and power. For ITs who grew up in a hierarchical school culture,

when they have no hierarchical status in their new school as in the United States, they struggle to shift their mode of classroom management (Niyubahwe, Mukamurera, & Jutras, 2013).

As previously mentioned, perceived teacher responsibility, student responsibility, parent responsibility, and respect for authority are all potential areas for cultural conflict in the classroom. Cumulatively, these potential areas also play a part in ITs' experiences with classroom management in a non-native school. How respect for authority plays a role in classroom management is seen in Oriaro's (2007) study about Kenyan ITs in the United States. ITs in the study explained that in Kenya it was expected that their students would be quiet and respectful to their teachers while the mainstream US school culture encouraged freedom of speech, discussion, and equality attributes. In Mercado and Trumbull's (2018) study, ITs noted that the need for classroom management was unnecessary in their native country because student responsibility, parent responsibility, and/or respect for authority were taken more seriously. To overcome these cultural differences in the United States, findings from Mercado and Trumbull's study found that ITs adjusted to their non-native classroom by giving clear rules, procedures, routines, and consequences to their students.

According to Peeler and Jane (2005), when ITs arrive in a new country, they will always lack culturally specific knowledge that will ultimately lead to cultural conflicts. Accommodating for the lack of culturally specific knowledge, requires ITs to acquire new knowledge that will enable them to understand the elements of teaching and learning in their non-native school and to appropriately apply this new knowledge to help them be successful. In addition to understanding the elements of teaching and learning, Peeler and Jane emphasized that if the rationale for new practices is not evident to an IT, they will not likely adjust their familiar teaching practices. To assist ITs in understanding the rationale for new practices, Mercado and Trumbull's (2018)

suggested pairing ITs with a mentor as an essential factor in limiting cultural conflicts. Through peer observations and/or collaboration with mentors, ITs gain access to resources and strategies that are effective within their non-native school thus generating the rationale for making changes. Other studies have also supported mentorships for ITs and observing other teachers to increase cultural awareness and decrease cultural conflicts (Deters, 2006; Jhagroo, 2016; Peeler & Jane, 2005).

Experiencing Discrimination

A professional challenge within literature experienced by ITs is discrimination in their non-native schools. The ITs in Sleeter and Milner's (2011) study experienced discrimination in several different forms but a common discrimination was negative responses to their accents. The way a person speaks, and their accent is a significant part of any social interaction. An accent embodies an important part of an individual's social identity and meaningful societal information (Gluszek, & Dovidio, 2010). A person's speech and accent can produce social information about their ethnicity, social status, intelligence, and academic success. In fact, studies have shown that linguistic stereotyping is not unusual, and that listeners constantly make judgements about speakers who are inaccurately linked to the way that they speak (Rubin, 2012). An international accent is the most noticeable characteristic of newcomers that identifies and potentially stigmatizes them as individuals who were not born in the country (Derwing & Munro, 2009; Moyer, 2004). An international accent means one is not native born and by extension the person does not have the language fluency of a native-born speaker, regardless of one's actual competence (Lindemann, 2002). Lack of perceived language fluency, in turn, make newcomers subject to conscious or unconscious positioning in social settings and perceived as less competent (Putjata, 2019).

For ITs in non-native schools and classrooms, their accents produced different negative responses. Some ITs had experiences where students would mimic or make a mockery of their accents (Collins & Reed, 2012; Hutchison, 2005). Some ITs explained that their accents made it acutely obvious that they were "foreign," "outsiders," and "non-native," and that these perceptions resulted in their students viewing them as less intelligent or less credible (Manrique & Manrique, 1999; McCalman, 2007). ITs' accents also played a role in their comprehensibility because students and colleagues had difficulty understanding them through their accents (Cho, 2010). In some cases, such as Smith's (2018) study of Afro-Caribbean teachers in the United States, the challenge was not just their accent or comprehensibility but also a difference in their understanding of English that influenced their perceived level of competency. In Smith's study, Black Caribbean and African international teachers had "to reconsider their sense of self and negotiate their status as legitimate speakers of English in the United States" (p. 265). Smith's study challenged the assumption that ITs are naturally adept to cope with linguistic diversity in the United States by emphasizing the pressures placed on non-native US educators to modify their English usage to a new context.

Lacking Support

Another professional challenge experience by ITs during their integration process in a non-native school is the lack of support. As described in Nayar's (2009) study, administrators and colleagues too often did not come to the aid of ITs because they were not viewed as different from a native teacher. Consequently, ITs typically experience a sense of isolation. Without support from the school administrators, faculty, and staff, ITs experience what can be described as a "sink or swim" scenario in which a non-native teacher is thrown into the classroom, and they are the singular factor that determines their success. Lack of support for ITs creates a lose-lose

scenario because, according to Nayar, when ITs made mistakes (that were rooted in cultural conflicts) they were perceived as lacking necessary skills and/or knowledge. Whereas the ITs should have been viewed as lacking a mentor or professional development to help them acclimate to their non-native school setting. As a result of this misperception, ITs in Nayar's study complained that their colleagues and/or administrator viewed them as lacking the necessary skill set and their ideas or suggestions were often not taken seriously.

Becoming a Successful IT

Given all the integration challenges that ITs can experience in non-native schools, it is important to insert that these challenges do not prevent ITs from being successful teachers. The key factors identified in literature as contributing to the success of ITs are: quality of reception and collaboration offered by administrators and colleagues (Elbaz-Luwisch, 2004; Myles, Cheng & Wang, 2006; Remennick, 2002; Deters, 2006); instructional and resource support provided by administrators and colleagues; mentor relationships developed to facilitate integration and collaboration (Peeler & Jane, 2005; Deters, 2006); and acceptance exhibited from the school community and students' parents (Deters, 2006).

In 2006, Deter conducted a study in Ontario, Canada that highlighted how support provided by a mentor and the administration was effective in encouraging ITs' success in a non-native school setting. The ITs in Deters's study stated that their colleagues' level of acceptance in addition to the many opportunities for and types of collaboration available enabled them to gain access to helpful resources. This encompassed social assets like networking with and obtaining guidance from veteran teachers or discovering tangible resources like instructional materials. Having a mentor aided the ITs' integration by giving a sense of being a part of the team and contributed to the growth of their teaching competencies and success. Deters' (2006)

study also noted that ITs felt supported within a school where there were other employees with different cultural backgrounds. A multicultural school community expedited the ITs' successful integration because their colleagues were cognizant of the difficulties ITs go through on a cultural and linguistic level and they worked collectively to support them. Peeler and Jane's (2005) study on the mentorship experiences of ITs in Australia revealed that mentors helped ITs in developing a sense of belonging because the mentors helped establish connections with other teachers, which subsequently promoted collaborative efforts between the ITs and the teachers. These mentorship experiences also helped ITs by disclosing essential knowledge and competencies ITs needed to teach in their new non-native environment.

Summarizing Integration Challenges

All newcomers in a new country experience a period in which they are integrating into the culture of the country. For an IT, during the integration process in a non-native school, they face various professional challenges. These professional challenges include understanding the content and the type of instruction promoted within their new school, addressing the cultural differences that exists between their native school culture and new school culture, experiencing discrimination on all fronts, and lacking support from administrators and colleagues. These unique set of professional challenges ITs experience further highlight the need to understand and address how to improve upon teacher effectiveness for ITs in a non-native school setting. Especially, given that how an IT navigates these professional challenges dictates if they will become a successful teacher in their new school. And although ITs experience professional challenges and too often lack the necessary cultural-specific knowledge in a non-native school, they have unique assets that can be beneficial to the school and the community.

International Teachers as Assets

ITs face challenges of integration in any school in the United States but literature has also shown that ITs can be assets to a school for several reasons including, but not limited to, addressing needs of diverse student populations, possessing unique cultural wealth, and increasing global competency of students and communities (Cho, 2010; Collins & Reid, 2012; Schmidt, 2010; Sleeter & Milner, 2011).

Addressing Needs of Diverse Student Body

By 2050, the proportion of students of color in the United States is expected to increase from 44 percent to 62 percent (Dunn, 2013). Currently, the teachers in the classrooms or enrolled in teacher education programs are more likely to have students from diverse racial, religious, linguistic, and ethnic groups in their classrooms (Dunn, 2013). The US Department of Education (2016) acknowledged the needs of the growing diverse student population within the US education system cannot be met with the lack of teacher diversity. The National Center for Education Statistics (NCES) report based on the 2017-18 school year, showed approximately 80% of the teaching force in the United States is White (Spiegelman, 2020). The lack of teacher diversity and the growing diversity of the student body population also brings attention to how ITs can be assets to education. Schmidt and Block (2010) emphasized that schools benefit from having a diverse teaching staff, as it brings a range of perspectives and experiences from different social and cultural contexts, enriching the educational experience for all students. Recruiting ITs is a potential solution to addressing the lack of teacher diversity and meeting the needs of a diverse student population. Hiring ITs does increase teacher diversity in US classroom but more importantly, ITs can use their unique cultural wealth to create culturally relevant or

responsive pedagogy[6] that will cater to the needs of the growing diverse student demographics (Arun, 2008; Santoro, 2007). Culturally responsive pedagogy also promotes global competency of students by exposing them to different cultures, diversity, and interdependency (Byrd, 2016; Lee, 2015).

Research in various countries has shown that a relationship between teachers and student academic success exists (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Hattie, 2012; Rivkin, Hanushek, & Kain, 2005). There is also evidence that culturally responsive pedagogies correlate with more positive student academic achievement, motivation, social-emotional disposition, and effort (Delpit, 2006; Esposito & Swain, 2009; Gay, 2010; Ladson-Billings, 1995b, 2000, 2006; Milner, 2007, 2010a, 2010b; Milner & Tenore, 2010). Culturally responsive teaching is grounded in the understanding that educational experiences are influenced by cultural differences. By gaining insight into their students' cultural heritages, teachers can design their instruction to better support their students' success. (Krasnoff, 2016). Krasnoff also maintained that culturally responsive teaching empowers educators to present their subject matter in diverse ways, drawing on students' real-life experiences as a means to inspire and help them relate new information to their personal, community, and global contexts. Dunn (2013) asserted that ITs are capable of understanding the cultures of ethnic minority youths in the United States and can efficiently implement culturally responsive pedagogy because they come from different nations and cultures and therefore have unique cultural eyes and dispositions.

[6] Culturally relevant pedagogy and culturally responsive teaching are different pedagogical approaches that are often mistakenly used interchangeably. Ladson-Billings's (see, e.g., 1995a) culturally relevant pedagogy contains the fundamental component that students must develop a sociopolitical consciousness; this component is not present in Gay's (see, e.g., 2010) culturally responsive teaching. In many ways, culturally relevant pedagogy can be thought of as a specific type of culturally responsive teaching; therefore, I use culturally responsive pedagogy throughout (where possible) as a more inclusive term of the various culturally specific pedagogies available.

Studies have found that ITs engage students by tapping into their individual experiences and weaving these experiences with the diverse cultural backgrounds of their students into the curriculum (Choi, 2018; McDevitt & Kurihara, 2017; Upadhyay, 2009). There are several examples in literature that support ITs implementing cultural relevant and culturally responsive pedagogies in various content areas. In Choi's (2018) study, a Korean high school teacher recognized gaps in the standard social studies curriculum after his students from minoritized language backgrounds expressed concerns about the emphasis on Western heritage. The Korean teacher decided to improve upon the curriculum and developed a social justice-oriented course. Another Korean high school teacher observed that the curriculum's narrow representation of Asia did not adequately reflect the region's contributions. To address this, she created a global studies program that emphasized primary sources from regions in Asia often neglected in mainstream education. Her objective was for her students to be able to view and analyze global affairs from a viewpoint that fully acknowledges cultural and religious diversity.

A Hmong American teacher in Upadhyay's (2009) study incorporated the cultural knowledge of her Hmong students into the science curriculum (Moll, Amanti, Neff, & Gonzalez, 1992). The teacher enriched the unit on seasons by highlighting the significance of certain plants and fruits in Hmong rituals. She welcomed students to discuss their personal encounters with herbal remedies and prompted them to contribute insights from their cultural heritage and familial practices in horticulture. Additionally, ITs in Kohli's (2012, 2014) research drawing from their own educational experiences and noting the insensitivity of some peers, championed the acknowledgment of students' names to validate their cultural identities and native languages. This approach inspired activities in which students wrote their names phonetically and engaged in community-strengthening exercises that celebrated the meanings behind their names.

These reported examples support a key criterion for culturally relevant teaching which is nurturing and supporting competence of students' home and school cultures (Ladson-Billing, 1995). Lee's (2015) study conducted in the United States found that ITs displayed characteristics of culturally relevant teaching in their instruction, they valued their students' home culture, and helped their students to make meaningful connections that bridged their schooling and real-world experiences. The ability of ITs to address the needs of the growing diverse student population derives from the cultural wealth they possess.

Possessing Unique Cultural Wealth

ITs in non-native countries are not only human capital but they possess cultural wealth that can be beneficial for their schools and their students. Collins and Reid's 2013 study conducted in Australia, identified international teachers as "human capital" for their non-native country given that a majority of ITs arrive highly educated with more than one degree and their education was financed by another country. Data in the United States do show that newcomers in the workplace are highly educated. According to Peri and Sparber (2011), over the past few decades, the number of newcomers in the workplace with master's, professional, or doctorate degrees in the United States has tripled. For this reason and others, there is a global competition for international teachers (Commonwealth Teacher Recruitment Protocol, 2004). Apart from being human capital, international teachers are also recognized in literature for their cultural wealth. In her study of international teacher candidates in Canada, Cho (2010) defined cultural wealth as "cultural resources in the form of competencies, skills, attitudes, divergent knowledge, and alternative ways of thinking and knowing" (p. 4). In essence, cultural wealth refers to unrecognized forms of capital that ITs bring to their non-native schools.

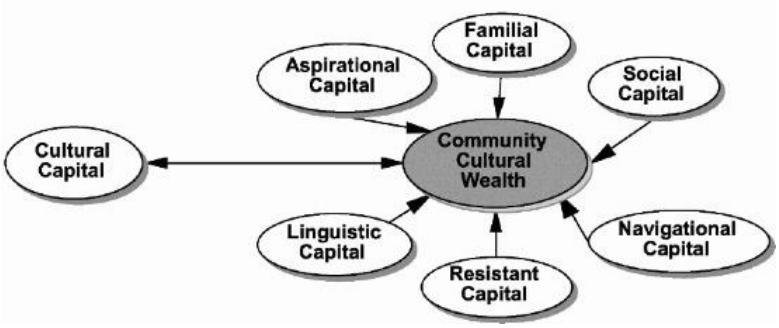

Figure 3: A model of community cultural wealth (Yosso, 2005, p. 78).

Yosso (2005) created a framework though critical race theory lens to emphasize the cultural wealth that newcomers possess which is unrecognized in the dominant culture. Using Yosso's model, cultural wealth encompasses linguistic, aspirational, familial, social, navigational, and resistant capital (Liou, Antrop, Gonzalez, & Cooper 2009; Yosso 2005).

Linguistic capital refers to social and intellectual skills developed through communication experiences in more than one language. Compared to native teachers, ITs are more likely to be multilingual. Essentially, ITs have higher linguistic capital because they bring multiple worldviews and linguistic skills to their non-native classrooms. The linguistic capital of ITs is even more important with the growing diversity within the student population because being multilingual affords them metalinguistic awareness. As such, ITs are more capable of identifying and addressing misconceptions made by students whom English is their second language. For example, in Safford and Kelly's (2010) study, several ITs documented how their linguistic capital played a role in the classroom:

> **Teacher 1:** I can see things from their points of view, what they might be thinking in their other languages. It's empathetic really. Sometimes when I'm reading their work I can tell how they're thinking, because I've made the same mistakes, making literal translations. My mum used to say to me, 'Do your brush' instead of, 'Brush your teeth', and 'Close the light'. So I used to say it like that. (pp. 407–408)
>
> **Teacher 2:** I was observing my teacher. She was asking the children what they did on the weekend. One girl said, 'We went to my mum's sister's house'. And the teacher said, 'What is the word for that?' But in other languages you have a word for 'mum's sister', not 'aunt', a specific word for your mother's sister, that specific aunt. And I know that,

> because I have it in Guajarati …There is no word in English for that—which is why the girl said it. She knew the word 'aunt'—she wanted to explain how they were related, and that is the only way she could do it in English …The teacher ignored it. (p. 408)

These excerpts validate the conclusions reached by Adair's (2011) study regarding the varying viewpoints of preschool educators with and without personal immigration backgrounds. Adair's research indicated that teachers with international backgrounds were more likely to recognize and honor the home languages of children from international families, showing greater respect for their linguistic autonomy compared to teachers without international backgrounds. ITs linguistic capital is also beneficial to the parents of students whose primary language is not English. Too often parents of these students are unaware of rules, policies, and programs within the school because information is disseminated in English. ITs serve as a bridge to help parents gain access to information to better equip their child in an unfamiliar school system (Monarrez & Wagler, 2021).

Aspirational capital is the ability to preserve ambitions and goals for the future in spite of real or perceived barriers and the ability to reflect it in daily practices. ITs aspirational capital is evident in their passion for the content area, passion for teaching, and passion to be a change agent (Monarrez & Wagler, 2021). Lee's phenomenological study (2015) concluded that ITs have tenacity and passion for teaching because in spite of the "dominant culture's systemic and sociocultural barriers" (p. 15) such as time-consuming and costly visa process, credentialing process, prejudices, and cultural differences, ITs push through for their dreams to teach in the United States. Lee's study also found that ITs demonstrate extraordinary work ethics and leadership skills despite the barriers they encountered in their non-native schools. The aspirational capital of ITs in the study was evident in their daily practices because they did not

hesitate to work extra hours and tended to work more than their colleagues to be competent teachers in their new setting.

Familial capital is not particularly about kinship relations but rather refers to the knowledge nurtured by a common sense of history, culture, and heritage. This form of cultural wealth, according to Yosso (2005), "engages a commitment to community well-being and expands the concept of family to include a broader understanding of kinship" (p. 79). Through the process of integrating into a new culture, ITs are searching for connections within their community. Their familial capital leads them to be a bridge in their community that promotes internationalization and ties into their social capital.

Social capital refers to the web of relationships among individuals, encompassing personal and cross-cultural connections, in a global world. ITs are likely to internationalize the social contacts and networks for students and the schools that employ them. One method for understanding social capital is to consider its bonding (where individuals with similar backgrounds can provide each other with emotional and psychological support) and bridging dimensions (connecting individuals from diverse backgrounds) (Putnam, 2000). In Subedi's (2008) case study of two ITs, the ITs similar experiences of being "othered" caused them to be keenly protective of international students and developed discussions on culturally sensitive topics in their classrooms to promote internationalization. In an effort to build a culturally respectful classroom and community, the ITs also facilitated discussions for both native and non-native students to share their interests such as music and sports to find commonalities. Students were also asked questions about their cultures and religion to identify differences as well as promote differences. Subedi found that when these dialogues are affirmed and fostered by teachers, it created an inclusive learning environment in which international students felt seen

and heard. From their experiences of being the "other," ITs interactions with their students and their instructional approaches often exhibit their passion towards social justice in their classrooms (Monzo & Rueda, 2003). Hence, demonstrating the social capital ITs bring into a non-native school setting through bonding and bridging.

Navigational capital refers to the skillset required to effectively navigate within unfamiliar societal structures, such as school systems or government agencies. Certainly, ITs who are teaching in U.S. classrooms bring with them a wealth of experience in maneuvering through such environments, an asset that can be highly valuable to both students and educational institutions. International parents and their child(ren) often come to the United States lacking an understanding of the education system. They too often do not know the level of engagement required or how to interact with schools. Even more challenging for international students and parents whose primary language is not English is communicating with teachers and administration in English and/or comprehending materials received in written in English. ITs can bridge the gap in multiple ways for international students and their parents because they are aware of the challenges newcomers face in a new culture. In Tobin and colleagues' (2013) study, schools heavily relied on ITs for translating letters, home visits, or conference meetings with parents so to deliver clear communication with international families. According to Ross (2015), through the stories of their own cultural experiences and knowledge, ITs became great assets in schools for international students and their native fellow teachers. The ITs in the study played a vital role in understanding international children's cultures and providing the support they needed in an unfamiliar educational setting.

Resistant capital encompasses the tacit knowledge and daily customs rooted in a culture that may not fully recognize or celebrate the cultural identities of ITs. The continuous

adjustments that these educators make in unfamiliar settings amass a wealth of insights indispensable for navigating and flourishing in a multicultural world. Having an understanding of the experiences, perspectives, and backgrounds specific to students from marginalized communities, ITs are well-equipped to mentor their non-international colleagues in engaging effectively with students from varied cultural and linguistic backgrounds (Dee 2003).

When combined, these varied, evolving, and interconnected forms of capital — linguistic, aspirational, familial, social, navigational, and resistant — provide ITs with a substantial cultural wealth that offers immense advantages to the students, educational institutions, and broader communities in the United States (Liou et al. 2009; Yosso 2005). The rich cultural wealth that ITs possess is perceived to be a tool that could be utilized to produce the global citizens needed for the future (Cho, 2010).

Increasing Global Competency of Students

The National Education Association (NEA) in 2010 published a report that states global competency is a necessity for students. The NEA defined global competency as:

> the acquisition of in-depth knowledge and understanding of international issues, an appreciation of and the ability to learn and work with people of diverse linguistic and cultural backgrounds, proficiency in a foreign language, and skills to function productively in an interdependent world community. (p. 1)

The criteria listed by the NEA for global competency is a part of the cultural wealth ITs' possess. In the United States, the recruitment of ITs is often advertised as promoting cultural and global competency of students (Books & Villiers, 2013).

According to Scott (2005), ITs promote global competency of their students when they utilize their cultural wealth within the classroom. Recruiters have argued that ITs can serve as effective cultural ambassadors who enrich the cultural literacy of US students by helping them to learn about the cultures of their nations (Dunn, 2013). ITs are therefore in a position to cultivate

the attitudes, beliefs, skills, and mindsets in their students that will empower them to participate actively within their local, national, and international communities. For example, in Cho's (2010) study, a middle eastern IT used her cultural wealth to create a transformative learning experience for her students where preconceived assumptions could be addressed. The IT began the lesson by wearing an *abaya* which is a loose over-garment that covers the whole body except for the head, hands, and feet, and asked her students what they thought about women who dressed this way. The discussion led to the exploration of racism, stereotypes, and prejudice, which created an opportunity to dispel stereotypical assumptions of women from her country. Another IT in Cho's (2010) study created a PowerPoint presentation that shared various customs of her native country and the multiple languages she spoke. These learning opportunities developed by the ITs in the study fostered global competency and represent how ITs promote learning and working with people of varying cultural backgrounds.

Influencing Student Learning

Research in various countries has shown that from the first day of school, student learning within a classroom is significantly influenced by the teacher (Dietrich, Dicke, Kracke, & Noack, 2015; Hattie, 2009; Roorda, Koomen, Spilt, & Oort, 2011). Student learning is often measured by student achievement, which is linked to nearly all facets of education. It is the primary outcome variable in most education research studies that drive educational improvement efforts (Hattie & Anderman, 2012). There are many factors that influence student achievement including a student's home life, school culture, peers, community, and so on; teachers however account for the highest variation at 30% influence on student achievement (Hattie, 2003). In research conducted within Chicago public high schools, Aaronson, Barrow, and Sander (2007) assessed the impact of educators on the progression of students' math test scores, linking the

effectiveness of individual teachers to observable characteristics of these educators. Findings from their analysis revealed that over the course of two semesters, enhancing the quality of math instruction by one standard deviation led to a rise in mathematics performance of students equivalent to 22% of the average yearly gain. Their results suggest that the more effective a mathematics teacher is in the classroom, the higher their student mathematics achievement scores.

Compared to any other school-based factors, teachers have the highest influence on student learning, hence the need for more research on ITs in the United States. Moreover, based on past studies, ITs assets can have a positive influence on students' learning. Adair (2011) supported this finding by stating that ITs can be invaluable for student success in the classroom. With the growing population of diverse students, several studies have recognized that the needs of the students cannot be met by the overwhelming White teaching force (Milner, 2006; Sleeter, 2001). ITs can meet the needs of diverse students through the application of their culture wealth and development of culturally responsive pedagogies. ITs are role-models, they are compassionate to the cultural knowledge students own and they apply this knowledge as the groundwork of their instructional practices (Sleeter & Milner, 2011). Timperley and Phillips's (2003) study findings showed that teachers' expectations are linked to student learning. Sleeter and Milner's study found that ITs had higher expectations for their students. Having these higher expectations as well as using their experiences and multicultural backgrounds to be more empathetic, helped the ITs' students succeed.

Summarizing International Teachers as Assets

ITs face challenges when integrating at a non-native school that they will need to negotiate and overcome on their journey to be successful teacher. It is important to support ITs

during this process of integration to ensure the assets they bring to the classroom are not wasted. The assets ITs bring to a non-native school can benefit all parties involved. ITs can uniquely address the needs of diverse student populations by using their cultural knowledge to develop culturally responsive pedagogies that promote student learning. ITs can also apply their culture wealth to bridge the gap in areas that are marginalized by the mainstream culture thus creating a benefit for students, native-born teachers, administrators, and parents. And ITs stimulate the global competency of their students, their colleagues, and their communities by exposing them to a culture outside of the mainstream culture.

All in all, ITs can be and are assets in US classrooms as documented in various studies; however, more research must be conducted in the United States. An exploration of ITs' experiences in non-native school in the United States can help identify the areas of support needed for ITs. More research can also identify assets they ITs bring to non-native schools and how these assets can be used to facilitate student learning.

Closing Thoughts – A Personal Perspective

The United States has hired many international teachers to teach in the classrooms across the nation but many ITs are not fully prepared to be successful in the classroom. Schools that receive international teachers should work collaboratively to prepare and equip ITs with the resources and materials they will need to be effective in their school climate. As stated in literature, integration challenges that international teachers face can be minimized by ensuring each IT has a mentor to guide them and assist them. Having a mentor can provide the support an IT needs and help create a sense of community. Shadowing the mentor or observing their classroom can address cultural differences and how to navigate those differences as well as increase the understanding of the content and type of instruction promoted within the school. By

minimizing the integration challenges for ITs, they can shift their focus from tackling challenges to being effective in the classroom. ITs in literature have cultural wealth they bring from their countries that can be beneficial for their students and school. As the student population is becoming more diverse, having ITs who possess multicultural awareness and promote culturally responsive pedagogies becomes more beneficial. From personal experience, international mathematics teachers who I have worked with have high standards for their students similar to their experiences in education. These colleagues had a strong work ethic that was instilled from their countries of enculturation and encouraged their students to work through adversities. They were never shy about their culture or their accents which presented opportunities to teach their students about their cultures and other cultures. However, my international colleagues did experience cross-cultural conflicts from students, parents, and administrators because of misunderstandings in communication, differences in norms and expectations, and classroom management. I believe that the stories of ISMTs presented in this research project assists in uncovering ways to minimize challenges ITs face and ways they utilized their cultural wealth by addressing how they navigated their teaching practices and how they influenced student learning.

CHAPTER 3

THEORETICAL AND CONCEPTUAL FRAMEWORKS

The purpose of this study was to investigate international secondary mathematics teachers (ISMTs) lived experiences and their influence on student learning in US classrooms. Two research questions guided the study:

1. How do ISMTs negotiate their teaching practices relative to their teaching (and learning) experiences in their country of enculturation to become successful teachers in the United States?
2. How do ISMTs influence student learning in classrooms?

In this chapter, I present in turn the theoretical and conceptual frameworks used throughout the study. Cultural fusion theory (see Croucher & Kramer, 2017) was employed to describe how ISMTs negotiate their teaching practices and experiences in US classrooms. Danielson's (2013, 2022) framework for teaching conceptual model and instrument was employed to identify teaching practices and behaviors for effective teaching and to describe the practices used by ISMTs to become successful teachers in the classroom and their probable influence on student learning.

Cultural Fusion Theory

To provide a lens to view how ISMTs negotiate teaching in a non-native school, I employed cultural fusion theory (CFT). CFT is a process in which newcomers in a new host country adopt the behaviors and traits of the mainstream culture while maintaining elements of their native identity to function in the mainstream culture (Bilge, 2019). CFT honors the communication processes of newcomers, their identity negotiations, and the resulting effects and will assist in capturing and explaining the lived experiences of newcomers in a new school

culture. The process of how newcomers adapt in a new culture is often referred to as cross-cultural adaptation. In addition to the theories of cross-cultural adaptation, CFT acknowledges that newcomers in turn leave their imprint on the dominant culture thus creating a mutualistic symbiotic relationship. The imprints created through the process of blending two cultures emphasize an additive viewpoint of CFT that shows what is gained from ISMTs and the school through their fusion.

History of CFT

The construction of cultural fusion theory began in 1992 with Eric Kramer. According to Robert Dubin, author of *Theory Building* (1978), the strength of a theory is hinged upon its descriptive power. In any social scientific research, a theory's descriptive power includes its ability to meet two key goals: understanding and prediction (Dubin, 1978). Early explanations of cultural fusion were able to provide understanding by their ability to describe how newcomers adapt to the culture. The beginnings of cultural fusion however did not provide prediction and thus the theory failed to meet the goals of social scientific research. In 2017, Stephen Croucher and Eric Kramer reformulated CFT to provide understanding (description) and prediction of the cultural fusion process to satisfy the requirements of social scientific research.

Croucher and Kramer (2017) combined key components described below from commonly used theories such as Kim's adaptation theory (1988, 2001, 2017) and Berry's acculturation theory (2005, 2006) to reformulate CFT. Kim (2017) referred to cross-cultural adaptation as how newcomers achieve a stable and functional relationship with their new environment when adapting to an unfamiliar culture through a stress-adaptation-growth process. The stress-adaptation-growth process of cross-cultural adaptation encompasses enculturation, deculturation, and acculturation. Enculturation is the process of learning the dynamics of the

mainstream culture and acquiring the values and norms necessary to function in the new culture. Deculturation is the pruning process newcomers experience when aspects of their native culture are lost when assimilating into the mainstream culture. During the process of acculturation, newcomers adopt, acquire, and adjust to their new culture (Croucher & Kramer, 2017; Kramer, 2000). Acculturation can be described as the modifications newcomers make in a new country as a means of adapting to new culture and customs. In simpler terms, acculturation can be explained as how newcomers adapts to fit into the mainstream cultural context (Berry, 1997). Acculturation often refers to "changes in behaviors, attitudes, values, and identities' of immigrants in a new country" (p. 152). According to Berry's acculturation theory, there are four avenues for acculturation into a mainstream culture: integration, marginalization, assimilation, and separation. Integration is the combination of developing a strong link between one's native culture and the new mainstream culture. Marginalization is the opposite of integration where a weak link is formed for one's native culture and the mainstream culture. Assimilation is a "middle ground" where the newcomer adopts aspects of the mainstream culture and shed aspects of their native culture. Separation is the detachment from one's native culture for the mainstream culture or just the opposite.

Boundary Conditions of CFT

Although Kim's (1988, 2001, 2017) cross-cultural adaptation and Berry's (2005, 2006) acculturation theories are widely referenced, they do not recognize how newcomers influence the mainstream culture of their new environment. CFT, however, acknowledges the bidirectional relationship of how a newcomer influences a new culture and how a new culture influences a newcomer. Cultural fusion theory has three boundary conditions or conditions in which CFT can be studied. The first boundary condition is the newcomers must be predominantly socialized in

one culture and then migrate to a new culture. Based on the research by Kim and Berry, the second boundary condition is that newcomers to a certain degree will invariably rely on the dominant culture and setting. The third boundary condition maintains that there must be interaction between the newcomers and the established members of the dominant culture.

Assumptions of CFT

Given these boundary conditions, CFT is based on four assumptions that drive human behavior during the process of cultural fusion. The first assumption, as stated by Kim (2001), is "humans have an innate self-organizing drive and a capacity to adapt to environmental challenges" (p. 35); second, individuals inherently possess a self-directing drive and the desire to preserve their cultural identities; third, the fusion of an individual's culture with the mainstream culture transpires via communication; fourth, this blend of cultures constitutes a fluid, dynamic system that mutually influences both the individual and their environment (Croucher & Kramer, 2017).

The first assumption stems from the collective insights of various scholars who have recognized that an individual's aspirations are shaped by the environment they inhabit, which in turn holds them accountable, even amidst the growth and challenges presented (e.g., Berry, 1992; Lysgaard, 1955; Redfield, Linton, & Herskovits, 1936). Every challenge or change in life ignites a fundamental impulse to overcome it by managing one's approach to the situation. This impulse segues into the second assumption, reinforcing an individual's sense of self as they navigate and communicate within new settings. Newcomers have many forms of communicative interactions with members of the dominant culture and members of their own cultural group as they are adapting to a new environment. Unlike cross-cultural adaptation theory, CFT views interactions with co-ethnics not as a barrier but a bridge during the fusion process. In the third boundary

condition of CTF there will always be a time where the newcomer is communicating with dominant culture. The newcomer's proficiency in navigating communication hinges on the dominant culture; conversely, the dominant culture's reliance is equally dependent on the newcomer's openness to the presented cultural exchanges. The second assumption highlights the necessity for an ongoing bidirectional flow, which is integral to the negotiation of each identity (Kramer, 2013, 2014).

The first and second assumptions of CFT present broad patterns of human behavior during the initial stages of cultural integration. In contrast, the third and fourth assumptions concentrate on the progressive changes that occur when a newcomer goes through cultural fusion. The third assumption identifies the various factors that may emerge in the communicative process within cultural fusion. Croucher and Kramer (2017) described cultural fusion as an open system where the newcomer and the dominant cultural group are interacting in the midst of a multitude of variables such as the newcomer's identity, demographics, host-culture acceptance, media, and so on, which can all affect the rate of fusion. The process of working through the variables and learning and maintaining behaviors/traits enhance the newcomers understanding of the dominant culture and ultimately changes the newcomer. When the fourth assumption is rooted in the transformation, the newcomer and the dominant culture go through the open system cultural fusion process. In the open system process, the variables are in constant interaction, thus the newcomers are constantly changing as well as the dominant culture. Croucher and Kramer (2017) argued that it is impossible for the dominant culture to be unchanged by the insertion of new cultural practices, beliefs, norms, and so on.

Theoretical Axioms of CFT

Built on the boundary condition and assumptions, the seven axioms developed in the reformulation of CFT are:

1. Cultural fusion involves both acculturation and cultural maintenance. This primary axiom focuses an individual's journey and decisions to adopt behaviors/traits of a new culture while also maintaining their own culture. In addition, this axiom provides insight to how the dominant culture participates in maintaining their own identity while observing/adapting to the insertions made by newcomers.
2. Cultural fusion brings about intercultural transformation. In the open system, individuals are subject to unknown variables in the new environment and as they are learning new cultural behaviors/traits while maintaining their previous behavior/traits, a transformative development begins. The transformation is a multifaceted process that involves the development of intercultural competence, the acquisition of new perspectives, and the promotion of mutual understanding across cultural boundaries. Cultural fusion theory acknowledges this transformative process of blending with a new culture is ongoing, with individuals constantly encountering new aspects of their unfamiliar surroundings. This ongoing journey of learning and adaptation impacts stress levels, simultaneously deepening newcomers' comprehension of their new environment. Ultimately, this amalgamation of stress, learning, and the ongoing fusion process transforms individuals, shaping them into more interculturally adept beings.
3. "Intercultural transformation is manifested in increased functional fitness, psychological health, and intercultural identity" (Kim, 2001, p. 90). Newcomers will be challenged with new ways of acting and behaving when they migrate to a new

culture. In response to this challenge, newcomers often adapt as a means to function with the new culture. Psychologically adapting can be stressful but when a newcomer is able to adapt, they gain a greater confidence and are transformed. As they transform, newcomers are developing new identities as they converge aspects of the dominant culture and thus creating an intercultural identity.

4. Newcomer and host-culture intercultural transformation facilitates and is facilitated by communication competence. The ability of a newcomer to communicate within the dominant culture is an integral part of functioning in the new environment. It is necessary for the dominant culture to have a basic level of communicative competence and flexibility to communicate with newcomers for newcomers to function in the culture.
5. Intercultural transformation facilitates and is facilitated by participation in host and minority (interpersonal and mass) communication activities. During the adaptation process, newcomers have benefited from interpersonal communication within their own group as well as intergroup communication because it reduces cultural shock, stress, and helps them better understand the dominant culture.
6. Pressures placed on newcomers by the dominant culture influence and are influenced by the newcomers' levels of intercultural change. Croucher and Kramer (2017) highlight three primary environmental factors that impact the cultural fusion process: the receptivity of the dominant culture, the pressure the dominant culture places on newcomers to conform, and the degree to which newcomers strive to preserve their marginalized identity and culture. Because newcomers belong to a different social group they are essentially perceived as threats and often experience prejudice.

Croucher and Kramer identify three kinds of threats that contribute to such prejudice: realistic threats arising from competition over resources, symbolic threats based on perceived differences in beliefs, values, and norms that can lead to discord, and intergroup anxiety which underscores personal fears encountered during interactions with unfamiliar identities. This form of anxiety can manifest itself both in the expectations of the dominant culture for the newcomer to integrate, and in the newcomers' struggle with the demands of assimilation (Croucher, 2013).

7. A newcomer's predispositions influence and are influenced by the newcomer's levels of intercultural change. The amount of change a newcomer is willing to make is dependent on the newcomer's willingness to change. Croucher (2008) found that newcomers have more realistic expectations when they have some knowledge about the new culture before they migrate. The degree of ethnic similarity can also influence intercultural change for the newcomer. The more similar a newcomer is to the dominant culture the less they will be viewed as a threat to the dominant culture and the easier it will be for them to adjust. Furthermore, Kim (2001) identified three personality traits that influences a newcomer's level of cultural adaptation that CFT acknowledges: openness, strength, and positivity.

In the concluding remarks made by Croucher and Kramer (2017), they offered points of reference for future studies of cultural fusion. Some of the questions and suggestions included:

- Clarifying the definition of "functional fitness." How a newcomer chooses to function or their fitness into a society should be expanded from an assimilation perspective.
- What aspects/characteristics do newcomers choose to adopt and/or maintain; and why do newcomers choose such particular aspects/characteristics? Croucher and Kramer

believe that this analysis will develop an understanding of the psychological aspects of cultural fusion.

- How does the host or dominant culture change in response to the introduction of the newcomer? There is limited research on how the host culture is changed by newcomers and in a world where globalization is increasing, the degree of influence is an important aspect to review and consider.
- What are the effects of host receptivity and conformity pressure on the cultural fusion process. More work should explore receptivity because history has shown that minority immigrant groups are often the targets of hateful political and social rhetoric (Bowen, 2007).

Illustrations of CFT

Since travelers have visited or migrated to different parts of the world, cultural fusion has been a part of history. The blending of two cultures as proposed in CFT can be seen in many parts of history such as the history of food, music, and education. For example, when non-Brazilians think of Brazil, Japanese cuisine would most likely not be the first thought that pops into their mind. Contrary to what most people know about Brazil, over 1.9 million individuals of Japanese descent live in the country, therefore outside of Japan itself, Brazil hosts the largest population of Japanese descendants. During the Meiji period, Japan suffered serious socioeconomic problems which led to droves of Japanese families migrating to other countries such as Brazil to escape poverty. Brazil's community of Japanese migrants, otherwise known as nikkeijin, first began entering Brazil in 1908 and worked on coffee farms (Nishida, 2017). The primary axiom of cultural fusion theory involves both acculturation and cultural maintenance which was evident with the Japanese migrants in Brazil. Although these Japanese migrants were

thousands of miles away from their native country, they adapted to Brazil's culture while maintaining their Japanese heritage. Through food, the Japanese migrants fused their culture with Brazil's. During the early 1900s in Brazil, Japanese emigrants experienced acculturation when it came to the agriculture in their new environment. Due to challenges in sourcing Japanese ingredients, adjustments were necessary to savor their customary dishes. Cassava and cornmeal stood in for rice, and local produce like papaya replaced traditional fruits and vegetables. Over time, Japanese farmers began to grow their own ingredients (cultural maintenance) and contributed to Brazilian agriculture with the addition persimmon, Fuji apples, pears, pumpkins, and Japanese cucumber. In São Paulo, cultural fusion with Japanese emigrants created a popular cuisine called the Temakeria, which is a Japanese version of the taqueria. Temakeria is an alternative for tacos and they are cone-shaped sushi rolls that could easily be eaten on the go.

A deep look into New Orleans' culture also reveals the axioms of CFT in multiple spaces but the secondary axiom that cultural fusion leads to intercultural transformation is emphasized within the complex development of Jazz. New Orleans' distinct history and its rich ethnic and cultural makeup created a space for intercultural transformation through continuous cultural interactions that set the stage for many culturally fused traditions. New Orleans popularity grew because of these fused traditions as they were displayed in their festivals, foods, and, especially, their music. The rich ethnic and cultural makeup of New Orleans was created by the influx of various groups into the city. During the early 1700s, about 30% of the population of New Orleans comprised of enslaved West Africans. Towards the late 1700s, more than half the city's population consisted of people of varied African descent. The cultural exchanges with black Americans into uptown neighborhoods brought the elements of the blues, spirituals, and rural dances to New Orleans' music. The city's cultural makeup changed even further during the 19th

century when German and Irish newcomers came before the Civil War. After the Civil War Italian newcomers were added to New Orleans already diverse population. One of the theorems of CFT states cultural fusion increases when the host receptivity increases. Because New Orleans was a place where cultures were constantly mixing, host receptivity for different cultures was greater and hence, fostered cultural fusion in many levels. The concentration of new European newcomers in New Orleans was unique in the South. In spite of the race tensions in the country, people of different cultures and races often lived close together, which facilitated cultural interactions. This proximity contributed to the growth of the Creole community who were people of mixed African and European ancestry and who were often well-educated craft and trades people. Creole musicians were at times educated in France and played in the best orchestras in the city. The blend of African and European cultures as seen by the Creole community illustrates the cultural interactions and exchanges that led to the intercultural transformation of their musical traditions and the development of early jazz.

The fourth axiom of CFT states there is a positive correlation between communication competence and intercultural transformation of the newcomer and the host culture. Personal communication is described as when newcomers practice their communication competence to interact with members of the dominant culture (Croucher & Kramer, 2017). Social communication occurs when members of the dominant culture practice their communication competence with the newcomers and vice versa (Croucher & Kramer). In education, international teachers teaching in a non-native school experience this process of social communication. An example can be seen through Alban and Reeves's (2014) study of 15 American teachers who taught at international schools in Asia. The results of the study indicated that all 15 teachers originally lacked communication competence with members (students,

parents, and community members) of the dominant culture as they had many instances of communication issues. The teachers had difficulty pronouncing student names and words in their everyday interactions. One American teacher noted westerners tend to be upfront and direct juxtaposed to the Asian shame-honor culture that is non-confrontational. Some American teachers misinterpreted such interactions with members of the dominant culture as being deceptive and sly. The teachers' unfamiliarity led to frustration and confusion that initially impeded intercultural transformation. But because teachers are constantly interacting with students, these international teachers gained understanding of cultural underpinnings of the observed behaviors of member of the dominant culture that led to "a transformation in their personal cultural identities" (p. 9).

Studies Employing CFT

There have been studies that have completed a comparative analysis between cross-cultural adaptation and CFT as well as a few studies that have employed CFT. Here, I review these studies and summarize their findings to inform how CFT has been applied in research. Support for Kramer's (e.g., 2000, 2003) cultural fusion theory can be found in Sandel and Chung-Hui's (2010) study of female marriage migrants of Taiwan. The study investigated how women from Southeast Asia and Mainland China married by professional marriage brokers to Taiwanese men adapted to Taiwan's culture. The lenses of CFT and cross-cultural adaptation theory were used to examine how the women adapted in Taiwanese culture and which theory the researchers believed captured the women's experiences. The study involved 28 women in transnational marriages and data were collected from interviews and ethnographic field notes from rural locales. Questions during the interviews explored topics from Kim's (e.g., 2001, 2006) theory of cross-cultural adaptation such as interactions with co-ethnics. According to her

theory, interactions with co-ethnics may help newcomers initially but become detrimental over time. The interview questions were developed to investigate if interactions with co-ethnics could be detrimental over time and if well-adapted individuals would identify more with the host culture and have a higher degree of satisfaction. During the interview process, Sandel and Chung-Hui experienced a case where they were considered "insiders" by a participant (non-familial relationships were thought of as "outsiders"). They chose to use this case and another similar case where a participant chose not to continue with the study because they felt the study was meddling with their affairs to address selectivity bias. Once data were collected, Sandel and Chung-Hui triangulated the data and coded using grounded theory.

Data were examined using both CFT (2000) and Kim's (2001) cross-cultural adaptation theory. Sandel and Chung-Hui (2010) reviewed each theory's viewpoints in terms of: (a) adaptation, (b) impact of ethnic group interactions, and (c) possible final outcome of acculturation. Adaptation, in terms of language adoption, some women claimed that as they learned a new language they forgot some of their native language. Cross-cultural adaptation supports this claim because it would support the zero-sum learning process, as you gain some (enculturation), you lose some (deculturation) in learning to adapt. CFT would support an additive viewpoint because the women learned more in the new language than what they claimed to have lost in their native language.

In regard to whether co-ethnic group interactions can be helpful or harmful, the data supported both theories. A participant in the study (Sandel & Chung-Hui, 2010) described how she was judge by women of the same ethnicity because of her fluency of Taiwanese languages and her length of stay in Taiwan. The same woman had some Taiwanese associates but none worth connectedness and this resulted in mal-adaptation which supported cross-cultural

adaptation. Another participant had an opposite experience where her role as an advisor for other women of her ethnicity afforded her an opportunity to be of great help to co-ethnics in transnational marriages. Her experiences with co-ethnics in conjunction with the former participants' experiences can be viewed as supporting CFT because their shared experiences demonstrate that relationships with co-ethnics are complex.

When Sandel and Chung-Hui (2010) analyzed the trajectory of acculturation, the data supported CFT in that adaptation does not lead to a single predictable outcome, but unpredictably to many. In cross-cultural adaptation, the responsibility to change and adapt is placed on the newcomer and higher-level of adaptation only occur when the newcomer internalizes and accepts their new mainstream culture's value, beliefs, and norms. Data from the study showed that many of the women resisted some of the beliefs in Taiwan culture and still communicated that they were satisfied with their lives. The resistance of Taiwan culture was an evident theme in the data specifically when it came to the management of money and the sense of personhood.

Supporting CFT's boundary condition of receptivity as a relational phenomenon, Sandel and Chung-Hui (2010) stated, "the successful adaptation of the women we have met comes from both their willingness to adapt to Taiwan's culture, and the willingness of their husbands, extended family members, and members" (p. 21). They concluded noting that cross-cultural adaptation theory lacked adequate explanations for some the observable data collected whereas the flexibility in CFT afforded justifications of more of the data. They also observed the flexibility of CFT as a weakness in terms of its inability to prove times when fusion does not occur.

Apart from Sandel and Chung-Hui's (2010) study, there have been other comparative analysis studies that have supported CFT over Kim's cross-adaptation theory (see Croucher, 2008; Lui & Dong, 2019). In addition to comparative analysis research of CFT, there are a few studies that have employed CFT. Kobzeva and colleagues' (2021) study investigated cultural fusion in Russia. Russia is a diverse country that hosts over 160 ethnic cultures, but Russian is the single national language that is mandatory for every member of its society. Kobzeva and colleagues' study centered on ethnic Germans and Greeks in Russia to study shifts in migrants' culture and to analyze migrant cultures impact on native residents; more specifically, the study focused on the Chuvash people, who moved to Bashkortostan and had lived there for centuries. Kobzeva and colleagues utilized mathematical modeling techniques to explore the cultural impact of the Chuvash people on Russia, particularly focusing on changes in the local language. Their study incorporated data sourced from the Russian Federal State Statistics Service and census data spanning from 1920 to 2010. Analyzing this data enabled the researchers to delineate shifts in the proportion of the ethnic German and Greek populations in Russia, as well as the Chuvash community in Bashkortostan. Through their mathematical model, the researchers were able to assess how cultural traits of both migrants and indigenous populations changed amidst cultural fusion. They discovered a direct correlation between the likelihood of the host language being supplanted by that of newcomers and the prevalence of Chuvash individuals speaking their native language in everyday contexts. Specifically, a higher prevalence of Chuvash language usage among the local population corresponded to an increased probability of language replacement in the Bashkortostan region.

Kobzeva and colleagues (2021) sought to examine the evolution of the Chuvash people's ethnic language under the influence of the Russian Federation. Their research uncovered a direct

relationship between the degree to which migrant communities maintained their cultural practices in a new host nation and the likelihood of cultural changes within the host country. Their findings indicated a strong commitment to cultural traditions among the inhabitants of Bashkortostan. Kobzeva and colleagues employed CFT to highlight how fusion occurred within language. Despite the mandatory use of Russian, the migrants continued to use their ethnic language. Although they had migrated long ago, the Chuvash people continued to adhere to their longstanding traditions and use their native language. Kobzeva and colleagues noted that although most Chuvash people were multilingual with the ability to speak other surrounding languages, over 75% used their native language as well. They also discussed how the Chuvash language had evolved and developed distinct characteristics in various regions of the Republic. This enabled linguistic scholars to delineate four regions and identify 13 dialects. However, in certain areas of Bashkortostan, descendants of Chuvash migrants fully assimilated and lost proficiency in their native language. Through the Chuvash people, most of them maintain their native language, while learning surrounding languages and creating new dialects.

Another study that employed CFT was Yadnya and colleagues' (2021) case study, which used the axioms of the theory to analyze and show the sociocultural fusion of the Pegayaman Muslim diaspora community in Bali. Using cultural fusion theory, Yadnya and colleagues intended to show new linguistic practices, cultural traditions, and identities that developed from the exchanges of the different cultures. In Buleleng Regency of Bali, the Pegayaman community developed over a long period of interactions of mixing cultures between the Muslim diaspora and the Balinese culture. Data for the study were collected through participatory observation, interview, survey methods, and a focus group discussion. The focus group discussion included linguists, anthropologists, community leaders, and cultural experts in the community and was

used to triangulate the data and maintain validity and reliability of the data. The survey administered included a combination of open- and closed-ended questions related to the sociocultural fusion in the development of the Pegayaman community and the features that were negotiated during the process of fusion.

The Pegayaman community was shaped through a genealogical fusion that occurred through the marriages of Javanese men to Balinese women. Religion played a big role during the fusion process; Javanese men were Islam and Balinese women were Hindu. Some features were sustained, others modified, and some rejected. The results of the study found cultural fusion was found in agriculture, naming, religion, and technology systems. A major element sustained was the language. The use of Balinese language was maintained over centuries even in the transnational marriages because of the strong mother-child interactions. The maintenance of the Balinese language led to the translation of the Muslim holy book, the Koran, into Balinese. Rejection, for example, came in the form of food. In Islam, the only type of meat that can be consumed is halal meat and the Pegayaman people refused to incorporate any meat from non-Muslims into their meals. On the other hand, these instances created opportunity for fusion. Because of the Muslim belief of halal meat, variants of Balinese foods were developed. In their naming their children, they combined Balinese first names with Islamic names to create a unique naming system. The cultural fusion was also evident in religion because the Pegayamans held various holidays, beliefs, and rituals that are not found in other Islamic communities.

In conclusion, Yadnya and colleagues' (2021) analysis supported the relevance of the primary axiom of cultural fusion theory, which emphasizes the integration and preservation of cultural elements. The Pegayaman Muslim community exemplified the first axiom of CFT by retaining aspects of their minority culture while embracing facets of the dominant culture. The

study identified two modes of social and cultural assimilation: the Muslim diaspora community adjusted their sociocultural framework to align with Balinese customs and norms, and they amalgamated the dominant culture with the subculture of the Muslim community, resulting in the emergence of a new cultural identity.

Affordances and Limitations of CFT

Cultural fusion theory provides a framework to delve deeper into the interactions of newcomers in a new mainstream culture. With CFT, researchers can analyze the cross-pollination of cultures. The use of CFT can broaden the access to recognize points of intersections, how they converge or diverge in terms of cultural traditions, practices, and influences. CFT highlights cultural creativity by recognizing that when cultures interact and exchange ideas this interaction leads to cultural diversity and enrichment in which new artistic, linguistic, musical, and culinary forms can emerge. CFT also provides a look into outcomes of globalization because cultures are not static but are constantly evolving through interactions, adaptations, and exchanges with other cultures (Croucher & Kramer, 2017). Cultural fusion theory contributes to a broader understanding of cultural dynamics and encourages the appreciation of diverse cultures and their transformative potential.

As determined by Croucher and Kramer (2017), there are still aspects of cultural fusion that should be explored. Some of those aspects include but are not limited to: CFT has the potential to oversimplify the complex and intricate process of newcomers blending with the mainstream culture. CFT may overlook power relations and power imbalances such as colonialism or globalization that can influence the outcomes and implications of cultural fusion. Historical, social, and political contexts that shape cultural interactions and fusion are aspects that may not be considered or generalized. Moreover, CFT may not identify or give voice to all

the communities or people involved in the fusion process. Lastly, the emphasis on hybridity may not adequately address cases where the newcomer and/or the new mainstream culture is/are actively resisting assimilation.

International Secondary Mathematics Teachers and CFT

CFT was selected for this study because the boundary conditions were aligned with the requirements and objectives of the study and its axioms could be used for making meaning of and explaining how and why ISMTs negotiated their teaching practices. To study cultural fusion the first condition is: newcomers are encultured in one culture and migrate to a new culture. One of the requirements to be a participant in the study is to be born outside the United States. The second and third condition of CFT are: newcomers have a dependency with the mainstream culture and newcomers must communicate with members of the dominant host culture, respectively. For this study, the participants' teaching positions made them dependent on the dominant host culture. ISMTs must rely on the dominant culture's language to effectively communicate with students, parents, and faculty members and administrators. To effectively teach and engage students, ISMTs had to familiarize themselves with educational standards, expectations, and teaching methods in the United States. ISMTs' experiences satisfy all the boundary conditions to study cultural fusion in the classroom.

All in all, CFT made sense of the process involved in how newcomers achieve cross-cultural adaptation and how they blend the cultures, which was central to this study to describe how ISMTs negotiate their teaching practices to be successful. In describing how ISMTs negotiated their teaching practices, the first axiom of CFT was used. The first axiom recognizes that fusion involves both acculturation and cultural maintenance. To functionally integrate into a new country as described by Kim (2017), ISMTs must learn to adapt to their new environment.

Adaptation in a new school community and classroom environment requires a reassessment of the previously held beliefs of ISMTs influenced by their past experiences regarding the essence of education and the dynamics of teaching and learning mathematics. Their experiential knowledge before moving to a new country is shaped by their roles as students and professionals in their country of enculturation. Their experiences as students and professionals in their country of enculturation may or may not translate effectively into US mathematics classrooms. In CFT, acculturation is an additive and integrative process unlike cross-cultural adaptation; in that, newcomers can maintain their native cultures while fusing aspects of the host culture. CFT was employed to highlight the fusion that occurs within classrooms of ISMTs. Specifically, what teaching practices were retained, fused, idled, and gained in the process of the fusion of their native culture and the new mainstream culture. The fourth and fifth axiom of CFT described the ISMTs' intercultural transformation that occurred from gaining communication competence and their interactions with other international teachers. Pressures placed on ISMTs to change their teaching practices whether through the evaluation process of teaching or by observations were investigated using the sixth axiom of CFT: pressures placed on newcomers by the dominant culture influence and are influenced by the newcomers' levels of intercultural change.

Danielson Framework for Teaching

What it means to be a "successful" teacher is a controversial conversation in education because what it means to be successful carries different meanings in different spaces. Successful teachers and effective teachers are often used interchangeably. Danielson's (2013, 2022) framework for teaching (FfT) conceptual model and instrument is one of the most widely used approaches to define and evaluate effective teaching and was employed here to identify the

teaching practices negotiated by ISMTs to become successful teachers in US classrooms (see Malmberg, Hagger, Burn, Mutton, & Colis, 2010; Pianta & Hamre, 2009).

Danielson framework for teaching (FfT) was developed by Charlotte Danielson. Danielson holds degrees from Cornell, Oxford, and Rutgers and has an expansive work history in education with numerous experiences in different positions. She has taught grade levels from elementary to post-secondary and has worked as an administrator, a curriculum director, and a staff developer (Yaple, 2012). She began constructing the framework in the 1990s with a goal to create a comprehensive system for evaluating teacher effectiveness that was grounded in educational research. Danielson initially published the first edition of the framework in her book *Enhancing Professional Practice: A Framework for Teaching* in 1996. Her book became popular and widely used in the late 1990s and 2000s, even before legislative actions were put into place to improve teacher evaluations. Built from a constructivist approach to teaching, Danielson, in her book, introduced the framework's four domains of teacher responsibility: planning and preparation, classroom environment, instruction, and professional responsibilities. The framework identified 76 elements of effective practice that were organized into 22 components within the listed four domains (see Figure 3). Each element is accompanied by a rubric or rating scale delineating the four performance tiers based on observable behaviors exhibited by either teachers or students. The four tiers of performance were: unsatisfactory, needs improvement, proficient, and distinguished.

Figure 3. *The Framework for Teaching.* From The Danielson Group. Retrieved from https://danielsongroup.org/resources. Copyright 2020 by The Danielson Group.

Revisions of FfT

Over the years, FfT has undergone revisions and improvements to enhance its components and align the framework with evolving educational standards and research. In 2003, Danielson along with 12 educators and experts launched the Danielson Group. The Danielson Group became a group of consultants who worked to improve upon and develop FfT to its full potential. With the Danielson group, the second edition of the book was released in 2007, just as the Obama administration rolled out the beginning of the Race to the Top competition. The 2007 edition of FfT maintained the architecture of the 1996 edition; however, the components were

composed of several smaller elements, which serve to further define each component. A few of the components were renamed but mostly simple changes were made such as changes in the language for the sake of clarity. For example, the original name of a component, “Contributing to the School and District,” was changed to “Participating in a Professional Community,” because the original version may have implied that it was an extra duty for some individuals rather than being fundamental to the teaching profession, whereas the new name indicates that it is a crucial professional responsibility. Additionally, the 2007 edition incorporated frameworks for non-classroom specialist roles like school librarians, nurses, and counselors.

FfT went through three additional revisions post-2007. The subsequent revision occurred in 2011, prompted by insights gathered from the Bill and Melinda Gates Foundation's research project, Measures of Effective Teaching (MET) (Danielson, 2013). Following that, in 2013, as a response to the adoption of the Common Core State Standards (CCSS) and informed by input from educators, Danielson once again revised FfT. The 2013 edition integrated the instructional considerations of CCSS and introduced language refinements aimed at enhancing scoring precision when employing the framework for evaluations and observations (Elliot & Moran, 2013). Within the revision, the rubric language was more precise for clarity than that of the 2007 edition. Moreover, in the 2011 revision, the levels of performance were articulated at the component level rather than the element level. Despite offering less granularity, the rubrics at the component level captured all relevant information from those at the element level and were considerably more user-friendly for evaluations. Critical attributes for each performance level within each component were established, providing necessary guidance for observers to differentiate between practices at adjacent levels of performance. The revision also offered possible examples for each level of performance for each component. The examples served to

illustrate the meanings of the rubric language and what practice can look like in a range of settings. The 2022 revision of FfT reworded some of the domains and clusters, to focus on equity, reflect research on culturally responsive teaching, support several facets of professional development, and the use of high-quality instructional materials.

Figure 4. *The Framework for Teaching.* From The Danielson Group. Retrieved from https://danielsongroup.org/resources/fft-at-a-glance/. Copyright 2022 by The Danielson Group.

Measurement in FfT

The components of FfT are measured through a process of observations, evidence collection, and evaluation. In the first domain, planning and preparation, the components focus on the teacher's knowledge of the content, the ability to organize and plan effective instruction

and lessons for student learning. To measure this component, an evaluator would typically review lesson plans, curriculum materials, and any other planning documents provided by the teacher. The information provided and collected would be analyzed to determine their alignment with instructional goals, standards, and the needs of the students.

The second domain, learning environment, addresses the teacher's ability to create a positive and inclusive learning environment. The evaluator should observe the physical space and arrangement of the classroom, the establishment of clear expectations, the management of student behavior, and the encouragement of a supportive and respectful classroom climate. Evidence gathered for this component can include direct observation of classroom exchanges, student work samples, and artifacts such as classroom rules and procedures.

In the third domain, learning experiences, the central focus is on the teacher's instructional strategies, the level of engagement of students to learn, and differentiation of instruction to accommodate diverse students. Evaluators can observe classroom instruction to measure the teacher's use of effective instructional practices, questioning techniques, feedback, and scaffolding. Evidence can be collected through instructional materials, student work, and assessments.

The last domain, principled teaching, examines the teacher's commitment to ongoing professional growth, collaboration, and professionalism. The evaluator should take into consideration the teacher's participation in professional development activities, their contribution to the school community, adherence to professional standards, and commitment to reflective practices. To measure the elements of this component, evaluators can use professional development records, feedback from colleagues and administrators, previous evaluations, and participation in activities/events outside the classroom.

During the evaluation process, the evaluator is collecting evidence from numerous sources. The evidence collected is then analyzed and evaluated using the rubric in the framework. The teacher would be awarded one of the four levels of performance (unsatisfactory, needs improvement, proficient, and distinguished) based on evidence observed and collected, analyzed and evaluated, in line with the rubric specified in each of the framework's component. The evaluator often engages in a post-observation conference with the teacher to provide evidence that supports the evaluation, to discuss the strengths and weakness observed, and to suggest areas of improvement. The aim of the evaluation and the ratings are to guide the teacher's professional growth, inform professional development plans, and make decisions to improve upon their effectiveness and accountability.

Studies on FfT

Evaluating the performance of teachers has been an important educational policy issue and establishing an effective and credible evaluation system is a challenge schools in the United States have to confront (Milanowski, 2011). Many research studies have been conducted that reviewed the credibility and effectiveness of FfT with teachers and/or supervisors. A quantitative study completed by Sweeley (2004) explored teachers' attitudes toward FfT's four domain areas. The study was conducted in a Pennsylvania public school system, using 230 teachers from varying grade levels. The purpose of the study was to ascertain teachers' perspectives on the domain areas they considered as indicators of effective teaching. The results revealed that a majority of teachers expressed positive views, either agreeing or strongly agreeing, with all four domains outlined in Danielson's (1996) framework for teaching. In each domain, there were specific components that scored extremely positive with the teachers. In the first domain, planning and preparation, the components were: demonstrating knowledge of content and

pedagogy, selecting instructional goals, and designing coherent instruction. For the second domain, classroom environment, the components were: creating an environment of respect and rapport and organizing physical space. The components for the third domain, instruction, were: questioning and discussion techniques, engaging students in learning, and providing students with feedback. For the last domain, professional responsibilities, the components that scored highly were: reflecting on teaching, maintaining accurate records, and showing professionalism.

Evans, Wills, and Moretti's (2005) study investigated 12 alternative certification teachers in New York to uncover how teachers perceived FfT. All the participants were enrolled in a master's program while teaching at a public school. Six of the teachers taught in an elementary mathematics class while the remaining six teachers taught special education classes. Ten out of twelve teachers recognized that the Framework for Teaching (FfT) was or could be a valuable rubric. However, four teachers expressed concerns about its effectiveness when evaluating teachers in special education classes. They pointed out that certain components, such as higher-order thinking, questioning and engagement, and classroom discussions, might not always be observable or feasible in special education settings. Half of the participants expressed concern about the subjectivity of the observations and the effectiveness of short observational time.

Scanlan's (2016) quantitative study examined if a correlation existed between a teacher's rating received using FfT and student achievement in reading and mathematics. A sample of 31 teachers from two elementary schools were selected to participate in the study. Student achievement was measured using growth scores from the Northwest Evaluation Association MAP (measuring achievement and growth) exam. The results of the study found a moderate, positive correlation between student achievement in mathematics and the teacher's rating using

FfT. Student achievement in reading showed a low, positive correlation with teacher rating using FfT.

Affordances and Limitations of FfT

Like any other instrument developed, there exists the instrument's strength along with its weaknesses. As an evaluation tool to assess teacher effectiveness, FfT has a comprehensive overview of components that highlight aspects of being an effective teacher. FfT embraces multiple aspects of teaching practice by including the four domains: planning and preparation, learning experiences, learning environment, and principled teaching. Within the domains, FfT delves deeper using components and indicators to supply teachers and evaluators with proper descriptions to foster a teacher's growth and development. Danielson's (1996) framework offers a broad format that allows teachers from all grade levels and teaching content areas to be evaluated for effective teaching practices or areas needing improvement, regardless of their individual teaching styles (Benedict, Thomas, Kimberling, & Leko, 2013). However, Danielson's (2022) framework is not designed to serve as a checklist for explicit teacher behaviors or competencies, nor is it meant to validate any particular teaching style. FfT is aligned with widely accepted professional standards such as the CCSS to promote consistency in evaluating teachers' instructional practices and professional growth. FfT affords reflexive practice and professional growth of teachers by encouraging self-assessment and examples to engage in meaningful practices. The Danielson framework facilitates active and teacher-centered professional learning opportunities. Such professional learning involves the teacher engaging in an active intellectual process characterized by self-assessment, reflection on practice, and professional dialogue. Shulman (2004) concurred that the Danielson model empowers teachers to actively inquire into their own teaching practices, fostering authentic learning through activities like writing,

dialogue, and questioning. Additionally, FfT recognizes the importance of addressing diverse student needs by providing flexibility within the framework, allowing teachers to adapt their instructional approaches while upholding academic rigor.

Danielson and McGreal (2000) stated that any endeavor to develop a teacher evaluation system must address two fundamental questions: (a) What do we believe good teaching looks like? and (b) What are the processes and procedures that will best fit what the school district wants the educational system to accomplish? Danielson's (2007) framework does address both questions thoroughly as seen through the strengths listed above however like any evaluation system subjectivity and interpretation poses a threat and exposes a weakness. FfT relies on the subjective assessment and interpretation of an evaluator. Subjectivity can be elusive goal for any evaluator therefore the potential for bias and variability in outcome from one evaluator to another evaluator is an element of the framework that cannot be overlooked. To reduce bias and variability, another weakness of FfT is the amount of time and effort from teachers and evaluators to implement the framework successfully. Teachers and evaluator must be trained appropriately to gain understanding and clarity of the domains, components, and indicators to promote consistency and quality of the framework. Moss (2015) argued that successful completion of "training is a major undertaking that is critical for the smooth, accurate application of the observation instruments that are a crucial part of the new evaluation requirements" (p.89). As mentioned in the Evans, Wills, and Moretti's (2015) study, some teachers felt FfT failed to properly address the differences between special education teachers and a typical classroom teacher during the evaluation process. Such experiences reveal a weakness of the framework to fully capture the complexity of teaching given that an evaluator is limited to the parameter of the components and observable data and behaviors link to the components. Although an evaluator

has many forms of collecting data within the framework, they may never know all the aspects that go into the decision-making process of a teacher's planning, their classroom environment, instructions, and/or how they engage professional responsibility. Even by narrowing an evaluator's parameters to the framework's discrete components, nuances of effective teaching may be overlooked. Furthermore, as identified in the Gates' MET project (Kane & Cantrell, 2010), most teacher evaluations do not emphasize teachers' influences on student achievement. FfT is not exempt from the findings of the MET project. The framework acknowledges the importance of student learning but does not put emphasis on student outcomes. The focus of the framework is more on the teacher and their observed behaviors and practices. In doing so, FfT does not capture the impact of a teacher's instruction on student learning outcomes.

International Secondary Mathematics Teachers and FfT

Danielson's (2013, 2022) FfT was useful in analyzing data collected to address the first research question: How do ISMTs negotiate their teaching practices relative to their teaching (and learning) experiences in their country of enculturation to become successful teachers in the United States? Through a synthesis of empirical studies and theoretical research, the FfT conceptual model and instrument describes and identifies teaching practices and behaviors that are associated with effective teaching. With the framework, I was able to explore the four domains (planning and preparation, learning environment, learning experiences, and principled teaching) to theorize the shifts that occurred with the participants from their country of enculturation to the United States. For example, the FfT model (refer to Danielson, 2013) outlines components associated with the classroom environment, encompassing aspects like organization, mutual respect, active listening, sharing of speaking opportunities, physical proximity, courteousness, time management, and objectivity. These components are social

constructs influenced by the cultural norms prevalent in diverse cultures (Gay, 2010). Employing the FfT instrument highlighted the variations of these culture constructs in the stories of ISMTs as well as identified how they adapted and what they did effectively in the classroom. Therefore, using FfT to analyze the stories of the ISMTs in this study, I was able to identify and describe the teaching practices the participants implemented that led to their success and the teaching practices they negotiated within each domain.

FfT also supported the language and teaching practices to address the second research question: How do ISMTs influence student learning in classrooms? Danielson's FfT identifies the responsibilities of teachers that empirical studies have shown to enhance student learning. I used FfT to identify practices and behaviors to highlight the participants' influence on student learning such as how they engaged their students, provided effective instruction, created a positive learning environment, and/or their involvement in professional growth activities.

Closing Thoughts – A Personal Perspective

As a secondary student, I had the pleasure of taking advanced placement biology and accelerated chemistry, two courses that were taught by international teachers in my high school. Both teachers knew the subject matter exceptionally well and were passionate about teaching and helping their students learn the material. I remember other students mimicking their accents and giving the teachers a difficult time in class, but the teachers never wavered from their objectives. The chemistry teacher won the Star Teacher award (multiple times), Milken Educator Award, and many more accolades. The biology teacher also won awards and advanced in his career and was appointed by the district. These teachers were excellent teachers, I am deeply intrigued by the stories of other international teachers who have embarked on similar journeys. This research aims to shed light on the experiences and successes of international teachers, exploring how they

navigate cultural differences, adapt to new educational systems, and contribute to the enrichment of their students. Through my own experiences and a review of relevant research, this study seeks to showcase the resilience and dedication of international teachers to become successful teachers in the United States and the positive influence they have on students and schools.

The transition from one educational system to another can be challenging for international teachers. At the same time, international teachers bring a wealth of knowledge, experiences, and perspectives to their classrooms. Success stories often feature teachers who not only adapt but also contribute innovative ideas to enhance the quality of education. International teachers often find themselves in unfamiliar classrooms in terms of norms, procedures, students, resources, and so on; therefore, creating a need to reflect on, adapt, and develop their teaching practices to become successful their new environment. FfT, grounded in research, has categorized and created a rubric for effective teaching practices and elements that serve as evidence of those teaching practices. Using FfT in my study was useful for identifying the effective teaching practices negotiated and used by the ISMTs. Using CFT was instrumental for highlighting the transformative process of their teaching practices and why they negotiated specific teaching practices. From these two frameworks, a roadmap for successes of the ISMTs can be viewed and provide insight for other international teachers and the school they work in. Success stories of international teachers can also reveal inclusive learning environments that celebrate diversity and promote intercultural understanding.

CHAPTER 4

METHODOLOGY

There is a continued growth of international teachers in classrooms across the United States; however, there is limited research on their teaching experiences and how they acclimate in non-native schools. In this chapter, I discuss narrative inquiry methodology and explain why it was used to bring awareness not only to how international secondary mathematics teachers (ISMTs) negotiate their teaching experiences in the United States but also to their influence on student learning. Recall, two research questions guided this study:

1. How do ISMTs negotiate their teaching practices relative to their teaching (and learning) experiences in their country of enculturation to become successful teachers in the United States?
2. How do ISMTs influence student learning in classrooms?

Within the chapter, to provide context, I provided a brief overview of narrative inquiry and review three recent mathematics education studies that employed narrative inquiry as a methodology. Next, I outline the research design of my study, which included brief discussions on context, participants and participant selection, procedures and data collection, and data analysis. I conclude the chapter by discussing some limitations of narrative inquiry and by providing some closing thoughts from a personal perspective.

Narrative Inquiry

The goal of qualitative research is to develop greater knowledge and understanding of a phenomenon through the collection of first-hand experiences and perceptions of research participants (Austin & Sutton, 2014). Qualitative research is also effective in giving “voice” to participants by using their words and meanings to tell their stories. Because the purpose of this

study was to examine the perceptions and classroom experiences of ISMTs in the United States, a qualitative approach was the most appropriate methodological choice. More specifically, to answer the research questions, the form of qualitative research used in the study was narrative inquiry to collect rich data from the lived experiences of ISMTs in grades 9–12 US classrooms.

Narrative inquiry was used as a methodology by Connelly and Clandinin (1990) to describe the personal stories of teachers and has gained increasing use in studies of educational practice and experience. Narrative research is anchored in the belief that human beings make sense, organize their experiences, and create selves through stories. Building on the theory of experience by philosopher and educationalist John Dewey (1859–1952), Clandinin and Connelly's developed narrative inquiry as a research methodology (Clandinin, 2006). Drawing on Dewey's criteria of continuity and interaction as well as his notion of situation, Clandinin and Connelly developed a three-dimensional narrative inquiry space: (a) the personal and social (interaction) along one dimension that focuses on the cultural and personal influences of the experience; (b) past, present, and future (continuity) along a second dimension that focuses on the time of the experience and how the experiences could influence the future; and (c) place (situation) along a third dimension that focuses on the environmental surrounding during the experience and their influence on the experiences (Clandinin, 2006). According to Clandinin and Connelly (2000)—

> Using this set of terms, any particular inquiry is defined by this three-dimensional space: studies have temporal dimensions and address temporal matters: they focus on the personal and the social in a balance appropriate to the inquiry: and they occur in specific places or sequences of places. (p. 54)

Narrative inquiry is a multifaceted and dynamic methodology. In this approach, the researcher poses questions aimed at interpreting and immersing themselves in the participant's world, rather than seeking to predict or explain it. Throughout the process of collecting and

analyzing stories, both the researcher and participant continually discuss and validate the meanings therein. This method allows the researcher to gain profound insight into the various contexts that shape the participant's life by actively engaging the participants in the research process through the collection of stories, ongoing negotiation of relationships, and exploration of collaborative avenues with the participant.

Narrative inquiry as a methodology is gaining prominence in many works in literature. Studies that have employed narrative inquiry as a methodology can be found in a wide range of disciplines such as education, medicine, psychology, and sociology (Clandinin, 2007; Riley & Hawe, 2005). There are numerous advantages to employing the narrative approach in qualitative research. First, humans possess a natural inclination for storytelling, making it easy for them to recount their experiences. Secondly, narratives yield rich and detailed data, offering deep insights through vivid descriptions. Lastly, this approach enables researchers to uncover profound meanings, as participants often disclose significant aspects of themselves within their narratives.

For my study, narrative inquiry provided a means for ISMTs to share their experiences and tell their stories of how they negotiated their teaching practices to become successful teachers in the United States. The participants shared their experiences growing up in their country of enculturation, their student life, and their classroom teaching experiences before and after moving to the United States. Their narratives were meaningful in exploring the various shifts in the classroom that occurred from teaching in their country of enculturation to the United States. How the ISMTs navigated these shifts to be successful in the classroom assisted in making connections and filling the gaps in literature.

Narrative Inquiry in Mathematics Education Research

Three recent mathematics education studies that employed narrative inquiry are Martinie, Kim, and Abernathy's (2016) exploration of mathematics teachers experiences of transitioning into the Common Core State Standards (CCSS), Frost's (2010) investigation of influences on teachers' instructional decisions in mathematics, and Chen, Wei, and Jiang's (2016) documentation of Chinese mathematics teacher's thinking and actions in dilemmatic spaces.

The purpose of Martinie, Kim, and Abernathy's (2016) study was to understand how high school mathematics teachers viewed CCSS and how they experienced the transition period. The study used narrative inquiry to explore and reveal the voices of seven mathematics teachers of a midwestern school through their experiences of transitioning into CCSS. Martinie and colleagues interviewed each teacher for an hour or longer then conducted follow-up interviews via email that included probing questions to clarify data previously collected. All the interviews were transcribed and sent to the teachers for member checking. The researchers also observed and documented the teachers during faculty meetings and professional developments. Through Polkinghorne's (2007) narrative analysis, four salient stories developed within the study: The Hardcore Adopter, The Anxious Adopter, The Cautious Adopter, and The Critical Adopter. The findings of the study revealed the danger of assuming teachers would irrefutably change their practices with the adoption of CCSS because there exist different types of adopters. Martinie and colleagues suggested that the unique needs of each type of adopters has to be addressed, more than likely through meaningful trainings, for a successful transitionary period and to avoid the typically top-down approach of the implementation of such systems. The study did not provide a

strategic plan to train teachers or how to differentiate professional developments to address and meet the needs of all teachers.

Frost's (2010) study used narrative inquiry to highlight the voices of three sixth-grade teachers in a western city in the United States and gain insight into factors that affected their instructional decision in the classroom. The three participants completed two individual interviews and two focus group interviews. The teachers were also observed teaching three sequential mathematics lessons. All three teachers taught at schools that served a high proportion of students of color, low socioeconomic status, and limited English proficiency. The teachers had several students who were English language learners with "low" reading levels, but the district-selected textbooks required a fairly high reading level. How the teachers approached teaching and their instructional decisions was a focal point for the study. The classroom observations of the teachers provided the instructional decisions discussed during the interviews. The interviews included questions pertaining to the school context, the teachers' mathematics background, and reflections on their teaching. Frost utilized prototypical narratives to establish links between the teachers' stories and their instructional choices. These narratives revealed that the teachers interpreted their present experiences through the lens of past life events, which shaped their values, motivations, and the significance they attributed to their personal history.

Chen, Wei, and Jiang's (2016) study conducted during 2011–2014 in mainland China was based on a national project called Teacher Practical Knowledge under the Chinese Socio-cultural Contexts. A team of 10 faculty and postgraduate students from two universities researched 50 students of varying grade levels from six schools in Beijing. Chen and colleagues interviewed all the teachers, observed the teachers during professional development activities and in their classrooms, and reviewed artifacts related to their work. The teachers were each

given 2 minutes to provide a story about how they cared for their students. Chen and colleagues selected one teacher out of the 50 teachers, Ms. Lee, to conduct a case study to explore the dilemmatic space of uniformity versus differentiation. Ms. Lee's story was self-titled "No Clapping for Low Achieving Students," which highlighted a moment of dilemma encountered by Ms. Lee in her everyday teaching practice. Within her story, Chen and colleagues were able to get a glimpse of Ms. Lee's reflection on her educational beliefs and professional identity. Ms. Lee worked at a school with three campuses, almost 300 faculty members, and over 5,000 students. In the past 2 decades before the study, the school had earned over 60 prestigious titles, including the Model School for Cultural Construction of Beijing and the Excellent Key School for Internationalization of Beijing. Furthermore, the school was recognized as an exemplary institution for implementing the Eighth National Curriculum Reform.

To explore Ms. Lee's thoughts and actions within complex dilemmatic contexts, Chen and colleagues (2016) utilized three analytical steps outlined by Clandinin & Connelly (2000): broadening, storying and re-storying, and burrowing. To ensure the credibility of their findings and address their positional biases, they employed three methods: (a) peer debriefing to cross-verify interview transcripts, field notes, and observation notes among the three authors; (b) triangulation of findings by considering multiple perspectives and interpretations of the same narrative episode; and (c) sharing preliminary findings with participating teachers for feedback, verification, and refinement.

The data analysis revealed multi-level dilemmatic contexts divided into macro-, meso-, and micro-levels, aligning with national educational reform policies (focused on student quality), school governance for effective performance (emphasizing exams and excellence), and teachers' roles in student development (promoting diversity). Ms. Lee integrated her role as an educator,

drawing from Chinese traditional morality and ethics, while also embracing her commitment as a professional in the contemporary movement towards teacher professionalization, thus embodying the role of an educator for diversity. Chen and colleagues (2016) acknowledged that findings should not be generalized to other contexts and that deeper burrowing for specific cultures is mandatory for people of different contexts. Recommendations for future studies included increasing the sample size for a cross-case comparison.

In all three studies, narrative inquiry was the methodology used for data collection and analysis. By collecting stories and narratives from teachers, the researchers aimed to capture the lived experiences, perspectives, and subjective insights of the educators. Narrative inquiry allows researchers to explore the complexities of teaching and learning through the voices and stories of those directly involved, providing a nuanced understanding of their experiences and practices.

Research Design

Context

This narrative inquiry study focused on ISMTs' lived experiences of teaching in schools in the United States and their influence on student learning. The participants were selected from different schools in the state of Georgia. Each participant teaches or taught at a school that has a predominantly Black student population and high minority enrollment ranging from 77%–98%. Two participants taught at schools with a moderate student population of approximately 700 students; two participants taught at larger schools with population of 1,300 students and 3,200 students. Taking into consideration the varying location of each participant and varying availabilities, the individual interviews took place on Zoom.[7] Each participant felt comfortable using Zoom and the interviews took place with little to no technical difficulties.

[7] Studies such as Caraboglu, Basaran, and Roberts (2010) and Deaking and Wakefield (2013) have found the quality of video conferencing interviews did not differ from face-to-face interviews. Advantages of Zoom for researchers

Participant Selection

Unquestionably, saturation is the most commonly applied principle for determining sample size and judging its adequacy (Vasileiou, et al., 2018). Saturation occurs when "gathering fresh data no longer sparks new theoretical insights, nor reveals new properties of your core theoretical categories" (Charmaz, 2006, p.113). While there is not a prescriptive sample size, the sample of participants should be enough to ensure some level of saturation. This study began with a minimum sample size of four participants with plans to increase if necessary to reach saturation.

As noted in my approved IRB letter (see Appendix C), to acquire and select the four participants for the study, I employed snowball sampling (Kirchherr & Charles, 2018) and a method of purposive sampling called expert sampling (Etikan, Musa, & Alkassim, 2016). Snowball sampling is a commonly used sampling method in qualitative research in which one interviewee supplies the researcher with one or more potential interviewees. I initiated snowballing from my current professional network (see Appendix G). From colleagues to my supervisor, I was able to obtain seven potential candidates for the study. I called each of the potential seven participants to introduce myself, determine if they met the requirements to be in the study, and gather their interest in being a part of my study. To finalize my potential participant list, like most narrative inquiry studies, I used purposive sampling. By employing expert sampling, a method of purposive sampling, participants had to meet a set of requirements

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compared to face-to-face interviews are its accessibility and convenience, reduced costs and time, and comfort and familiarity. Archibald and colleagues (2019) study found that participants and researchers had positive experiences with Zoom including its ability to facilitate personal connections with users. In Gray and colleagues' (2020) study, participants ability to select a space of their choosing (which notably may provide insight into the participant's life for the interviewer) allowed them to feel more comfortable speaking about personal topics during the Zoom interviews. Additionally, findings of the study supported interviewers' ability to observe participants' non-verbal communication during Zoom interviews.

that fit the purpose, problem, and objective of the study and would be considered experts in their field.

For the purposes of studying the lived experiences of ISMTs, the requirements for each participant selected was:

- Born outside of the United States,
- Taught secondary mathematics outside of the United States,
- Taught mathematics for two or more years specifically, in grades 9–12 in the United States, and
- Received exemplary or proficient ratings on their annual TKES evaluation(s).

It is important to note, that each participant selected had two or more years of experience in grades 9–12 mathematics classrooms to ensure they had passed the honeymoon and culture shock stages of acculturation and have had experiences negotiating their teaching practices. During the phone calls to the seven potential participants, I identified if they met the requirements of the study and if they could commit to the time requirements of the interview process. After the phone calls, only five participants met the requirements and had the time to devote to completing the interviews. I sent an email to the five participants, describing the purpose of the study and attached a demographic questionnaire to be completed and returned (see Appendix D). The purpose of the demographic questionnaire was to document that each participant met the criteria of the study and to gather more information about the participants to determine the initial four participants.

In qualitative research, participant selection is purposeful, and they are selected based on who can best inform the research questions and promote the understanding of the phenomenon under study (Creswell, 2009; Sargeant, 2012). Once the questionnaires were returned to me, I

selected four participants who based on their provided information had the most teaching experiences to increase the potential for gathering rich data that would inform the study. The four selected participants were each emailed an IRB consent form to sign, detailing the requirements of the study as well as outlining the ethical implications and confidentiality of the study (see Appendix E). Upon the receipt of a signed consent form, I called each participant and began scheduling the date and time of the first round of interviews.

Participants

Each participant was born outside of the United States of America and when they migrated to the country they taught mathematics at a secondary level. Collectively, the participants' ages ranged from their early 50s to early 60s and they had lived in the United States from 13 years to 27 years. There were two female participants and two male participants. One male and one female participant were born in India. The other male participant was born in Ivory Coast and the other female participant was born in Jamaica. All the participants had taught in both public and private schools, taught a wide range of mathematics subjects and some had also taught other subjects, and had twenty-seven or more years of combined teaching experiences from different countries.

The level of education of the participants was evident throughout the study. All of the participants completed their secondary education and received their Bachelor's degree in their country of enculturation. Supporting research such as Hunt and Gauthier-Loiselle (2010) has shown ITs tend to be highly educated, all the participants had earned multiple post-secondary degrees with the minimum degree being a Master's. All the participants received many awards and accolades along their education journey. Their success as students also carried across into their teaching career. Two of the participants have held positions as the department chair at

multiple schools. Two of the participants were selected as Teacher of the Year multiple times. Table 1 below provides an organized brief description of the participants according to their pseudonyms to provide a glimpse of the participants and their trajectories as international secondary mathematics teachers.

Table 1
Participants' Education and Teaching Background

Name (age range)	**Devi (45–54)**	**Bhaskara (45–54)**	**Etienne (55–64)**	**Jean (45–54)**
Country of Birth (other countries lived prior to the United States)	India (none)	India (Dubai)	Ivory Coast (none)	Jamaica (none)
Number of years in the United States	14 years	13 years	27 years	20 years
Nationality/Ethnicity	Indian/Asian Indian	Indian	American/Black	Jamaican/Black
Degrees earned (where)	BS (India) MEd (India)	MS in Mathematics (India) MEd (India) EdS in Education (India) PhD in Mathematics Education (USA)	BS in Mathematics (USA) BS in Applied Mathematics (USA) MS in Education Leadership (USA) EdS in Curriculum and Instruction (USA)	BS (Jamaica) Teaching Diploma (Jamaica) MEd (USA)
Countries taught (length/certification status)	India and USA (27 years) Taught in private and public schools Taught grades 9–12	India (10 years – certified) Dubai (7 years – certified) USA (10 years – certified) Taught in private and public schools Taught grades 9–12	Ivory Coast (4 years-non-certified) USA (27 years certified) Taught in private and public schools Taught grades 9–12 (Algebra, AP Statistics)	Jamaica (10 years) USA (20 years) Taught in private and public schools Taught grades 7–11
Teaching Awards and Accolades		Department Chair at multiple schools Golden Apple Award Star Teacher Teacher of the Year (Dubai and USA)	District Teacher of the Year Coach Awards	Department Chair at multiple schools

Below, I use the participants' narratives, in their own *words*[8], to provide a personal description of their lives. Particularly, their lives before migrating to the United States as a prelude to inform the first research question. MacIntyre (2013) stated, "narrative form is neither a disguise nor decoration" (p. 211). The statement made by MacIntyre highlights that narratives drive human agency because individuals are the authors of their lives. In the narratives provided, the participants tell the stories of their lives in their country of enculturation, their educational and mathematics education journey to become a teacher, and teaching in their country.

> **Devi:** I still love my country and [it] was very fun. I had lots of support from my family. I come from a very big family…like it was a joint family. I had my grandparents at home, my parents, my dad's older brothers…so we grew up in a big family, it was fun. And was pampered a lot. Was lot of pampering done to us. I was always have been a leader. Like in India we have monitorial system. So playing the teacher role, in the absence or presence of teacher…so I was always that. I was vice president to the Big College, like the college was like probably some thousands [students] in that college. Until like 10th grade, math was my favorite then I was into physics. All math teachers they're like they saw something in me. I was always thinking like I'm mediocre…I never thought like I could do excellent in math. The whole contribution to my math, I should say goes to my mom. She would wake me up at 5 o'clock in the morning…she says you do math in the morning; you remember it. She was very particular about doing math…she's no more but she used to think that if you're smart in math, you're smart in life.
>
> I didn't think I would come into teaching life at all. I wanted to go for physics and become a scientist. So the plan was [with my husband], if I become a teacher, I can take our kids to school, be with them, then come back home. I can have vacation…so it's like family time, and all that. But as soon as I became a teacher, I just, I was excelling everywhere in teaching. I just loved it. Like wherever I go, my students say that "oh, you are a good teacher." Then my administrators would always like me, you know they would say, "hey you are a good teacher." So all those positive reinforcements they made me not change my mind. And the students respect a lot in India. They respect if you are a good teacher. Because it's so competitive in India, you got to have a good command on your subject. It's not how much you know but what you explained, and they (the students) get it. That's when I think you become a good teacher. The most essential skill in teaching is your communication. So I would communicate…as I said, breaking the content into pieces and using some strategies so that they learn what the material you are presenting

[8] Notably, I use the participant's own words, dialects, phrases, idioms, and so on to highlight their voices and maintain the integrity of their stories. During the interviews, the participants engaged in casual conversations and their ways of storytelling (i.e., narrating) are a part of the rich tapestry of linguistic diversity and human expression as multilingual individuals.

them. And the most important thing is, there should be that connection. I would always think, what if that student is mine, what if that student is my son or daughter?

Bhaskara: I'll say it (India) is fun and there is no much of pressure. We used to go out and play after coming back from school, 2–3 hours you go and hang around with your friends in the street and know play whatever game you like to play and have good fun. Come back after 7:00 o'clock or something like and clean up yourself and take shower and do your little prayers and you need to sit and study for an hour or two. Education is the primary one; we all focus on education. Ninety to 95% of students are doing a good job. They want good results like because very competitive between schools like, so we need to prove ourselves. Education is so important. Respecting the elders is very important. The class is 35 to 40 kids…they cannot act crazy. Classroom management is not a terminology existing in the Indian classrooms. I was a very obedient student. I wanted to excel and 5th or 6th grade I struggled in math a lot…but I don't have any help because parents won't sit and teach. Ninth-grade math teacher, he was excellent. He made me understand the logic behind math instead of just doing procedure. So afterwards, my favorite subject has become math. And when I was doing my bachelors in math, one of the professors, he taught linear programming…he will put a problem on the board, he will come and sit with us, and he will pretend as if he doesn't know anything. And he will probe questions like a student, and he'll make us to do it. That is the first inspiring light for me to be a teacher, like he was amazing. [Another] one of my professors used to explain so well, it is like, he breaks it down and nicely, anybody can understand that and that is the one of my keys to be a teacher.

Basically, what I have done there (India), and which helped me is the content actually content delivery. When you're master's [educated] then you can teach 11th and 12th. If you are bachelors, you are allowed to teach only up to 10th grade. You cannot teach beyond that. Those kind of restrictions makes you prepared and content-based a little bit stronger. And as a teacher my strength, my philosophy is to scaffold ideas. When you scaffold, you know that some people will pick up in this level 2, some people can pick up in level 1, and some people make up in Level 3. So you are giving the opportunity for everybody. I like to be in the classroom to see what I can make a difference in the life. See, this is a profession you can see the difference in the classroom. You know at the end of the day, you know that what you're doing if the day goes well, the kids appreciate they come to you and say that "thank you so much I got it, I got it." You don't need to have any award, right? That joy you will not get everywhere like you know.

Etienne: I was I think I was one of the fortunate, because my dad was a congressman himself, …and we have a chauffeur and all that, so I think my growing up was great in Africa. Education is our own way out of poverty and everything else. So family encourages kids to go to school. I was number one [in mathematics] in school…not that I was very smart, but all these sorts of things was a review for me. My dad was a great dad. He always teaches children at home…you know everything that my teacher taught us in school I already saw at home. My mom has no education, my dad was educated, and my mom knew every night I had to go study. When she sees me, "go get your books and study." Teacher have a lot of respect. Even though teachers were broke, but kids tend to

respect teachers. My high school math teacher, we call him Bill…came into class no books and just chalk…he will teach you everything. I always wanted to be like him. You can ask [him] any question you want, and he would answer you. He would demonstrate everything. We have no hands-on, no manipulatives, no calculators. Graphing functions, you *study* the function, then you graph it.

Teachers, they go to a qualified school, for the most part. So the school trust them, your family trust them. They will make sure the entire program is taught to the kids. I mean, the teachers were very, very responsible. Even though they didn't have a lot of means to do what they have to do…they were doing the job. In Ivory Coast, they need teachers…so I started teaching science to younger kids. As a teacher you are influenced by your teachers. So I tried to teach my kids the way I was taught myself. The schedule was rough man…you teach every day. About 50 kids. After I give quiz, the next day my kids expect their quiz back…so teachers work really hard man. I think I was a successful teacher because my kids were really happy, they were taught, and they were learning. I'm real proud about [teaching] note-taking skills. I told the kids, you may not have a big brother or big sister at home to help you out…so you got to take good notes. I will tell them "that's important, please write it down." When it comes to the book, most families cannot purchase the book for the kids…the notes are very, very important.

Jean: I was a little bit more sheltered than other kids in my community. My dad was an elementary school principal and so we basically went to church, went to school and we came home, and we did school activities. We weren't rich or anything cause they were teachers. We had everything we needed for school, and we lived a well-rounded life cause we got to do lots of different things. Sunday is family day, we stay home, we cook at home, we eat at home. We love our music for sure; if we hear music we dance. Education was a priority obviously…we expect our children to do well in school. We expect them to be respectful to adults. In elementary, I was an outstanding student all around. The top performing [schools] were called traditional high school…I went to a traditional school…we only had one, so I was one of the top kids in the parish at the time. I had great teachers and I had older cousins as well in the same school who would help me if I needed help. My first greatest math teacher…was a really young teacher…he was very motivational…he was always there to support us. [Most teachers] went to the board, taught the material, and you did the work…chalk and talk. You went home, you practiced by doing the homework and you came back, and you did a test. There were drills for when I was much younger you know for multiplication tables. You had to know your tables, in Jamaica.

I never intended to teach; it was not even on my list at all because they (parents) were teachers. I saw this ad that came out for this college…they wanted more students…I thought it was a good way to get away from home. So I went to teachers college with still no intention of teaching and when I graduated…just a week before school started I got two jobs, and they were teaching jobs. It was wonderful. It was my dream job; I would go back to it. I felt more like a family there when I was a teacher and I think it's mainly because we sit in the staff room and we got to know everyone really, really well. I taught at an all-girls traditional high school…I taught anywhere from 28 to 35 [students]. The

> students have their classrooms…and the teachers would go to them. So when you walked into the room, all the students would stand, and you would say good afternoon and they would say good afternoon Miss, and you would say have a seat and they would sit down, and you would start teaching. I incorporated as many hands-on activities as I could. I would walk around…I don't recall my teachers walking around…they would teach or stand at the board…but I walked around my classroom to see what the kids were doing. So that was a big thing for me, I still do that. One of my big things is building relationships and so they can be more comfortable, can come talk to me, and if they need help, I want them to not be scared to come ask me for help. When a student came to me, I would say to myself, what if this was my child approaching a teacher, how would I want the teacher to respond and I try to respond in the same way.

From the narratives collected from the participants, I learned some characteristics about each of them. Bhaskara has a desire to learn in the classroom and outside the classroom. He is kind, sensitive, at times comedic, and humble. Devi is soft-spoken, caring, and sweet. She is supportive of others and wants to be supported. Both Bhaskara and Devi are religious and maintain their customs. Jean is an outspoken, direct, tell-it-like-it-is type of person. She is not afraid to speak her mind or give her opinion to anyone, including her administrators. She can laugh at herself but is serious about not allowing others to dictate her life. She has high expectations for herself and others and refuses to settle for less. Above all else, Jean is Jamaican, through and through. When she speaks about her culture, she lights up. Etienne, is a very hard worker, so much so he was burned out after a few years of teaching. He learned there needed to be a balance and stopped bringing work into his home. His level of devotion to his students is top level. He speaks multiple languages and uses them to connect with his students, parents, and others. He does not care about accolades and prefers to do his best practices in silence. For Etienne, it is all about the students and not about him.

All the participants did well in school, and they had familial support. The participants recalled their moms making them complete their assignments and study for exams or having their cousins assist them with difficult concepts. In terms of their mathematics education, with

the exception of Etienne, there were times in which they spoke of struggling in mathematics or they did not perform well. However, there were specific teachers who provided positive affirmations or demonstrated a strong depth of knowledge that were catalysts for the participants' interest and growth in mathematics or whom they learned effective teaching practices to use in their own classrooms.

I also learned that the participants were all driven individuals who have a passion for teaching. Although none of the participants intended on teaching as a profession, once they were in the classroom, they fell in love with teaching. Devi loved to teach because she could impart her knowledge to her students. Bhaskara, loved to teach because he could impact the lives of his students. Etienne, loved to teach because he wanted to broaden the minds of his students and help them become successful adults. Jean, loved to teach because of her daughter and being a part of the community within her school. Overall, there was an immense care for the well-being and success of their students that was revealed throughout the participants' stories.

Procedures and Data Collection

In narrative inquiry, both participants and researcher must collaborate to confirm the alignment of the stories told. To capture stories and the lived experiences of ISMTs, interviews, interview notes, and artifacts (i.e., demographic questionnaire, TKEs evaluations) were used as modes of data collection. In qualitative research, it is recognized that language is not value neutral. In other words, participants may make meaning of a word, sentence, or question differently than what was intended by the interviewer (Hollway & Jefferson, 2000). Prior to the implementation of the study, I conducted a field test to review possible interview questions to ensure they aligned with the objectives of the research questions. Upon the completion of the

field tests, the initial interview questions were modified by addressing any misinterpretations generated from the questions to improve the clarity of the interview questions.

Patton (2002) stated that there are three essential approaches to collect data in qualitative research using open-ended interviews: informal conversational interviews, standardized open-ended interviews, and the general interview approach. I chose to use the general interview approach same as a semi-structured interview that uses an outline of questions to ensure all important topics are covered but permits opportunities to solicit richer narratives. The interviews (both individual and group) were conducted virtually via Zoom in a closed room with no outside interruptions to maintain privacy. Rapport was originally developed with each participant through the initial phone calls to select participants and to schedule their first interview date. The participants completed three individual, semi-structured interviews and one focus group interview (Harrell & Bradley, 2009) during an 8-week period starting in September 2022 and ending in November 2022. Each individual interview lasted between 60 to 90 minutes and the focus group interview lasted around 90 minutes. The interview protocols centered around two types of questions (see Appendix F). The first type of questions were open-ended, framed in everyday language and broad. The questions were designed to be exploratory, allowing participants to share personal experiences of teaching in their country of enculturation and the United States and how they made meaning of it. Moreover, these open-ended questions allowed participants to provide detailed stories that they selected, that were relevant to them, and that centered around their lived teaching experiences. The second type of questions were probing questions, aimed at bringing participants to a deeper level of awareness and at times to confirm the details of their stories.

The first individual interview focused on participants' student and teaching experiences in their country of enculturation to understand the participants' cultural and educational backgrounds. After the first interview, I assessed the quality of the initial questions, the data collected, and developed follow-up questions. The second interview concentrated on participants' teaching and student experiences (if applicable) in the United States. The third interview explored the shift and negotiations made in terms of teaching in the United States. The end of the third interview was used for member checking. High-quality qualitative research demands trustworthiness and member checking is a validation technique to improve upon trustworthiness (Birt et al., 2016). Member checking, also known as participant or respondent validation, is a technique for establishing the credibility of the research findings. Data or findings are returned to participants to check for accuracy and to ensure the interpretation of the researcher are aligned to their experiences. In addition to member checking, the third interview addressed any follow-up questions from the first two interviews for clarification and alignment, and to collect the participants' reflections. The focus group interview was used to capitalize on communication between participants to generate more in-depth data on their experiences as ISMTs as well as member checking. As stated by Nyumba and colleagues (2018), focus groups can help participants explore and clarify their views in a way that may not occur during an individual interview.

The interviews were audiotaped as stated in the IRB consent forms the participant signed prior to start of the study but I also took journal notes during the interviews. The journal notes taken during the interviews were later used to develop follow-up questions for the next interview and determine experiences that may need to be validated by the participant. After each interview, I wrote an observation memo within 24 hours as a first step. The memos provided an opportunity

to document the interview experience with each participant (Emerson, Fertz, & Shaw, 2011). The second step entailed attentive listening to the audio recordings without immediate transcription to further annotate insights directly gleaned from the data. Preliminary conceptions regarding the context and overarching themes were recorded (Emerson, Fertz, & Shaw, 2011; Maxwell & Miller, 2008). In the third phase within the interview context, I transcribed the recordings by verbatim and coded the data into distinct categories (Maxwell & Miller, 2008; McMillan & Schumacher, 2001). During the transcription and subsequent reviews of each participant's account, I employed a reflective journal to capture initial reactions and support my coding process. Repeated examination of the transcriptions, alongside my observational notes and journal entries, facilitated the identification of my categories. These categories, organized chiefly by thematic relevance, were aligned with research questions.

Data Analysis

Analyzing qualitative data is a process of interpreting the collected information by examining and making sense of the initial data, filtering the data into themes via coding, and presenting the findings through diagrams, tables, and descriptive narratives. In the analysis process, the researcher immerses in the raw data and consolidates the data by concentrating on parts of the data that provide insight for the research questions. Within these sections of the data, the researcher searches for patterns and themes. The researcher interprets the narratives, makes meaning from the pattern and themes, which becomes the findings within the study.

In a narrative inquiry study, data collection and analysis are not a step-by-step process but rather a simultaneous activity (Butina, Campbell, & Miller, 2015). Initial data analysis does not begin after the data have been collected but during the first interview when the researcher is identifying potential themes and follow-up questions. The data analysis conducted during data

collection is used to refine the interview questions and gather more in-depth data. After the data collection is finished, a more intensive and thorough data analysis begins.

Narrative analysis is a type of qualitative data analysis commonly utilized in narrative inquiry. Although there are no standardized procedures for narrative analysis, various narrative researchers have published guidelines and methodologies for the analysis of narrative data. According to Reismann (2008) there are four approaches to narrative analysis: thematic narrative analysis, structural analysis, dialogic/performance analysis, and visual analysis. Thematic narrative analysis examines the substance of a story, probing its central themes without much emphasis on the mode of delivery. This approach maintains the coherence of the story, not fragmenting it by how it is presented. Structural analysis, on the other hand, delves into the story's construction to unearth specific communicative points. Beyond just content, this approach examines the form of the narrative, seeking deeper meanings within the communicative acts. Structure might relate to the genre, overarching plot, or linguistic style, and typically involves meticulous attention to speech details to discern the narrative's composition. Such focus on content organization can reveal deeper insights than what is said in the narrative. Dialogic/performance analysis considers the narrative's context and perspective, asking who is telling the story, as well as when and why, thus recognizing narratives as social constructs that are multifaceted and collaboratively built. A newer method in narrative analysis is the visual narrative analysis, which combines text and imagery (like photographs, paintings, videos, collages, etc.) to explore the formation and expression of individual and collective identities through visual means.

For this study, I performed data analysis using narrative thematic analysis, not because it is the most common of the four approaches but because the content within the text is the primary

focus of the approach. Braun and Clarke (2006) provide a six-step approach for conducting narrative thematic analysis: become familiar with the data, generate initial codes, search for themes, review the themes, define themes, and write-up. I used these six-steps to complete the data analysis. In the first step, I immersed myself in the data by repeatedly reading the transcriptions and interview notes. After reading the data completely at least once I began to jot down notes and ideas to generate codes. Once I became familiarized with the data and developed an initial list of ideas about the data collected, initial codes were then generated. Through open coding, where codes are developed and modified during the coding process, the data were reduced to smaller pieces of meaning. Some codes developed during analysis were content knowledge, family, collaboration, and student interactions. In the next step, I refocused my analysis into a broader level of themes by reviewing relationships between the codes and identified overarching ideas. In the fourth step, I reviewed, modified, and developed themes to ensure they accurately represented the content of the narratives, they were coherent, and were relevant to the research questions. Some themes developed were teaching diverse learners, accountability for learning, and building a support network. Once I established the themes, I identified the sense making of each theme by clearly defining the theme and what aspect of the data the theme captures (Braun & Clarke, 2006). In the last step of the analysis, I provided evidence and arguments for the themes selected within the data by choosing particular extracts that illustrated the story that was being told from the theme and about the data collected.

Limitations of Narrative Inquiry

In recent years, narrative inquiry has received growing attention and has been used as the qualitative methodology for investigating and valuing human experience among researchers from multiple disciplines such as psychology, sociology, and philosophy (Riessman, 2008). Although

the use of narrative inquiry in research is growing exponentially, it is not without limitations and challenges. Narrative inquiry provides an opportunity to obtain rich, in-depth detail of a phenomenon or life experience through the narratives of the participants. There are two parts involved in narrative research (a) the collection of evidence, and (b) the analysis or interpretation of the evidence. Nonetheless, because data collection is dependent on the recollection of the participants' experiences and the findings are dependent on the researcher's interpretation, there are a few challenges researchers need to address.

The main challenge facing a narrative inquiry researcher is validity (Gergen & Gergen 2003). If it is an accepted belief that there is not a singular truth and that narratives are co-constructed between the participant and the researcher (a key assumption of narrative inquiry), then questions emerge regarding the legitimacy of the research findings and the authenticity of the researcher to depict the study's participants. Consequently, narrative researchers must make a case for the acceptance of the validity of the evidence gathered and the credibility of the interpretation presented.

The Hawthorne Effect (see Adair, 1984) is one concern that threatens the validity of the truth of participants' narratives. Hawthorne Effect occurs when participants modify their behaviors and stories because they are mindful that they are engaged in a study. A remedy for the Hawthorne Effect is to observe participants in a naturalistic environment such as the classroom where they are immersed in what they would typically do. It is recommended that researchers should not account for the first observation or the beginning of an observation because the participant will still be aware of being observed. Over time, the awareness of the participant wanes, and they fall into their routine habits. Although I did not view the participants in their teaching environment, with the exception of one participant who Zoom'ed during their planning

period in their classroom, the Zoom interviews were conducted while the participant was home. In being home, the participants are already in an environment of their own, where they most likely feel comfortable and because each of us were in a closed room, a sense of privacy was established.

Another way of reducing the Hawthorne Effect is building relationships with the participants. To assist in creating a safe space for participants to dialogue with me freely, I applied the following six stages a researcher should take during conversations with the participant proposed by Oswald and colleagues (2014): gauge the person, create a non-threatening perception, introduce yourself, establish rapport, look for a relaxed signal, and link to conversation area. The setting that an observation or an interview takes place is crucial in implementing these six stages. Oswald and colleagues stated that a social setting leads to data that are richer and of high quality because participants are more relaxed and feel less pressure. As stated above, the interviews took place in a closed, private room, using Zoom to create a safe and relaxed environment.

A third way to overcome the Hawthorne Effect is through triangulation of multiple data collection approaches. Triangulation is used in many methodologies to increase validity because using more than one approach increases confidence in findings. Polkinghorne (2007) affirmed that in narrative research the stories serve as evidence for personal meaning and not factual occurrence of events and the truth sought by the researcher is not historical truth but rather narrative truth. To increase confidence of the narrative truth, I employed triangulation of the data collected by asking questions in a different way during the interviews or through follow-up interviews as well as through their evaluations to correlate to the narratives presented. Member checking as described in the data collection section enhances the reliability of the narratives

produced through the process of delving deeper into questions and continually seeking clarification from the participants in the interpretive phase of the research. Through member checking, the data can be provided to the participants to check whether the description captures the spirit of their meaning so they can confirm or suggest modification, increasing the validity of the narratives (Polkinghorne, 2007).

Apart from the participants' truth, the researcher's truth must also be considered in narrative inquiry. Heikkinen and colleagues (2012) emphasized the importance for narrative researchers to thoroughly contemplate the validity and construction of their stories. They highlighted reflexivity as vital for ensuring validity and credibility. In narrative inquiry, the researcher is heavily embedded in data collection and analysis process because it requires an understanding of the participants' lived experiences to effectively and realistically represent their experiences. Therefore, the choices made during data collection and analysis by the researcher, whether overt or kept covert, can influence the construction and co-construction of the narratives.

It is important to note that narrative researchers cannot separate themselves from the investigation, rather they must seek methods to explore the experiences of participants, their personal experiences, and the shared experiences that emerge from the collaborative process of inquiry (Clandinin, 2006). Somekh (2006) stressed the importance of the researcher analyzing their relationship with the object of research. Throughout this study, I was as transparent as possible by detailing my interests and experiences pertaining to the study. In Chapter 5, I applied FfT to identify the teaching practices the ISMTs negotiated, CFT to describe how the teachers transformed their teaching practices and supported my findings by utilizing the ISMTs' own

words to capture their voices in their stories. My aim is to ensure that readers can view the process of my interpretations and assess the plausibility of the offered findings.

Closing Thoughts – A Personal Perspective

By employing narrative inquiry, my intention was to identify how ISMTs negotiate their teaching practices to become successful teachers in the United States. My hopes are that the findings of this study provide useful implications for ISMTs, school leadership, and mathematics teacher educators in general. Through the stories of ISMTs, the study encourages teachers to reflect upon what challenges ITs have at schools with respect to negotiating their teaching practices and identify changes that can be made to assist ITs in overcoming these challenges. I hope the findings might motivate school leadership to create professional developments and/or mentoring programs that meet the needs of ISMTs and ITs. With respect to mathematics teacher educators, I hope that courses will be developed for pre-service teachers that address cultural conflicts for ITs as well as diverse student populations. And in terms of mathematics education in general, I hope the findings clearly highlight how to create culturally responsive pedagogy in mathematics using the fusion of one's native culture and the mainstream culture to inform and generate different "best practices."

Throughout the process of collecting the data and analyzing the data, I reflected upon my identity as a Nigerian-born secondary and post-secondary mathematics teacher and how this may have influenced the data collection, analysis, and findings in my data. I am fully aware that how I was viewed by the participants had an influence on our interactions during the interview process and vice versa. As a budding researcher, it was important for me to create opportunities to rethink and re-evaluate my thinking each step of the journey. A key instrument I used and found pivotal later in the process were the memos I wrote after each interview. I was able to record my

initial thoughts and feelings about each interview. As I reflected on those thoughts, I was able to improve upon the structuring of my next interviews, which included the sequence of the questions and follow-up questions, but also helped me confront the challenges of interpretation. Knowing that a challenge for any qualitative research is the filtration of data through the lens of the researcher and the framework employed, I used the memos, interview notes, transcripts, and questionnaires to facilitate the authentication of the voice of my participants. To ensure I was authenticating their voice and stories and not my own, I emailed the participants each of their interviews and narratives for the review and confirmation of their stories. Providing opportunities for the participants to read the transcripts and their narratives created a means to identify inconsistencies, receive additional comments, challenge my interpretations, and re-analyze their stories. My transparency through this process does not guarantee an accurate interpretation on either side however my goal was to provide sufficient data to offer a clear relationship between the data and the interpretation of the data (Anderson, 2010).

CHAPTER 5

DATA REPRESENTATION AND ANALYSIS

The increasing trend of recruiting international teachers to fill teacher vacancies in the United States warrants research to study their lived experiences in classrooms. The purpose of this study was to explore the lived experiences of four international secondary mathematics teachers (ISMTs) using cultural fusion theory (CFT) and Danielson's framework for teaching (FfT) as theoretical and conceptual frameworks to uncover how they negotiated their teaching practices to influence student learning and become successful teachers in the United States. I identified the teaching practices the ISMTs negotiated in the United States using the 22 clusters of FfT and explained the process of transforming their teaching practices according to the axioms of CFT. In this chapter, I present the data and discuss the findings, addressing the research questions and summarizing the analysis, all supported by the data collected and analyzed.

Cross-Cultural Conflicts

Cross-cultural conflicts in the classroom can arise due to differences in values, beliefs, communication styles, and norms among students and teachers from various culture backgrounds. When these cross-cultural conflicts occur, they can lead to cultural fusion when teacher and students interact in meaningful dialogue and reflection to learn more about each other's cultures and possibly find commonalities and shared values. As discussed in the literature review, Mercado and Trumbull's (2018) study identified areas where international secondary teachers experienced cross-cultural conflicts such as teachers' responsibility, students' responsibility, and parents' responsibility. It was important therefore to question each participant regarding their perceptions of the teacher's, students', and parents' responsibility in their country of enculturation and in the United States. ISMTs' responses were insightful to identify the

beginnings of some cross-cultural conflicts that would impact their teaching practices and create opportunities for cultural fusion (see table 2).

Table 2
Teacher, Student, and Parent Responsibility: Country of Enculturation and United States

Country of Enculturation			
Participant	**Teacher Responsibility**	**Student Responsibility**	**Parent Responsibility**
Devi (India)	"teach, communicate, take care of all the everyday work of a teacher like attendance, grades, duty post"	"most times it is student responsibility (to learn) …they don't blame teachers"	"communicate with teacher"
Bhaskara (India)	"delivering the instruction …make sure it is meaningful to the students"	"learning piece was the student's responsibility"	"and parent is just monitoring their (child/ren) progress"
Etienne (Ivory Coast)	"the teacher will teach what they know"	"the student studies, the student studies, that's it"	"(child/ren) don't miss school…they study"
Jean (Jamaica)	"teach the material"	"be in school every day…come with all their materials…come to class on time…do their homework and learn the material"	"to make sure their kid attended school…make sure they had everything they needed"
United States			
Participant	**Teacher Responsibility**	**Student Responsibility**	**Parent Responsibility**
Devi (India)	"the teacher is acting like a parent basically"	"they don't take their responsibility at all"	"parents don't take responsibility of these kids. Some do but it's like a handful of them"
Bhaskara (India)	"to push it (responsibility) to the student…to be a facilitator"	"student responsibility is to be pushed; accountability is needed there"	"the responsibilities are less because they are not taking any responsibility for the student's learning"
Etienne (Ivory Coast)	"Teachers have to be aware that everything will be them"	"students think they have no responsibility"	"they have to be responsible…parents have to get involve in their child's education"
Jean (Jamaica)	"Everything"	"this is not for every kid; I feel like there are no expectations for the kids"	"I don't think they feel they are responsible for anything"

Reviewing and analyzing the responses pertaining to their countries of enculturation, ISMTs' perceptions could be summarized as the teacher's responsibility was primarily to teach the concepts of the course, the students' responsibilities was to learn and study the concepts, the parents' responsibilities was to make sure their child/ren attend school and keep up with their progress. In the United States, the ISMTs' perceptions were the responsibilities of student

learning shifted greatly onto the teacher. Most of the ISMTs stated teachers have multiple roles and are responsible for everything. On the contrary, students and parents according to the ISMTs, seemed to have abandoned their responsibilities with negligence of their part in the learning process. For the ISMTs, these differences in perceived responsibilities between countries, created many instances of cross-cultural conflicts and set the stage for culture fusion to develop.

Applying Danielson's Framework for Teaching

Danielson's framework for teaching has four domains: (1) planning and preparation, (2) learning environment, (3) learning experience, and (4) principled teaching. From the interviews and data analysis process, codes were developed that shaped the themes of the clusters in each domain where the ISMTs negotiated their teaching practices (see table 3). The presentation of the data used FfT to identify the teaching practices that were transformed in the United States. The axioms of CFT explained the ISMTs' transformation of their teaching practices to become successful teachers in the United States.

Table 3
Framework for Teaching Four Domains: Negotiated Clusters and Themes

Domain 1: Planning and Preparation	
Negotiated Clusters	**Themes**
Knowing and Valuing Students	Diversity in students
Using Resources Effectively	Diversity in resources
Domain 2: Learning Environment	
Cultivating Respectful and Affirming Environments	Respect
Fostering a Culture for Learning	Accountability for learning
Supporting Positive Student Behavior	Classroom Management
Organizing Spaces for Learning	Flexibility
Domain 3: Learning Experience	
Engaging Students in Learning	Active learning
Domain 4: Principled Teaching	
Documenting Student Progress	Evidence-based
Engaging Families and Communities	Building a support network
Growing and Developing Professionally	Willingness to grow

Domain 1: Planning and Preparation

According to the first domain of FfT, accomplished teachers have a command of their subject, know the central skills and concepts, are aware of typical misconceptions and how to address them, and advance student understanding through pedagogical approaches that incorporate global awareness, cultural diversity, and interdisciplinary connections. All the participants admitted that from a young age mathematics was easy for them to comprehend and they excelled in the subject. Their confidence in teaching and knowledge of their subject matter also stemmed from the prerequisites they completed to teach at a secondary level. For the ISMTs to become secondary teachers in their country of enculturation, they would have to complete teachers' college or have at least a master's in mathematics. There were several instances where the ISMTs spoke of their mathematical knowledge and pedagogical strengths in their discussions by incorporating concepts from their country of enculturation into their lessons, making interdisciplinary connections with scientific concepts and applying scaffolding techniques to address misconceptions and varying student skill levels.

Although the ISMTs had confidence in their disciplines, they experienced a shift in their teaching practices in the domain of planning and preparation in the following clusters: (1) knowing and valuing students and (2) using resources effectively. The theme for these clusters was diversity in students and resources. For the ISMTs in the study, diversity was not as evident in the classrooms of their country of enculturation as it is in the United States. Their classrooms were not multicultural, there was more uniformity in the curriculum, and there were not as many resources available for teachers. In some cases, classes lacked diversity in skill levels because students were separated by their performance on mandated exams. Coming to the United States, which is often described as a "melting pot" of cultures, ISMTs were exposed to multicultural

classrooms with various races, religions, depth of knowledge, and resources. The stark contrast of the makeup of the ISMTs' classrooms between their countries of enculturation and the United States led to negotiations of how they planned and prepared their lessons. During an interview, Jean said, "I had to learn how to teach everyone, at the same time, so everyone could benefit" (Interview 3), which demonstrated a need to adapt her teaching practices for diverse learners.

Knowing and valuing students.

> **Bhaskara:** I learned the fact that understanding students, one-on one, it was a little challenge for me in the beginning because of the language barrier and the different culture and stuff. So, I got the first lesson that know your students. That is the first lesson I learned in a few years. (Interview 2)

According to the description of this cluster in FfT, "successful teachers are consistently guided by who their students are and who they hope to become, which means they understand, honor, and leverage students' intersecting identities—including their racial, cultural, religious, and gender identities, among others" (p. 12). Teachers therefore who are effective in this cluster proactively seek knowledge of their students in terms of their background, cultures, skills, interests, language proficiency, and special needs. For the ISMTs in the study, they valued their students, and some viewed their students like their own children, however, knowing and understanding the perspectives of their students in the United States was challenging because of the increased diversity in the classroom and the differences between their cultures:

> **Jean:** When I taught in Jamaica, I taught all the kids that were above average. When I came here, everyone is in the same class. So that was a very big adjustment as to how to meet the needs of everyone, so I had to model my lessons to accommodate everyone (Interview 2).

> **Devi:** We didn't have those differentiated instruction, we didn't have those IEP plans in India. (Interview 1)

Research indicates that a teacher's knowledge of their students plays a vital role in effective lesson planning. According to Hattie's visible learning (2009) study, understanding

individual students' prior knowledge, learning styles, interests, and cultural backgrounds enables teachers to create more engaging and tailored lessons. Personalization of lessons enhances students' motivation as they perceive the content as relevant and relatable. Furthermore, a study by Gregory and Chapman (2012) emphasized that teachers who know their students well can anticipate their learning needs and potential misconceptions. Knowing their students' strengths and needs allows teachers to diversify instructional strategies and this differentiation has been shown to increase student achievement and engagement (Tomlinson, 2017).

In their countries of enculturation, the ISMTs expressed differentiated instruction was not a concept not only because of a more homogeneous classroom but also the competitiveness of students reduced the need for differentiated instruction. A typical class in their country would be teacher-centered and the teacher would teach the whole class and assign the same assessments. Jean stated, "In Jamaica, I would give everyone the same thing and expect them all to get it done" (Interview 3). In the Ivory Coast, Etienne expressed similar sentiments saying, "you got special needs or not, they don't care about that, all of you are going to fight, all of you are going to be in the same classroom with one teacher "(Interview 3). Teachers did not have to seek the knowledge of their students because teachers came to teach the concepts and the students were expected to learn and study the concepts. In Devi's words, "we don't do icebreakers in India to get to know each other…you're here for learning and I'm here for teaching, that's it" (Interview 3). In coming to the United States, the ISMTs had to negotiate their teaching practices to accommodate for classrooms of diverse learners that included learners of varying backgrounds, content knowledge, and special needs to plan and prepare differentiated instruction.

Bhaskara was the only participant in the study who taught in another country before coming to the United States. He taught in Dubai and the diversity in the classroom prepared him

for multicultural classrooms in the United States. The classrooms in Dubai consisted of students from various countries and religions. Bhaskara admitted however that he had to "win their heart" which was not required in India because students there were "committed and accountable." The process of winning their hearts for Bhaskara was the process of getting to know his students, their needs, and strategies that worked in the classroom to cultivate learning. When I asked what helped Bhaskara in reaching the needs of his students, he responded, "I personally feel that if you don't have one-on-one interactions with the students, it is not going to make a good impact with student learning" (Interview 3). For Bhaskara, getting to know his students and have one-on-one interactions with them was pivotal to meeting the needs of his students.

With time, each ISMT recognized the importance of getting to know their students and this shifted their approaches to planning and preparing their lessons. They began to incorporate differentiation, cultural aspects, and student interests into their lessons. When discussing how the ISMTs planned their lesson, Etienne revealed that although teachers at his current school planned as a group, afterward he would plan according to his classes and his students:

> **Etienne:** We're planning as a group, and some teachers think that's enough but as far as I'm concerned that's not enough. You got to plan by yourself. How am I going to introduce the lesson? How am I going to end my lesson? I got to know the way I do the lesson… the kids are different. You can't do the same thing, all the time, with all the kids. (Interview 3)

Etienne comprehended the importance of diversifying his lesson by tailoring his own lesson to meet the needs of his students because what works for one set of students may not work for another set of students. Another way the ISMTs shifted their lessons was by learning the interests of their students. Jean voiced that she readily talked about her culture with her students and incorporated Jamaica into her lessons, but she also sought the interests of her students to include in her lessons:

> **Jean:** So, in my teaching, I'm trying to find background information or things that they're familiar with. My school is a big football school, so I bring all that into my teaching. (Interview 2)

In getting to know her students and valuing their differences, Jean shifted her teaching practices by using videos for her visual learners, scaffolding her instruction, including optional challenging problems for more advanced learners, and incorporating small groups for collaborative learning. The other ISMTs shared similar responses as Jean's when discussing how they adapted their lessons to address the needs of their students but one significant factor to making this change was the abundance of resources they had at their disposal.

Using resources effectively.

> **Jean:** I had more materials; I had more resources that I didn't have to make. I had a brand-new MacBook, and this was year 2001. Smartboards were just coming in and I was willing to try to use it. In Jamaica, I had a chalkboard so that was different (Interview 2).

This cluster of Danielson's FfT states that it is the responsibility of every teacher to use resources (items or services) available through the school or beyond the school to support students' learning and development. When teachers use a variety of resources, such as visual aids, technology, real-world examples, and hands-on activities they can facilitate active learning, engagement, and deeper understanding for their students. Moreover, utilizing various resources accommodates diverse learning styles, as demonstrated in research by Pashler and colleagues (2008). Visual learners benefit from diagrams and charts, auditory learners engage with audio recordings, and kinesthetic learners thrive through hands-on activities. By integrating different types of resources, teachers can ensure that they reach a broader spectrum of students and enhance their comprehension. For the ISMTs in the study, coming to the United States exposed them to resources they did not have access to previously and integrating these new resources into their lessons enhanced their teaching practices. Learning to use technological resources was not a

straightforward process but once the ISMTs overcame that hurdle, they expressed that the resources eased teaching and learning in their classroom.

Jean described her classroom room experience in Jamaica as “chalk and talk.” The teacher would teach as they are writing with chalk on the board. The materials available to the teacher were chalk and measurement tools (compass, ruler, protractor). For Etienne, Ivory Coast’s educational institutions were financially constrained and therefore resources were very limited. Most students did not have textbooks because they could not afford to buy textbooks. Teachers in Ivory Coast were not well-paid and did not have resources to bring to the classroom. When describing how mathematics was taught in Ivory Coast, Etienne said, “we had no hands-on, it was chalk, no manipulatives,…no calculators” (Interview 1). For Devi, she described their lack of resources as, “we had no technology…no visual lesson presentations, we had no smartboards, nothing…a blackboard and that’s it and the chalk” (Interview 1). In the United States, the abundance of resources was an uplifting experience for the ISMTs. The ability to incorporate technology into their lessons was a game changer not only for student learning but also as a tool that could be used for planning, instruction, and documentation.

Devi enjoyed using technology as part of her instruction. She recalled a memory when she was teaching sequences to her students, and she used technology to visually present the patterns in sequences. For students who are absent from class or wanted a review, through technology, Devi was able to post her lessons and attach videos to her class web page to ensure unlimited access to the material presented in class. She also used technology to create games such as a Jeopardy math-themed activity for students to practice and answer questions. Outside of technology, Devi found other resources such as activities to engage her students, which included math problems in mazes, puzzles, and riddles.

Jean used technology to enhance her lessons and provided an example of using digital algebra tiles to illustrate the distributive property. At first when using technology, she said, "no one wanted to use a Smartboard because they didn't want to look stupid in front of the kids" (Interview 2). She admitted to her students it was a new experience for her and they were going to learn together. Jean always requested getting new resources from the school because she saw the value it could bring to her teaching and her students.

Bhaskara attended and presented at numerous professional development events and was quite knowledgeable not only in content but also in strategies and resources to use in the classroom. He noted, "the technology here, we have a lot" but he believed that teachers should be well-versed in how to use technology wisely in the classroom. He described grouping students and completing math relays using math problems in his classrooms and analyzing trig ratios using accessible resources to measure various objects around his room:

> **Etienne:** Yeah, I still make my own assessment for quizzes…we use Iluminate software for the district. We use that for its multiple-choice questions, even Illuminate, you can have other type of questions and all that…. Where I use quizzes is quizzes.com, to assess my kids, in what we do in classroom or even as an exit ticket. To give you insight about certain background information about how well the kids got the information that day or not…it's just a check for myself to how efficient I was explaining the lesson to the kids. (Interview 3)

Etienne used technology to create assessments for his students. He enjoyed using software to generate a variety of assessments, which also graded the assessments and provided instant feedback for him and his students. The instant feedback allowed him to reflect on his instruction and to make any necessary adjustment for future classes and lessons.

With the diversity of resources, ISMTs revamped their teaching practices but the primary tool they all used was technology. Technology has the potential to significantly improve teaching practices in mathematics classrooms. A study by Keengwe and Onchwari (2009) found that

technology-enhanced lessons increased student engagement and motivation. Technology, such as interactive simulations and virtual manipulatives as described by the ISMTs, enhanced the richness and depth of their instruction and enabled students to visualize mathematical concepts, making abstract ideas more concrete. These types of visualizations can lead to students achieving deeper comprehension, retention of mathematical principles, while also capturing students' interest and making lessons more engaging. The ISMTs employed technology to facilitate instant feedback on math problems and assessments, therefore helping their students immediately identify and correct errors. This employment accelerated the learning process and allowed for timely interventions when misconceptions arose. Moreover, technology was utilized by the ISMTs to address the needs of diverse learners. They used adaptive learning platforms and software to tailor instruction to individual students' needs, and also adjusted the difficulty level of math problems based on student performance to ensure that each student receives appropriate challenges and support.

Domain 2: The Learning Environment

The learning environment proved to be the domain where the ISMTs experienced the most transformation in their teaching practices. The transformation of their teaching practices took place in the following clusters: (1) cultivating respectful and affirming environments, (2) fostering a culture for learning, (3) supporting positive student behavior, and (4) organizing spaces for learning.

Cultivating respectful and affirming environments.

> **Devi:** We celebrate September 5th as Teacher Day in India, so all teachers are respected, and teachers don't teach that day. (Interview 1)

> **Bhaskara:** When you don't have a respect then you don't have the value on it. I feel that those values are so important but here (in the United States) that's missing. (Interview 1)

The description of this cluster in FfT states: co-creating an environment with students built on respect is a critical element of a teacher's skill in promoting social and emotional wellbeing and students' academic success. Positive relationships between teachers and students and among students provide a foundation for collaborative learning. (p. 24)

Respectful classroom environments contribute to positive teacher–student relationships, increased self-esteem, improved academic performance, and a reduction in behavioral problems. When teachers show respect for students by valuing their ideas, opinions, and backgrounds, students' self-worth improves, and they are more likely to trust and connect with their educators and less likely to engage in disruptive behaviors (Hamre & Pianta, 2001). The ISMTs expressed that students in the United States generally do not automatically show respect to their teachers or value their teacher's role in educating them.

For the participants, respect is a significant aspect of the interactions in their everyday life in their country of enculturation and teachers are customarily respected and valued:

> **Devi:** For us, books are given by goddess of knowledge. So, if you don't respect books, goddess of knowledge is going to be angry on you. So, you can't just show disrespect, so that respect is been embedded from day one, in your blood, it's been infused. Respect, respect, respect this, respect that, don't throw paper, don't stand on paper, you know. You can't stomp on a paper and then walk away. All these like you can't throw the book away. You can't throw pens away… you getting this respect thing, enculturated in your everyday life…so you can't say bad word to guru, because that teacher is a Guru. I'm still enhancing your knowledge toward your progress, so you should be treating teachers with respect. (Interview 2)

> **Bhaskara:** We have different figures like you know, for education we have a God, for wealth we have a God. So we will worship the books like a God. See when I came here (the United States), the kids are stomping on the book and sitting on the book… imagine, good gracious no…. We automatically give respect to people who are older or in a place of authority. Yeah, the thing is, respecting the elders is very important. We don't call the elders by name at all. We call with their special names like formal names…we try our best, being respectful to the elders is very, very important and not raising your voice against the elders at all. No way, no way…and so even teachers, we respect them as though they were our parents. (Interview 1)

> **Jean:** We (Jamaicans) expect our children to do well in school. We expect them to be respectful to adults. Like the disrespect that people have for teachers (in the United States), they don't pay us that much to you know, for us to suffer like that, you know?! (Interview 3)

Therefore, in their countries of enculturation, the ISMTs did not have to create an environment built on respect because respect was embedded in their culture. The ISMTs had to negotiate their teaching practices to cultivate a respectful and affirming environment for their students in the United States. The theme for the cluster was respect as it was the missing part of the puzzle for the ISMTs in their learning environment. Respect was readily given to teachers in their countries of enculturation but had to be earned in the United States. In the United States, unlike their countries of enculturation, the teachers were exposed to students using derogatory language, making inappropriate comments to one another, undermining their authority, refusing to follow classroom rules, engaging in disruptive behaviors, and showing disinterest by not completing their assignments. Most of the ISMTs experienced cultural shock initially from the disparity of respect for teachers and authority from their country of enculturation to the United States. This respect discrepancy is not the singular experience of these ISMTs, as shown in the NEA's report of the 2018 Global Teacher Status Index of countries where teachers are most valued, the United Stated scored a 39 out of 100 which is below the average country score of 41.4 :

> **Etienne:** I remember he (a student) came to me because he said, "You too young, I won't respect you" and he just walk out. The kids will not respect you…they don't respect you, so you gotta be able to accept that. Kids, younger than your own kids, will cuss you out. I have a friend; he was having a hard time because he said this kid right here cussed me out…. I said yeah, this America man…but guess what? He didn't last long in the classroom. He just quit. I knew, I knew it…I wasn't surprised. I knew he won't last long because you got to change your entire mentality. (Interview 2)

Each participant was asked to describe a day in a mathematics classroom in their country of enculturation. Although the participants are from 3 different countries, they described a strikingly similar narrative. A teacher does not have a designated classroom, instead there is a

teacher's lounge with desks where teachers can work. A teacher rotates around classrooms; therefore, students are already in the classroom when a teacher walks in. In each of their descriptions, the respect students had for the teacher/authority was apparent. When the teacher enters, all the students stand and greet the teacher. A person can begin to see why ISMTs would need to negotiate in this cluster because of how reversed the process is in the United States in which a teacher has their own classroom but is the one standing and greeting the students as they walk into the room:

> **Devi (India):** They are in the class and teachers walk into the class. When we go into the class, all students they got up. Nobody's sitting, they all stand, and they always greet the teacher. They greet the teacher and then the teacher gives them permission to sit. (Interview 2)
>
> **Devi (United States):** …have your own room and having to be standing outside the door welcoming them, instead of you walking in and everybody standing up…like you are respecting them more than they do to you. (Interview 3)
>
> **Jean (Jamaica):** Ok, so we don't have our own rooms like we have here. So when you walked into the room, all the students would stand, and you would say, "good afternoon," and they would say, "good afternoon, miss," and you would say, "have a seat," and they would sit down, and you would start teaching (Interview 2).
>
> **Jean (United States):** I walked in and said hello to the kids, and they were like, they would respond "yes" "no." I was taken aback because when I taught in Jamaica they would always say "yes miss" or "no miss." (Interview 2)
>
> **Bhaskara (India):** When I walk into the classroom, the class is 35 to 40 kids. When you work, it is based on the respect, actually. See the respect is very important there. They (students) cannot act crazy…Come and sit in the class and I start teaching and (the students) pays attention and do the work. (Interview 1)

Respect was a glaring theme evident during the interviews as well as the data analysis within this domain in FfT. In everyday life, respect is a part of each and every interaction that takes places. According to Dillon (2022), from an early age "children are taught to respect their parents and teachers, school rules and traffic laws, family and cultural traditions, other people's feelings and rights, the country's flag and leaders, the truth and people's differing opinions"

(p.1). Teachers however mention lack of respect from community, parents, administrators, and/or students as reasons for leaving the profession. It is not shocking that teachers become dejected with education when the people with whom they must work, administrators, parents, and others in the community, devalue their importance (Marlow, 1996). Lickona (2009) acknowledged the lack of respect for teachers from students stating, "students' respect for authority varies widely from school to school, but overall, teachers say, there is a serious problem: Large numbers of children show attitudes of disrespect and defiance" (p. 15).

For ISMTs to cultivate a respectful and affirming learning environment, they incorporated their cultural values into the classroom. They took on a parental role of showing students how to behave and respond positively in situations when the students were not respecting the learning environment. The ISMTs focused on building relationships with their students as the groundwork for fostering a respectful and affirming learning environment. They invested time and effort in getting to know their students, building trust, and showing genuine care and concern for their well-being. The teachers actively listened to their students when they spoke and demonstrated empathy. Wubbels and Brekelman's (2005) research suggested that clear communication is a fundamental component of respectful teacher–student relationships. The ISMTs noted they learned to communicate expectations, instructions, and feedback clearly and effectively to reduce misunderstandings, which helped students feel respected by being well-informed. Another tool the ISMTs used to cultivate an affirming learning environment was to recognize and praise students' hard work, improvements, and achievements. Utilizing these acts of positive reinforcement strengthened a sense of respect for their students' dedication and promoted a positive learning environment.

Fostering a culture for learning.

> **Etienne:** The point is, if you go to poor school and you want to really learn you can learn. You can learn, you can become what you want to become. The teachers are there to help you out. I was having one day of tutorial during the week but if you ask me that you want to come on Wednesday, I will stay for you. You see what I'm saying? So I'll make myself available. What I do to be available to kids, is that once school starts I got no life, no girlfriend, no wife, I just dedicate my life to the kids. So, if you need me, I'm available. (Interview 2)

To foster a culture for learning according to FfT, high expectations accompanied by support must be established. Furthermore, learning is not just guided by the teacher; students too should take responsibility for their learning, learn to persevere through challenges and have confidence in their abilities. Research in the United States and Australia has shown that teachers can foster a culture for learning by setting high expectations, promoting a growth mindset, implementing differentiated instruction, modeling a love for learning, providing constructive feedback, and creating a safe and supportive environment (Dweck, 2006; Hattie, 2009; Hattie & Timperley, 2007; Tomlinson, 2017).

The difference in the culture for learning in the United States was a jarring experience for the ISMTs. In their countries of enculturation, the responsibility of learning fell on the students and parents did not blame teachers if their child/ren did not learn. On the contrary, when students were not learning the material taught by their teacher, parents would step up. Parents supported teachers by making sure their child came to school, had materials needed to foster learning, and sending their child to tutoring or teaching them at home when they needed additional assistance. The theme for this cluster was accountability for learning given that the ISMTs where now held responsible for fostering a culture for learning when prior to coming to the United States they never had to:

> **Etienne:** Back home, the only way out (of poverty) for the kids was education, so everybody really want to learn. So you don't have to worry about motivation. In

> America, you got to worry about motivate those who are not motivated to learn, so that's another issue for you to as a teacher (Group Interview).

The ISMTs in the study did not perceive that there was a strong culture for learning at their new schools. In the interviews, ISMTs noted that skipping school or class was more common for students in the United States. Some students do not come prepared to learn in class and did not see the value in completing their assignments. Although free resources such as before school or after school tutoring are available, such resources were not taken advantage of by most students. For ISMTs, it was one thing for the students not to take accountability in their learning, but they were also surprised to find that in some cases parents lacked accountability as well. Jean expressed that there were times students would skip school and she would contact their parents and the parents would come up with an excuse for the student. Etienne expressed the lack of accountability of parents by sharing a similar experience when a student skipped class and he called home and the parent covered for the student. Later that same day, Etienne saw the student and spoke to him, only to find out the story the parent gave was a cover and not the truth. There were also times when parents would call students during the class period, which the ISMTs viewed as disrespectful to them and devaluing of the learning environment.

The ISMTs adapted to share the accountability for student learning by developing a culture for learning via setting high expectations, creating a safe and supportive environment, integrating differentiated instruction, and modeling a love for learning:

> **Jean:** The expectations for students are different here. In Jamaica, you're not spoon fed, you're expected to work. But the expectations for the kids (in the United States) are low…when I started teaching, I was just so surprised that they would give stuff like homework passes. So I'm like, if I'm giving homework, it's important. Like, I'm not going to give a homework pass. My expectations (from Jamaica to the United States) are the same. I expect them to be respectful and do what I ask you to do…what has changed is the way I speak to the kids. So, I call them my love, I said, "so how you doing today my love" and you know, and I tell them I love them (Interview 2).

Later in the interview, Jean reiterated: “Have high expectations of the kids and when you have high expectations, they will rise to those expectations, those standards. Communicate with them, tell them the first day, tell them what you expect and maintain your standards. Don’t change it” (Interview 2). For Jean, setting high expectations challenged her students to put effort into their learning and she spoke caringly to her students to create a safe and supportive environment, and this fostered a culture for learning in her classroom. Etienne communicated that students have to buy-in to the teacher first before they are willing to listen and learn from the teacher. Etienne therefore supported and connected with his students by being a soccer coach, attending football games and games of his students, contacting parents, and providing materials and snacks in his classroom. Once his students viewed him as a supportive figure in the classroom and outside the classroom, their willingness to learn in the classroom improved. Etienne recalled an instance when a student missed class and he called his mother to check-in on the student:

> **Etienne:** I mark him absent. He’s a young man that don’t do a lot of work, but I care about him. So I called his mom to find out what was wrong with him. I said, ok, tell him I called. Show him I care about him.… I didn’t talk about the work he wasn’t doing in class with his mom. I said, I’m calling to find out if he is safe, that’s all. She said thank you. (Interview 2)

For Etienne, creating a safe and supportive environment was the key to fostering a culture for learning in his classroom. Once his students had bought into the learning experience, he continued to grow their interests in learning and understanding mathematics by incorporating games into his lessons as an element for differentiating instruction and modeling his love for learning:

> **Etienne:** Because I found out myself these games develop my brain when I was a child growing up, so I want the kids to have a similar experience. But it’s a game that you got to interact, its hands-on…it was something different for the kids to do. I expose you to the games and if you have interest then we just do it and I play myself and I enjoy it too. (Interview 3)

Devi and Bhaskara also shared similar stories of how they took on more of the accountability for student learning and established a culture for learning through creating a safe and supportive environment and promoting a growth mindset.

Supporting positive student behavior.

> **Devi:** You have to do corrections in their behavior, like I just said, I had to talk to one of the kids and she would just raise her tone. I'm like no, don't raise your tone, you can say that like this way too. (Interview 2)

FfT describes effective teachers who support positive student behavior as teachers who are not trying to control their students or remove misbehavior with their authority but rather promote compassion, support, and other positive behaviors with purposeful classroom rules and norms. Strategies supported by research that teachers can implement to support positive behaviors in their students are establishing clear expectations and rules, providing positive reinforcement, building teacher-student relationships, and being consistent in discipline (Emmer & Stough, 2001; Hattie and Timperley, 2007). When students know what is expected from them and understand that rules and consequences are consistently enforced, they are more likely to exhibit positive behavior. Building trust and rapport with students and reinforcing positive behaviors can also motivate and sustain students' good behavior. The theme of this cluster was classroom management because setting, modeling, and enforcing the rules and norms dictates how well a teacher can promote positive student behavior to maintain order in their classroom and keep their students engaged in learning.

None of the ISMTs had ever heard of the concept "classroom management" nor did they have to manage the behavior of their students prior to coming to the United States:

> **Bhaskara:** Classroom management is not a terminology existing in the Indian classrooms. You know, when I came to United States the first question is talk about classroom management. Classroom management?! In India it was already built-in, so you don't need to focus on that. (Interview 1)

> **Etienne:** It was a lot of kids in the classroom (in Ivory Coast), but it was quiet. It was super quiet, no one could talk. You can't even breathe, man. Yeah, because there's no distractions and no interruption…no one can talk, seriously. (Interview 1)

In their countries of enculturation, teachers did not have to establish classroom rules or monitor behaviors because the culture for learning regulated student behavior. Students did not disrupt the class, sleep, put their head down on the desk, or get up from their seats because they were there to learn. In the United States, the ISMTs perceived some students as not valuing education and in turn the students were not as engaged in the learning environment resulting in more occurrences of negative student behavior. Because the ISMTs were exposed to little to no negative student behaviors in their countries of enculturation, they lacked the skills and strategies to combat such behaviors when they arose and even more importantly, the ISMTs were lacking the skills and strategies to keep these negative behaviors from occurring altogether. Constructive feedback from the ISMTs' evaluations by their administrators were focused on how the ISMTs failed to manage positive student behaviors in the classroom:

> **Etienne:** Classroom management was the issue, and it wasn't you, cause you dressed up, you know you're going to be evaluated, so you're ready, but it's the kids don't care, they don't care about nobody. And that kid didn't eat last night, so he didn't sleep last night, he came to class and sleep, that's it. What you going to do? Wake him up? Wake up Johnny and to wake him up, you can't touch him. You say, Johnny wake up or you knock on the table, he wake up, you turn around, he go back to sleep again. The child is tired man. (Interview 2)

> **Devi:** My only problem was classroom management, so they (administrators) were like you are an excellent teacher. We just need to support (you) a little bit and then you will be rocking. (Interview 2)

Over the years, each ISMT learned how to manage their classrooms and support positive student behaviors. For Bhaskara, he focused on building teacher-student relationship to promote positive behaviors from his students:

> **Bhaskara:** Why the classroom management is happening because disconnect between the teacher and the student. If there is a connection, I don't think that the classroom management is an issue. (Interview 2)

Bhaskara revealed an instance where a student had stolen personal belongings of another teacher and the teacher was considering pressing charges against the student. Although he agreed with the teacher that the student should have a consequence, he expressed an alternative method of approaching the situation that could foster positive student behavior in the future and not damage the student's educational record:

> **Bhaskara:** And I said that, you are seeing as an incident, but think about the child's mental agony, that's why the child is in that situation. It is that day's momentary reaction, it is not that child. Just if you go and talk to the child and see that next day you try to be a new person…even though I (student) did something wrong, but then he (teacher) came and told me how to be better and not do what I was doing, it's not right, not appropriate kind of stuff.…That child will see you as an icon and inspiration, for their life…Because you (teacher) don't know what exactly the child's background. You don't know how much the child is suffering. (Interview 3)

For Bhaskara, it was more important to talk with the student, figure out why they stole the belongings of the teacher, and rectify their behavior by modeling positive behavior rather than focusing on the highest form of penalty and removing an opportunity to remedy the behavior. Bhaskara understood that there was more to the student's action and believed if the teacher modeled positive behavior rather than just reprimanding the student, the student would be more likely to see the teacher in a positive light and change their behavior. Jean and Devi provided similar remedies:

> **Jean:** (I) usually have a good relationship with my students. I feel that when you have a good relationship with them, most of them will do the best they can. I don't talk down to them or anything. And like today, when I'm done talking to you, I'm going to a baseball game because one of them wanted me to come see the baseball game. So they asked me, I try to go even if I don't like the sport, I go (Interview 2).

> **Devi:** Tell your classroom expectations and consistency of classroom expectations. And then slowly build up relationship, but initially you have to be like very firm on what you

> are expecting. So you make clear about everything you expect, and then you go building up relationship. And communication was the key. (Group Interview)

The other ISMTs also focused on building teacher–student relationships to encourage positive behaviors in the classroom while they also established clear expectations and rules and provided positive reinforcement. In the excerpt above, Devi recalled a conversation with another international teacher who was struggling with classroom management and revealed how she learned to support positive behaviors in her classroom. Communicating the classroom expectations and consistently enforcing the expectations was Devi's practice to support positive student behavior. Additionally, she worked on building positive teacher–student relationships and modeling appropriate behaviors for her students. For Jean, she built relationships with her students inside and outside the classroom. In her class, she kept her mom hat on and treated her students like her own child. She spoke to her students in a loving manner and did not tolerate disrespect. Outside the classroom, Jean would attend her students' events or games to show support and encouragement them. In turn, her students felt she cared about them as individuals, and they responded positively towards her.

Organizing spaces for learning.

> **Devi:** There's less physical space between student to student and then here (in the United States) they have like more personal space, they have their own desk and everything. Again in India, most classes, the students are always facing the teacher and the board. And here (in the United States), it's not. You can arrange the classroom as you like. (Interview 2)

Successful teachers within this cluster of FfT prioritize the organization of the physical space of their classrooms for learning and development as well as making the design safe and equitably accessible. Research in the United States has shown that the design of a classroom can influence interaction, collaboration, teacher–student relationships, focus, inclusivity, and the overall effectiveness of instruction (Hunley & Schaller, 2009; Rands & Gansemer-Topf, 2017).

Seating students in groups or pairs promotes face-to-face interaction among students and with their teacher, which leads to increased engagement, peer learning, and the exchange of ideas, altogether fostering a more dynamic and participatory learning environment. Moreover, a well-thought-out seating arrangement can minimize visual and auditory distractions, allow students and teachers to move freely, and permit the teacher to maintain eye-contact with all learners, facilitating feedback and support (Fisher et al., 2011).

. Because the ISMTs did not have their own classroom in their countries of enculturation, organizing their classrooms for learning was a teaching practice they acquired. The ISMTs stated the typical classroom in their countries of enculturation were setup to promote a teacher-centered class. The seats were all lined up and facing the front of the class and the blackboard:

> **Jean:** I don't recall my teachers walking around. They would sit at their desk, and they would teach or stand at the board and teach. And in my high school their desks were on top of a platform so they would stay up there, and they never came down (Interview 1).

The classroom arrangement for each classroom remained uniformed because teachers did not have their own classrooms. Teachers in those countries therefore did not have an option to design the physical spaces they taught in. The theme for this cluster was flexibility because the ISMTs came from rigid physical spaces to having the freedom to create and design spaces to fit their instructional needs.

> **Devi:** Like if you're just teaching something, then you can have them like everybody faced to you. If they're doing independent practice, then you can pair them up and say, hey you can practice, you two can pair up and practice. So you can do group activities, you can do station rotations, you can do a lot here…right now I have like three groups in my class. They don't all face the board, one face like that, the other face like right, and the middle group face forward. So I just keep changing it. (Interview 2)

Having their own classroom in the United States was a new experience for the ISMTs. In addition, placing posters/activities on the wall, maintaining safety drills routines, creating stations, and so on were new learning experiences for the ISMTs. The teachers had shifted their

instruction to be more student-centered and also designed their classrooms to align with their instructional plans. Some of the teachers switched their seating arrangements regularly depending on the activities they had planned for the day/week and others had a set arrangement of groups for collaborative learning experiences. Some teachers implemented permanent stations to integrate differentiated instruction for diverse learners. The ISMTs also rotated students methodically to limit distractions, disruptions, and to foster a learning environment.

Domain 3: The Learning Experiences

The third domain of FfT focuses on the implementation of the lesson with an overview of the purpose and content, questioning and discussion techniques, engagement of students in learning, use of assessments for learning, and flexibility of the teacher during instruction to meet the needs of students. ISMTs being confident in their content and pedagogy, did not face many challenges within this domain. The only cluster where they voiced having to negotiate their teaching practices was engaging students in learning. As evident from the second domain, the culture for learning varies from country to country and therefore the ISMTs had to develop means and resources to engage their students.

Engaging students in learning.

> **Bhaskara:** I want them to be responding to my questions…if you don't respond to me then you're not participating in the lesson and if you're not participating in the lesson, you're not going to get anything. (Interview 3)

This cluster conveys that for student learning and development, students must be engaged in the learning experience which is the primary responsibility of the teacher. A meta-analysis by Hattie (2009) synthesized over 800 meta-analyses of educational research and found that student engagement had one of the highest effect sizes on student achievement. Engaged students consistently outperform their less engaged peers and they are more likely to participate in

learning activities, ask questions, and seek clarification when needed. This active involvement in the learning process leads to a deeper understanding and retention of the material and improved academic performance. As discussed previously, in the ISMTs' countries of enculturation, learning was the student responsibilities and the teacher's role was to teach the material. Therefore, a teacher-centered approach was used by the teachers during instruction. The ISMTs had to adapt their teaching practices to integrate methods of engaging students in their respective classroom to promote learning. The theme for engaging students in their classrooms was active learning.

Bhaskara admitted he initially used a teacher-centered approach but later switched to a more student-centered classroom to increase the engagement level of his students. Instead of preaching at the board, he wanted his students to discover the mathematics. To engage his students, he focused on his questioning techniques to promote active learning, which he learned from a college professor. His linear programming professor was an exemplar not only for engaging students through effective questioning but also for helping Bhaskara "understand the logic behind math":

> **Bhaskara:** He will put a problem on the board, he will come and sit with us, and he will pretend as if he doesn't know anything. And he will probe questions like a student, and he'll make us to do it. (Interview 1)

Bhaskara loved how the teacher engaged his students that he modeled his classroom similarly. He used questioning techniques to engage his students and prompt them to discover the mathematics. When students are asked thought-provoking questions, they are more likely to think deeply about the material, connect new information to prior knowledge, and make meaningful associations. A study by Hidi and Harackiewicz (2000) demonstrated that well-designed questions can enhance students' interest in a subject, making them more motivated to

learn. Bhaskara, used questioning to ignite his students' engagement to become active learners and to learn new concepts:

> **Bhaskara:** I want your attention with me. How can I do that? I will say that; you tell them (students) that I'm going to randomly pick people. I want you to respond to my question. If you don't know the response, and that's fine, that's fine, but I'm going to ask somebody else who knows to volunteer to answer the question. I'm going to ask the person, you need to pay attention to that person, and I want you to repeat (their response) to me. (Interview 2)

For Etienne, engaging his student began with the creation of the learning environment. On a daily basis, Etienne has an agenda on the board so students are aware of the objectives for the day then he would have a bell ringer activity that also incorporated questioning to stimulate learning and engagement. For example, he stated that when he was teaching radicals, at the beginning of each lesson, he would promote learning the perfect squares by randomly calling students and asking for the perfect square of numbers from 2 to 21. Thus, both Etienne and Bhaskara used questioning techniques as well as games to engage students. Etienne grouped the seats in his room by four, he would call a group to answer his question, so the students had to work collaboratively and answer the question which kept them actively engaged in learning. More than questioning, Etienne loved using games to engage students and teach mathematical concepts:

> **Etienne:** You got to make the work fun for them. So you got to look for resources, find resources for examples for them to do the work. They can't just do rote work… I got checkers. I got chess, everything for the kids to have fun in. Because I believe that, if you extend the brain of a child, maybe one inch, that brain will never go back. I brought from Africa, a game called Awale. It's good for the counting principle of mathematics…and Awale is based on thinking so that's why I like it. (Interview 3)

Devi used the bell ringer as the lesson activator and a tool to initiate learning. Like the other ISMTs, questioning was used keep her students engaged:

> **Devi:** Supposing I'm teaching parallel lines; I ask where do you see parallel lines in your real life? If I'm teaching rotations, I'm asking them can you give me examples of simple like things that rotate? (Interview 3)

For Devi, asking these types of questions before and during her lessons, created the "momentum" for engagement and to keep her students actively learning during classwork, she also interspersed self-designed insightful activities. Devi learned that students loved fun activities, so she incorporated game-based learning platforms such as Kahoot for students to compete with one another and this helped keep her class fun while her students actively learned mathematics.

Domain 4: Principled Teaching

The fourth domain of FfT revolves around the reflective practices of teachers and what teachers do outside of the classroom. The transformations of the ISMTs' teaching practices took place in the following clusters: (1) documenting student progress, (2) engaging families and communities, and (3) contributing to school community and culture.

Documenting student progress.

> **Bhaskara:** Here it (documentation) is needed because the parents don't come to school asking questions. Automatically, the teachers are expected to reach out to the parents like, right? And then, the other one is, I will say documentation as far as students work, I will say in India, we don't see much of that. (Interview 3)

A successful teacher according to this cluster of FfT is a teacher that "consistently gathers, updates, and shares data that is accurate, accessible, and clear to students and families" (p. 50). There are various reasons listed in educational articles as the purpose for documenting student work such as aiding assessment, evaluation, and data-driven decision-making but also enhancing accountability, communication, and individualized support. As a reflective practice, when teachers document student work they can assess and evaluate students' progress accurately. Documentation provides a basis for identifying individual strengths and weaknesses,

which can inform instructional decisions. Documenting, in turn, helps teachers tailor their teaching methods to meet the specific needs of each student, ultimately enhancing learning outcomes. Documenting student work also provides a transparent record of student achievements and progress. This documentation can be shared with parents, school administrators, and other stakeholders, fostering effective communication and accountability within the educational system. Hence, documentation helps maintain a clear line of communication regarding student performance and goals.

Prior to coming to the United States, the ISMTs discussed the simplicity of documentation. Jean stated that "in Jamaica, [she] wasn't required to turn in a formal plan" (Interview 2); this lack of a required plan was similarly the case for the other ISMTs. They each made their own lesson plans, and the lesson plans were not documented or reviewed by administrators. Even a syllabus was not required as stated by Devi, "We don't give syllabus in India, it's there in the textbook, why do I give again" (Interview 3)? The teachers did not have to supply what they were going to teach, the materials required, the standards or learning outcomes for the class. The ISMTs would grade the tests and quizzes, record the scores in a gradebook, and return the assessments to the students. Teachers were not required to contact parents about their child's performance in class because it was the parent's responsibility to monitor their child's progress. In fact, parent conferences were not the norm for ISMTs. Correspondence with parents typically occurred around the dispersal of report cards. The accountability for a student's final grade was on the student and teachers were not accountable if a student did not pass the class:

> **Etienne:** Back home, the teachers are at the top of the ladder. If you fail a test back home, your mom won't ask the teacher, no question. She assume he (teacher) knows what he doing. In America, the mother going to question you. (Interview 2)

According to the ISMTs, teachers in their country of enculturation were not questioned or blamed because teachers were skilled and competent and therefore parents accepted that the teacher did their job to the best of their ability and the student may or may not have done the same. In the United States, the contrast in the viewpoint of whom is accountable for student learning made the ISMTs negotiate their teaching practices of how and why they document student progress. The theme for documenting student work was evidence-based as the ISMTs had to have documentation for what they were teaching, how they were teaching, and how they were communicating student progress with students and parents:

> **Etienne:** I hate that feeling that you got your back covered. I really, I really want to be genuine about doing things, you see what I'm saying… but in America, you got (to have) your back covered. Legally, I give my quizzes, I got document to show you I did it, you know. (Interview 3)

> **Devi:** That documentation, again, it plays a key role here, but again, it depends on like parent to parent. Some parents, you know, take the teacher word as you know, whatever the teacher says as the word, yeah.…So documenting everything becomes a part of your teaching instructions so you can show to the parent like I've been doing this, I've been teaching this, and your child didn't ask me any question when I was teaching, and now she's saying, like, I don't know anything on the quiz. (Interview 3)

> **Jean:** In Jamaica, we didn't document anything. We didn't call any parents. On report card day they came, and we told them whatever we told them, and that was it, and whatever we said they took it, they believed us. Here yeah, they think we are just there to get their kids or something, I don't know. Here, we're expected to document everything, call home, e-mail home. (Interview 3)

Given that accountability of student learning is heavily placed on teachers in the United States, ISMTs in the study quickly recognized the important of documentation. The ISMTs admitted that they were not formally evaluated in their countries of enculturation which supported their statements that teachers were not held accountable and were trusted to do their job. Having to be evaluated in the United States was a new experience but also a facilitator in documenting student work, which is a required component of a teacher's evaluation.

Documenting student progress as described by the ISMTs was not part of their teaching practices until they began teaching in the United States. Although keeping a record of student work was important to monitoring their students' progress and aided the ISMTs in their instructional decisions, the teachers voiced that documentation for them was a means to safeguard themselves because of the accountability placed on teachers and lack thereof on students and parents. ISMTs voiced that parents would question them about their child's grades, how they were taught, and how they were assessed. At times, the ISMTs even felt they were being blamed for the child's low performance. Administrators also required evidence to support teachers when parents would make inquiries pertaining to their child's progress at school. Therefore, to absolve themselves of blame for the student's behavior or performance, the ISMTs had to produce evidence that justified the student's grade, the validity of their assessments, and the effectiveness of their learning environments. The ISMTs stated they kept attendance records; lesson plans were submitted to administrators; parents of students who were at risk of failing were notified via email, phone call, or grade notifications; and they provided reteaching or materials for learning standards that students did not meet. All these steps the ISMTs took to monitor student progress were recorded as evidence to ensure they could prove they did their job to the best of their abilities.

Engaging families and communities.

> **Etienne:** I was getting ready to go to Sam's club and buy some stuff for them (students) tomorrow. Because I put a team together for EOC (End of Course assessment). So I'm going to meet with them Tuesday and Thursday after school, for one hour, 3:30 to 4:30. So I've called other parents yesterday to see to see if they can come pick up the kid because there's no bus at 4:30. (Interview 2)

According to the FfT cluster, successful teachers are aware that their success is linked to their students' success and a key component of achieving this goal is the engagement of parents

and the community. In the excerpt above, Etienne was demonstrating this principle in his description of how he had put together a team of students to support the students' success on the state-mandated end-of-course assessment. He was calling parents to make them aware of the opportunity for their child as well as ensuring the child will have transportation back home. To capitalize on the opportunity, Etienne was going to Sam's to purchase snacks, drinks, and notebooks for the students who would be able to stay after school to ensure they were fed and prepared to learn. Research consistently validates the positive impact of involving parents and the community in a student's educational journey (Fan & Chen, 2001; Henderson & Mapp, 2002). Such engagement not only contributes to academic success but also fosters social and emotional development, reduces dropout rates, supports special needs students, leverages community resources, and nurtures holistic growth. Therefore, these collaborative efforts between educators, parents, and the community are essential for ensuring that students thrive in their academic pursuits and beyond.

For the ISMTs in this study, engaging the parents was another addition to their teaching practices. The teachers found parental involvement was useful for curbing unproductive behavior of students and a pathway to foster student success. The theme was building a support network by having open and regular communication with parents, using technology to update parents on student progress and resources, and celebrating achievements:

> **Etienne:** Here (in the United States) I was calling parent because when the child has a bad behavior in classroom, you tell mom, she would talk to him, and the child would change completely. So parents' involvement for me has been the key to my classroom. Yesterday, I called and text about 30 parents. Some for tutorial, let them know and some to praise the kids.…Teachers have a tendency to call the bad kids' parents… I was calling the good kids' parents. I was going to bed, smiling to myself. The parents were happy, the kids were happy. Because that good kid, I'm the only one, I'm the only teacher who call the mom to say you're doing a good job at home, your daughter is being well raised, she's doing good in class, she participates, she asks questions. I called a mom yesterday,

> she starts crying, I'm telling you. Because nobody called her to tell her daughter is doing good job. You got to let the mom know she is doing a good job. (Interview 2)
>
> **Bhaskara:** Another thing I was preferring to do was contacting the parents and making sure that I build the relationship with the parents. I mean, I learned this trick in 2–3 years, like, first year I learned that I need to learn the student and then second and third year I started learning that oh, you need to have a contact with the parent. And call the parent not to complain about the student. First introduce yourself self then try tell something good to the parent so that the parent will trust you. Once they trust you, what I started doing is I started storing the names, the parents phone numbers in my cell phone. I go to the classroom, I mean randomly I call every day, two to three parents, and we talk, and I don't complain anything, but the parents talk to the kids. The kids talk to their friends, hey, Mr. Bhaskara called me, you know, so it spreads a lot and with that introduction when I go to the classroom and somebody is not following the instruction, what I do is, ok, I'm going to call your mom right now. I'll just show the name, they say no, no, no, no…they see the number is on my phone, they know that I call, I'm not lying. (Interview 2)

Etienne established his support network by calling parents to make them aware of resources available such as tutoring to assist their child's progress. He also made it a point to not just call the parents of students who could be in jeopardy academically but to call the parents of students who were academically successful. Praising the student and the parent created a positive climate and connection. The students felt acknowledged and supported and the parents felt seen and championed. By building a relationship with the parents, teachers demonstrate to each party involved how they are jointly vested in the student's success and promotes the continuity of their collective efforts to reach their goals. Bhaskara learned that engaging parents builds trust and over time helps the parent(s) and student view the teacher as an extension of the family. The parents have his phone number and Bhaskara can openly and easily communicate with parents because he initially created a connection based on building a relationship and he sustained this relationship through open and regular communication. Therefore, if a case arises and a student is misbehaving, he can call a supportive parent which in turn limits such occurrences in his classroom. For Bhaskara, when the focus is not on student behavior then all parties can focus on

student learning, which was his primary objective in engaging parents. Engaging parents for the ISMTs was an opportunity to build a supportive network that fosters a positive classroom climate. Students feel valued and connected when their families are involved, leading to improved social and emotional well-being. This sense of belonging can reduce stress, anxiety, and behavioral issues, creating a conducive environment for learning (Fan & Chen, 2001).

Contributing to school community and culture.

> **Jean:** They offer professional development for everything, for everyone, it's there. So I got my gifted endorsement through the county. I, like now, I'm doing Google educator certification. I've been to several different trainings and then come back and train other teachers. In Jamaica, and again, that's been 22 years, we didn't have as many professional development opportunities. I don't know if that was just the culture or just the lack of money. Any growth and development I had, was just as a result of being in the staff room with all the older teachers. And just asking them for help, and asking them, well, you know I know this, but I don't know how to teach this, what would you do (Interview 3)?

This particular cluster of FfT emphasizes what teachers do outside the classroom to grow professionally. Effective teachers in the cluster lead and contribute to the school's initiatives and work collaboratively with colleagues to acquire successful practices. A meta-analysis by Yoon and colleagues (2007) commissioned by the U.S. Department of Education found that high-quality professional development for teachers can lead to an increase in student performance by up to 21 percentile points. Professional development can equip teachers with research-based strategies and instructional techniques that are proven to enhance student learning. When teachers continually update their skills and knowledge through professional development, they are better prepared to meet the diverse needs of their students and facilitate academic growth. The theme for the ISMTs was a willingness to grow. The teachers willingly wanted to grow in their profession, and followed up by seeking professional development opportunities, pursuing/obtaining an advanced degree, presenting and publishing research, being members of professional associations, and collaboratively working with their peers.

When I asked each participant if they had professional development opportunities in their countries of enculturation, their responses were:

> **Etienne:** No, forget about it. (Interview 1)
>
> **Devi:** No, no, only our seniors (teachers) would tell you like what to do next. And then you follow them. (Interview 1)
>
> **Jean:** We had departmental meetings, but it was not for professional development…occasionally we would have professional development from the Ministry of Education but that wasn't very often. Once every few years. (Interview 1)
>
> **Bhaskara:** We talk to each other. It may not be very formal. There's no formal training like here (in the United States). Here we provide a lot of formal training. (Interview 1)

Workshops, conferences, professional learning communities, and so on were not available for the ISMTs or were fairly limited in their countries of enculturation. Nonetheless, they all communicated that teachers in their countries of enculturation would collaborate with one another as a form of professional development. Veteran (Senior) teachers in their countries of enculturation were valuable resources for new teachers and often shared effective practices gained from experience. Once the ISMTs began teaching in the United States, working collaboratively with senior colleagues was still a valuable source for professional development but there were additional resources that they could use to grow professionally:

> **Bhaskara:** Recently I went to the GCTM Conference, there are lot of new ideas…the teacher who is teaching in the classroom for 28 years, about to retire, she and her friend they come and present that, now when the kids walk into the classroom, they go to the walls. They will not be sitting in the seat at all. And they will probe questions, so that the kids will write on the board, one person will say, other person will write, so they have to be a team collaboration. There is no way the child can be off task. If you sit in the seat, you may be off task, but if you are writing on the board, nobody can be off task. And they (students) are proud about themselves and now, my classes are all engaged. All the students, are all the time, doing their work. (Interview 3)
>
> **Etienne:** So I took $10,000 to do my EdS. I got my EdS, ok, which is the education specialist and I paid that back. And then I took $25,000 to do my PhD… (my old school) used to invest a lot of money in teacher training. And while I was there, I took advantage

> of that and went outside the state for two or three days. We learned some new techniques. (Interview 2)
>
> **Devi:** Right now, in one of our PLCs, it's like it's called as gradual release strategy. You're gradually releasing, you are gradually releasing the material, then you are gradually working together, and then you are gradually making them (student) work independently. (Interview 3)

A study by Desimone and colleagues (2002) emphasized that professional development can lead to significant changes in teacher practices, including adopting more effective instructional methods and assessment strategies. When the ISMTs were engaging in various forms of professional development they confirmed Desimone and colleagues' findings, stating how learning new teaching practices or strategies enhanced student learning in their classrooms. Jean, in the introductory except above, contributed to her school's initiatives by attending professional developments and teaching her colleagues the effective practices and strategies she gained. Bhaskara not only attended professional developments and gained methods of improving student learning but also he presented at conferences and published articles. Etienne sought higher degrees in his field to be an asset to his students and school. He also took advantage of the professional development opportunities at his school to stay up to date, ensuring that he is well-equipped to implement the latest advancements in education and address the changing needs of students. Devi, through the professional learning community at her school kept learning innovative teaching practices, pedagogical techniques, and classroom management strategies. The additional resources available to ISMTs in the United States served as a catalyst for them to grow professionality and develop their teaching practices to influence student learning.

Summary of the Application of Danielson's Framework for Teaching

Danielson's framework for teaching draws on extensive literature in education and teacher effectiveness to provide a comprehensive view of teaching and provide clear, specific,

and observable criteria for effective teaching. Applying FfT, I was able to identity the effective teaching practices that challenged the ISMTs. Within the first domain of planning and preparation, the ISMTs were placed in classrooms of diverse students and resources that resulted in the transformation of their teaching practices of knowing and valuing students and using resources effectively. The most challenging and transformative domain for the ISMTs was the second domain, the learning environments. Coming from cultures where respect was embedded in everyday interactions to the United States where respect is earned not given, the ISMTs had to add cultivating respectful and affirming environments into their teaching practices to teach effectively. Moreover, the ISMTs had to foster a culture for learning through sharing the accountability of learning with their students. The teachers also acquired classroom management strategies to support positive student behavior and having the flexibility to design their own classrooms they gained the practice of organizing spaces for learning. The learning experiences, third domain, which focuses on instruction was transformative as the ISMTs learned to adopt active learning to engage students in learning. Lastly, in the principled teaching domain, the ISMTs negotiated the teaching practices of documenting student progress by ensuring they had evidence to support outcomes in the classrooms, engaging families and communities to build a support network, and growing and developing professionally through their willingness to grow and excel in their profession.

Applying Cultural Fusion Theory

Kramer and Croucher's (2017) axioms of cultural fusion theory (CFT) provides a framework for understanding how international teachers, who bring their own cultural backgrounds and teaching experiences into a new teaching context, negotiate and transform their teaching practices. Cultural fusion theory proposes that when different cultures come into contact

that there is a mutual exchange of ideas, values, and practices. CFT explores these complex processes of cultural exchange, adaptation, and transformation. Unlike traditional acculturation models, which may suggest a one-way assimilation process, cultural fusion theory highlight bidirectional influences. In this study, CFT was used in an intertwined combination of Danielson's framework for teachers (FfT; 2013, 2022) to show how the ISMTs influenced their classrooms and how their classrooms/schools influenced them. Specifically, there are four of the seven axioms of CFT that were explored within the data: axiom 1, axiom 4, axiom 5, and axiom 6.

Axiom 1: Cultural Fusion Involves Both Acculturation and Cultural Maintenance

> **Etienne:** I've seen changes in my attitude at first. Ok, when I first came, I was like we did that better at Ivory Coast and then I realized we are not number one in the world. (Interview 3)

International teachers often find themselves in educational environments with diverse cultural backgrounds. This axiom suggests that cultural fusion is inevitable as teachers and students from different cultural backgrounds interact. International teachers are likely to learn new teaching practices and maintain aspects of teaching practices from their country of enculturation. Etienne in the excerpt above, recognized there were aspects of teaching in Ivory Coast that he believed to be better than the United States (cultural maintenance) but through his interactions with colleagues and students he saw areas of improvement (acculturation).

In the first domain of FfT, planning and preparation, the ISMTs kept aspects of their teaching practices from their countries of enculturation such as planning a coherent instruction and setting instructional outcomes. The ISMTs however had to learn how to address and meet the needs of diverse students by getting to know and value their students. They purposefully interacted with their students to build positive teacher–student relationships to get to know their

students in order to personalize and differentiate instructions to meet their needs. Because the teachers came from a background with no technology, they had to learn to use technology effectively to address the needs of diverse learners. For example, they incorporated visual aids into their lessons, used graphing calculators to graph functions and identity their characteristics, and they used technology to assess their students and identify grade level math standards that needed to be revisited:

Jean: In Jamaica, we were expected to just provide instruction, nothing else (Group Interview).

Within the learning environment domain of FfT, acculturation took shape in learning to build relationships with their students and having to set, communicate, and consistently implement classroom rules to establish a positive learning environment. In their countries of enculturation, students were held responsible for learning and teachers focused solely on teaching the material. Students did not disrupt the class, were well-behaved, and respected their teachers. The ISMTs had to adapt their teaching practices in the United States to construct a similar learning environment. Cultural maintenance was evident in the ISMTs setting high expectations of their students to foster a culture for learning. Jean expressed she dressed professionally to work every day, she did not dress casually as some of her peers, and this was a practice she brought from Jamaica. She held high expectations for herself and presented herself accordingly to inspire her students to rise to her standards. Having been exposed to students who took responsibility for their learning experience, ISMTs knew their students in the United States were capable of being accountable of their learning and encouraged them to do so.

In the third domain of FfT, learning experiences, cultural maintenance was seen in the use of drilling. Drilling was used in their countries of enculturation for developing students' fluency in mathematical skills and procedures:

> **Devi:** (In India), more drill, more drilling, you do lot of exercises. (Interview 1)
>
> **Bhaskara:** I used to give 200–300 problems as homework for the week. The kids don't even complain about anything…see when you have a good practice of those 200 problems, you'll try to learn the trick of things and its skill based. Skill is a tool, without having the tools, you cannot think broadly. (Interview 1)

In drilling, students are presented with a series of math problems or exercises that focus on a specific mathematical concept or skill. They are then asked to solve these problems repeatedly. The goal is to practice the same type of problem multiple times to reinforce understanding and improve accuracy and speed in solving them. The ISMTs continued to drill students in the United States to build fundamental mathematical operations and procedures but admitted they scaled down on the number of practice problems. The teachers transformed their teaching practices by learning to engage their students through questioning, scaffolding, and activities.

Within the principled teaching domain of FfT, the ISMTs maintained teaching practices from their cultures such as engaging in reflective practices and collaborating with colleagues. The ISMTs consciously wanted to be effective teachers and often sought knowledge from senior teachers. They continued to seek knowledge in their field from colleagues in the United States but also grew professionally through professional developments and engaging with parents and their community.

Teaching is a multifaceted practice influenced by cultural norms, values, and traditions. When international teachers enter a new cultural context, they must navigate the complexity of blending their teaching methods with local expectations, pedagogical approaches, and communication styles. This complexity requires them to adapt and innovate. From their acculturation and cultural maintenance of teaching practices based on their experiences, international teachers are learning to adapt, and this process leads to their intercultural

transformation. This intercultural transformation can be influenced by communication competence and interactions with other international teachers.

Axiom 4: Newcomer and Host-culture Intercultural Transformation Facilitates and Is Facilitated by Communication Competence

> **Bhaskara:** Those who come from different countries, they don't have anything else to talk rather than their content. I think they don't have a choice because they don't know the culture. Of course, they will try to learn the culture but they're not going to sit and learn the culture 24/7 and talk about it. Like the locals, they have many things to talk about. They talk about football. They talk the whole day about football. But I cannot get into the conversation because I don't know ABC in football. So obviously, I'll enjoy it for a minute just to make them happy, and then I'll try to isolate myself. (Interview 2)

Effective communication is essential for cultural fusion to occur successfully. International teachers engage in cross-cultural communication, both with their students and their colleagues, to share their cultural insights and learn from others. This communication facilitates the exchange of ideas and practices that shape teaching methods. In the excerpt above, Bhaskara illustrated the challenges of communication and developing communication competence in a new mainstream culture. In most cases, international teachers have few relatable experiences with their colleagues and students and therefore must learn to share their experiences and establish new experiences together to create intercultural transformation:

> **Jean:** I do talk about Jamaica a lot but its more because some kid thought Jamaica was in Africa.… I say kettle and they say teapot. I always start by telling, especially after I've been here for a while, I would start by telling them at the beginning of the year, you know I'm from Jamaica so if I say certain things and you don't quite understand, just ask me (Interview 2).

> **Bhaskara:** You know the phrase "mad" … in India, mad means mentally retarded. One of the students came to me and said, "Are you mad?". She's asking me that are you mentally retarded or what kind of stuff? My colleague says no, it's not like that, mad means are you angry with me. (Interview 1)

The ISMTs noted that their unfamiliarity of certain words or different connotations led to miscommunication such as the example of the word mad. To overcome these challenges, the

teachers being aware of differences between cultures, brought their cultures into the classroom. As Jean noted, some students demonstrated a lack of communication competence because they had no knowledge of Jamaica. Jean made sure to not only talk about Jamaica but also incorporate Jamaica into her lessons and designed her classroom with artifacts from Jamaica. As she shared her culture with her students, they shared aspects of their cultures and together they gained communication competence:

> Jean: It's been more of them trying to learn my culture (I: mm-hmm). So they like, sometimes I've had some questions like, do you have schools in Jamaica…and then I'll say well I went to university in Jamaica. And then I have my pennants in my room and everything. And at one time they asked, well, do you wear clothes in Jamaica… I'll pull up a picture and showed them or they're like, do you have houses in Jamaica? It's more trying to learn, you know. If I'm teaching something about the parabola, I would have a video and you know showing the soccer ball whatever. I remember one time, when it was the World Cup, and the Jamaican women's team had made it, I used their video. Of course, I was talking about Jamaica, but also about the you know, the kick (Interview 3).

For Bhaskara, during his first semester of teaching in the United States, he had a co-teacher in his classroom. The co-teacher was beneficial for Bhaskara in learning how to communicate with his students and how to establish practices of classroom management. The co-teacher, in many ways, was Bhaskara's intermediary for intercultural transformation and building communication competence in his classroom:

> **Bhaskara:** Thank God I had a co-teacher… the principal was kind enough to have because he knows that I'm coming from a different country. He wants me to support, to keep that sub with me all the time.… And it was a great help for me that I didn't have much hiccups…. You see I was bit concerned that some kids are facing a lot of challenges at home and social life. Some kids are on trace of the police officers with kind of stuff [ankle monitors]. It was completely new to me as a culture, and I was bit concerned and worried. (Interview 2)

Bhaskara admitted he did not have background experience working with the challenges and behaviors exhibited by some of his students. He was genuinely concerned and wanted to have a good relationship with his students but lacked the cultural insight to know how to

communicate with them. With the help of his co-teacher, Bhaskara was able to navigate through cultural differences that posed challenges in communication and addressing the needs of his students.

Etienne and Devi both expressed similar challenges:

> **Etienne:** When I came to America, I didn't teach straight up. I went to school. So that helped me adapt to the culture here. For somebody who come from Africa straight up and go to the classroom, I think that would be more difficult. So even though I didn't go to high school here but, I went to college here, so that kind of helped me a little bit adjust to the reality of high school in America. And then you got time to adjust to the culture, the people, the people in the country…. I met some freshman students in college and, you know, we all talked, and I didn't go to high school here, they went to high school here. And because I had that transition time, now I'm looking back, I think that transition time, helped me a lot. (Interview 3)

Etienne's communication competence was developing while he was a college student in the United States. He was able to interact with other students and the shared experiences gave him cultural insights that he was able to apply when he began teaching.

> **Devi:** I had really hard time in the beginning especially with everything, like even with communication. I could not understand even if they [students] cursed me out. … I literally had to fight, like how fair it is, how fair it is, like with no support? They just do this to me. And then the county moved me to the third school. And all this happened in one month. But then thanks to the principal and my department chair, they gave me like 3-month period to collab. And I was like a very good learner, quick learner. I was looking at like what they've [other teachers] been doing to those that have these issues…how they are conducting their class through their classroom management techniques. (Group Interview)

Communication competence for Devi occurred from failed experiences of effectively communicating in the classroom. Devi came from a supportive family and work environment in India. In the United States, she struggled in the first couple of schools she was placed in because she lacked support. Colleagues and administrators did not share cultural insights and her students were disengaged. Once she moved to a school where she was mentored and supported by other teachers and administrators, her communication competence grew, and she flourished in the

classroom. Devi stated her biggest accomplishment was learning to communicate effectively by interacting with supportive colleagues and gaining communication competence to be able to manage her classroom.

Axiom 5: Intercultural Transformation Facilitates and Is Facilitated by Participation in Host and Minority Communication Activities

> **Jean:** My first job in Georgia had some Jamaican teachers there, Jamaican math teachers, and there were a couple of us. But they were the ones I learned the most from, like how did you change your mindset from having taught in Jamaica to teaching here? And I think that was my biggest support group, my own people, just, you know, because they had the experience both in Jamaica and here to help me along right there. Yep, and we seek out each other, even now where I teach, there are a couple of us, and we seek out each other (Group Interview).

International teachers face unique challenges related to cultural adaptation, communication competence, and adjusting to a new educational system. Research by Ingersoll and Strong (2011) indicated that interactions with colleagues, particularly those from similar cultural backgrounds, can offer emotional and practical support during the adaptation process. Because the other international teachers could relate to their experiences, the ISMTs were receptive to learning from one another and often sought each other out to share experiences.

> Devi: There were like teachers who were like international and have been here and have been like successful too. They told me soon as we came from India to US, they give us like some, kind of mentoring. They told us like how it is going to be, how difficult it is going to be and um and then um they also told the system. Like in India, the passing grade is like 35 then here it is like 70. And then you have no makeup in India. There's going to be makeup here. That's one thing they told about the system, you don't go from class to class, you have your own classroom. You got to set it up. You have to make classroom rules. You know, all this is cause everything was new. So they started mentoring about all that. They also told about you have to like speak slowly because initially, those who come from India have like a very fast accent, kind of like, you know, speak very fast. They gave us like a couple of useful hints. (Interview 2)

International teachers often form connections and engage in interpersonal communication with individuals from their own cultural background who may be teaching at the same school. As

these teachers share similar cultural experiences and challenges their interactions provide a sense of familiarity, support, and community. Through these connections, they can discuss their experiences, seek advice, and maintain a sense of belonging within their cultural group. Bhaskara expressed that his friendship with another Indian teacher not only brought him to the United States but also helped him excel in his craft. The two teachers would call each other every day and reflect on their classroom experience and content knowledge. They would share ideas and practices with one another that elevated their professional growth. Similarly, these interactions proved less challenging to the ISMTs than with their US-born colleagues.

Axiom 6: Pressures Placed on Newcomers by the Dominant Culture Influence and Are Influenced by the Newcomer's Level of Intercultural Change

> **Devi:** I came in 2008, so they did paper evaluation. I got NI, NI means needs improvement, needs improvement, needs improvement. So three NIs means your job gone. So I was like 3 NIs. They didn't like me. Initially, at that school the administrator didn't like me. She was like, I don't need international teachers or something like that. (Interview 2)

According to this axiom of CFT, when there is a perception of significant cultural differences or competition for limited resources, it can result in various challenges for international teachers. International teachers may face interpersonal conflicts, pressure to conform to host culture norms and practices, and a lack of receptivity from some members of the host culture. These conflicts often make the adaptation process more challenging for international teachers. For Devi in the except above, she experienced a lack of receptivity from her administrator that created a pressure to conform to certain teaching practices in the United States. Etienne described the lack of receptivity and a pressure to conform through an experience of attending a workshop where he suggested teachers rotating classrooms instead of students,

based on his experience in Ivory Coast. Rather than receptivity, he was reminded that in terms of education, Ivory Coast was at the bottom of the list and America was not:

> **Etienne:** To me, it was chaos. You got 2000 kids rotating compared to having 100 grown-ups rotating…I don't have the strength anymore to fight policies, so that's the policy that's what I'm going to do…so I embrace all the trainings down here and I embrace the way people do things down here. Guess what? This allowed me to have no problem with nobody, but I impress them, you know. (Interview 3)

From that experience, Etienne said he attended workshops but remained quiet. For him, "if you cannot fight them, join them." His perception was validated because once he conformed to the policies and teaching practices, he did not have issues and became Teacher of the Year at his school.

The ISMTs expressed some of their intercultural change also occurred from pressures to keep their job. Unlike their colleagues, international teachers have less career mobility. Most international teachers are recruited and work under a contract. Failure to adhere to the requirements of the contract may lead to a termination of employment and deportation to their country of enculturation. The pressure of not being a successful teacher, losing their job, and possibly being deported added to their motivation for intercultural change:

> **Bhaskara:** It is a survival thing; you need to do prove yourself…you don't have a luxury of thinking of some other job. Like here, the people step in as a teacher, oh, if it doesn't work for me then I can go somewhere else. And I can go and serve in military and then come back and serve for some time and then I can go back somewhere else. But that luxury, these international teachers don't have it. It is of course their passion; they have to survive. At the same time, they give more than 100% to make sure that they establish themselves. (Group Interview)

Evaluations was another motivating factor of intercultural change for the ISMTs. Although there were other methods or strategies they would implement within the classroom, the ISMTs focused on practices in which they would be evaluated. Without evaluations some of the intercultural changes in the classroom that occurred for the ISMTs would not have taken place:

> **Devi:** But here, you have to like do everything, let's do group work, station activity, lesson activity, all those…honestly I do it just because they like but it makes no sense to me. They want to see station activity when they walk in for observations. (Interview 3)

For Devi, she only incorporated station activities because administrators wanted to see teachers implementing this strategy in the classroom. Devi believed that station activities was not the only way to differentiate instruction. In fact, she used other methods to differentiate her instruction, but she made sure to also have station activities especially when she would be evaluated.

Summary of the Intertwined Application of CFT

Cultural fusion for the ISMTs occurred in their teaching practices through acculturation, cultural maintenance, and intercultural transformation influenced by communication competence, interactions with other international teachers, and pressures to conform to the mainstream teaching practices. They fused teaching practices from their countries of enculturation with practices of the new school setting, they integrated diverse cultural aspects into their teaching, experienced transformation in their teaching methods, and engage in cross-cultural communication. Through this dynamic cultural fusion, the ISMTs created unique and effective teaching approaches that drew from their diverse cultural experiences and perspectives.

Influence on Student Learning

Teachers have a significant influence on student learning through their instructional practices, expectations, relationships, and professional development. As the ISMTs negotiated the FfT teaching practices and became effective at applying these practices, they also influenced student learning in their classrooms. Knowing and valuing their students and learning to use resources effectively allowed the ISMTs to address the needs of diverse learners and plan differentiated lessons. By adapting their teaching methods and content to students' diverse needs and readiness levels, they enhanced learning for their students (Tomlinson, 2017). Furthermore,

by learning to use technology effectively, the ISMTs were able to document student progress. Technology afforded the ISMTs the ability to document their lessons, the assessments and grades given to their students, and maintain communications with parents. This technological accessibility provided the means for parents and students to view academic progress, provided accountability for the teacher and student, encouraged students to engage in self-assessment, and helped identify any learning gaps. Hence the ISMTs were creating an active and responsive learning environment where students can engage more effectively in their own learning processes. In addition, the ISMTs' willingness to attend professionally development opportunities to enhance their content knowledge and pedagogical skills, allowed them to grow professionally, which positively influences student learning (Yoon et al., 2007).

The ISMTs having their own classrooms for the first time afforded them flexibility to design their spaces according to their students' and instructional needs. The teachers discovered they could arrange students into clusters and they could create a variety of learning stations to promote active learning strategies, such as group discourse, problem-solving activities, and tactile exercises, leading to improved student engagement and understanding for their students. Moreover, cultivating respectful and affirming environments while the ISMTs supported positive student behavior which fostered positive teacher–student relationships in their classrooms. Therefore, according to research by Hamre and Pianta (2001), the ISMTs developed trusting and supportive relationships that reinforced a sense of belonging and engagement, leading to better learning outcomes for their students. At the same time, by implementing these teaching practices the ISMTs where integrating effective classroom management practices, such as clear expectations and consistent routines, which are associated with improved student behavior and learning (Marzano & Marzano, 2003). The ISMTs fostered a culture for learning by setting high

expectations and encouraging their students to believe in their ability to improve and learn which lead to increased motivation and learning outcomes for their students:

> **Devi:** So I role model them that and I show that you can also do it. I think as international teachers we not only bring in discipline to US schools, we bring in that kind of relationship, that kind of positiveness, that kind of like being a role model that we struggle, and we still can make it. (Group Interview)

In addition to the teaching practices, the ISMTs influenced student learning using their cultural wealth. Using Yosso's (2005) cultural wealth model, the ISMTs brought with them familial capital which recognizes the strengths and resources that individuals gain from their families and extended networks. Familial capital includes social capital (networks and relationships), cultural capital (knowledge, traditions, practices, a sense of belonging to a particular community or cultural group), and other forms of support that families provide. All the ISMTs came from a two-parent household and/or multi-family/generational household. Family was an important aspect that contributed to their development, well-being, and success. From the data, the ISMTs viewed their classrooms as an extension of their family and applied their family capital to create a sense of belonging and a respectful and affirming environment for their students:

> **Etienne:** In Ivory Coast, I learned at the early age that school is like your second family. Students must love each other like brothers and sisters…no fight. You don't fight your brother and sister…you just talk about your issue…. So I remember that from one of my classes and I use that here in the US…I treat my students like my own kids. I give them advice that I would give my own kids. (Interview 2)

> **Devi:** Like before you start teaching, you shouldn't be like, oh, I'm a teacher, just do this. You have to have that feeling, like ok, what if this is my son? Don't I think like he will be successful in my class? That's the whole thing. That that tells you the whole story. (Interview 1)

> **Jean:** My big thing now is developing relationships so they (students) can feel comfortable coming to me, and I think ever since my daughter started attending K–12, when a student came to me, I would say to myself, what if this was my child approaching a teacher, how would I want the teacher to respond and I try to respond in the same

> way.… I tell them stuff like you know you're like my own kid and even if I give you a consequence, it doesn't mean I don't love you because if I give my kid a consequence, I still love her (Interview 2).

> **Bhaskara:** As a culture (India), I think that we are more passionate, and we are having more patience to approach the students and scaffold the concepts. The reasoning is that we live with the families, the big family with many people. So we have to tolerate different people and try to adjust, cooperate in the family life, right? Right, and you have to accommodate everyone. So obviously you have the tolerance like you know, I need to be patient about it. Those skills helps me in the classroom when you talk to the students and ok you can reflect on those things. It helps you to build a relationship. (Group Interview)

The familial capital also helped the ISMTs in getting to know and value their students. They were receptive to differences and learning from their students, as they were also perceived as different in their new schools. The ISMTs used their cultural wealth to create a sense of unity and belonging in their classrooms and promoted student learning by incorporating cultural aspects from the United States and from their countries of enculturation. Etienne brought in African games such as Awale to deepen his students' understanding of the counting principle. Devi incorporated henna into geometry lessons. Jean used Jamaica's landscapes to teach slope. They exposed their students to their culture using mathematics, but they also incorporated aspects from American culture to cultivate an affirming environment that embraced diversity and enhanced student learning.

Furthermore, the ISMTs' strong depth of knowledge of mathematics facilitated student learning. All the ISMTs came to the United States with an undergraduate degree in their field, some came with their masters and others earned their masters in the United States:

> **Etienne:** I come because I know the math. So the kids after three or four days, they know this guy, know his math. They may not like you, because you look different, you sound different, which is normal to me, but there's one thing they know, they know you know your math. (Group Interview)

> **Bhaskara:** See if you're not strong in the content, you're not going to step into the US. Like say, when you are strong about your content, that is why you picked to be, you know teacher in the United State classroom. (Group Interview)

> **Jean:** Well, what I found here (in the United States) was that a lot of the teachers, especially in middle school, but sometimes in high school did not have a math preparation background. So in Jamaica, if you're a math teacher, you went to college, teachers college. And math had to be your major, or one of your two majors. So I think we bring a great teacher prep program. A lot of my peers here, again, mostly in middle school, they went to college and did something and then they took the GACE or the PRAXIS and then they became a math teacher. So I think that as international teachers we bring that in addition to knowing the content we also come with our own strategies (Group Interview).

The ISMTs' deep subject knowledge equipped them to design and deliver effective instruction. Teachers with strong depth of content knowledge can create clear and engaging lessons, provide meaningful examples, and explain complex concepts in ways that students can understand. When students often have questions, teachers with a deep understanding of the subject matter can provide accurate and comprehensive answers, addressing students' curiosity and promoting deeper understanding (Darling-Hammond et al., 2017). In-depth subject knowledge allows teachers to facilitate critical thinking and problem-solving skills in students by challenging students with thought-provoking questions and guiding them in analyzing and synthesizing information. The ISMTs were confident in their content and were able to facilitate critical thinking in their classroom, which enriched their students' learning environment. All in all, the ISMTs positively influenced student learning by implementing effective teaching strategies they brought, modified, or acquired, utilizing their cultural wealth such as familial capital, and having a strong mathematical background and depth of knowledge.

Summary

The effective teaching practices that challenged and transformed the ISMTs within my study to be successful teachers were: (1) knowing and valuing students, (2) using resources

effectively, (3) cultivating respectful and affirming environment, (4) fostering a culture for learning, (5) supporting positive student behavior, (6) organizing spaces for learning, (7) engaging students in learning, (8) documenting student progress, (9) engaging families and communities, and (10) growing and developing professionally. According to CFT, bidirectional influences facilitated the transformation of the ISMTs' teaching practices. The ISMTs brought their own cultural backgrounds and teaching experiences into their new teaching contexts, which influenced their students and school and their students and school cultures and experiences influenced the ISMTs. Cultural fusion for ISMTs occurred in their teaching practices through acculturation, cultural maintenance, and intercultural transformation influenced by communication competence, interactions with other international teachers, and pressures to conform to the mainstream teaching practices.

By applying these effective teaching practices that were brought, adapted, or acquired, the ISMTs positively influenced student learning in their classroom. Additionally, the ISMTs supported student learning by integrating their familial capital and strong content knowledge. Each ISMT viewed their classroom an extension of their family. The teachers valued their students like their own children and created an affirming environment that promoted a sense of belonging. The ISMTs' cultural wealth helped to create a supportive and affirming learning environment as they incorporated aspects of their culture and their students' culture into the classroom. Their strong depth of knowledge of mathematics was another significant factor that beneficially influenced student learning. All the ISMTs came to the United with undergraduate mathematics degrees, some with their master's degree in mathematics, and while in the United States some of them obtained higher degrees in their field. This strong mathematical background

made it easy for the ISMTs to provide their students with a high level of clarity in their teaching practices.

Closing Thoughts – A Personal Perspective

From previous studies, international teachers migrate to other countries being highly educated and not surprisingly I encountered this characteristic in the ISMTs of this study. Each participant was confident in their content knowledge and coming to the United States this was their strength. Having strong depth of knowledge in their content area, however, was not enough to be an effective/successful teacher in the United States. The wealth of knowledge of the ISMTs was useful in the domains of planning and preparation and the learning experiences. However, the cultural differences such as the diversity of their students, accountability of learning, classroom management, and so on set the stage for growth and cultural fusion.

The domain of learning environments created the most change in teaching practices for the ISMTs, largely due cultural differences and how education is perceived by students from country to country. Education is an asset that is sought after in the ISMTs' countries of enculturation and because of this, the ISMTs valued education and valued the education of their students. This was evident in the high expectations they set for their students to improve upon the student accountability for learning. Furthermore, all the ISMTs held strong family values which they applied in their classroom and in turn, encouraged student learning and improved their classroom management. I was not aware of how much familial capital influenced classroom dynamics but after hearing the ISMTs' stories it was evident. The ISMTs built a support network mimicking a family starting with their students, parents, and colleagues. The teachers treated their students like family which turned their initial weaknesses in the learning environments into a strength. Because the students recognized that the teachers cared about them and their learning,

they also took on more accountability for their learning in the classroom. The ISMTs also built relationships with the parents of their students and widened the family connectedness. The parents knew the teachers cared about the success of their child and the students were aware what happens in the classroom potentially could be told to their parents. The ISMTs also sought the assistance of colleagues to grow professionally and expand their support network. In conjunction with their content knowledge, the familial capital of the ISMTs aided in their success as teachers in the United States.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

For this final chapter, I present a brief summary of the study by revisiting the purpose, research questions, methodological and theoretical frameworks, and discuss key findings gained from the data analysis. I also review the limitations and delimitations of the study. I close the study by delineating the implications of this study and recommendations for future research on international secondary mathematics teachers in the United States.

Study Summary

With the increase in migration across the globe, cultures are mixing together in ways that have not yet been researched and studied. As an individual who moved from Nigeria to the United States at a young age, I am a product of cultural fusion. As a student and educator, I was exposed to many educators who have migrated to the United States from their countries of enculturation and faced different challenges in the classroom. As teacher vacancies rise, particularly in mathematics and science subjects, and the recruitment of international teachers increases to fill these positions, more research into their teaching practices is required. Research on international teachers in the United States is currently limited and most studies focus on their integration challenges and not on how they become successful teachers.

The purpose of this research study of four international secondary mathematics teachers (ISMTs) was to investigate the teaching practices they had to negotiate to become successful in the United States and how they influenced student learning. I specifically wanted to explore the challenges the ISMTs encountered and overcame in their teaching practices to highlight how they navigated in a new culture and classroom environment to foster student learning. Using narrative thematic analysis and employing Danielson's framework for teachers and cultural

fusion theory as intertwined conceptual tools, I investigated four successful international secondary mathematics teachers. I researched how the ISMTs navigated their teaching experiences in the United States to transform their teaching practices and become successful secondary mathematics teachers. Two research questions guided the study:

1. How do ISMTs negotiate their teaching practices relative to their teaching and learning experiences in their countries of enculturation to become successful teachers in the United States?
2. How do ISMTs influence student learning in their classrooms?

To gather data for my study, I used questionnaires, interviews, and TKEs evaluations. The questionnaire provided the participant's demographic information, educational background, and teaching background. The responses from the questionnaires validated the participant had met the requirements to be included in the study and assisted in developing more in-depth questions for the interviews. I conducted three individual interviews with each participant and one group interview during an 8-week period. The interviews generated rich data to explore the international secondary mathematics teachers lived experiences in the classrooms of their countries of enculturation and the United States.

To analyze the data collected, I employed thematic narrative analysis, which allowed me to delve deeply into the lived experiences of the participants. Thematic narrative analysis was a valuable qualitative research method for this study because of its participant-centered approach, applicability across different cultures and disciplines, structured way to uncover important themes and meanings within narratives, and rich exploration of lived experiences to capture both personal and cultural dimensions (Braun & Clarke, 2006; Riesmann, 2008). The lenses I utilized to present the data were Danielson's framework for teachers (2013, 2022) and cultural fusion

theory (2017). Danielson's FfT is an established comprehensive framework with global applicability that assesses different aspects of teaching practices and is grounded in research on effective teaching practices (Danielson, 2013; Klenowski & Wyatt-Smith, 2012). Cultural fusion theory recognizes the complexity of cultural interactions and exchanges that create new cultural identities, products, and forms. Using Danielson's FfT, provided a way to categorize the effective teaching practices the ISMTs negotiated and how they influenced student learning. CFT presented an approach to explain the transformations of the ISMTs teaching practices.

Discussion of Findings

The purpose of this study was to highlight the lived experiences of four international secondary mathematics teachers to illustrate their journeys to become successful teachers in the United States. I examined the stories of their educational and teaching experiences in their countries of enculturation and in the United States. Employing thematic narrative analysis afforded me the opportunity to prioritize the voices and perceptions of the participants narratives and reveal the themes in the teaching practices they negotiated. Utilizing FfT, the effective teaching practices that challenged and transformed the ISMTs within my study to be successful teachers were: (1) knowing and valuing students, (2) using resources effectively, (3) cultivating respectful and affirming environments, (4) fostering a culture for learning, (5) supporting positive student behavior, (6) organizing spaces for learning, (7) engaging students in learning, (8) documenting student progress, (9) engaging families and communities, and (10) growing and developing professionally.

The theme in the FfT domain of planning and preparation was diversity. ISMTs were exposed to classrooms with diverse learners and resources in the United States that tested their teaching practices. The teachers learned to operate successfully in a diverse classroom by

incorporating differentiated instruction, flexible grouping, culturally responsive content, examples, and teaching materials to make learning more meaningful and relatable. Having more resources at their disposal than they had in their countries of enculturation, the ISMTs learned to use resources effectively to address the needs of diverse learners, create engaging and enriching learning experiences, and foster student learning. The ISMTs integrated technology into their lessons by using educational software, apps, interactive whiteboards, and online resources. Through technology, the ISMTs were able to present mathematical concepts differently than they did in their countries of enculturation. They used visual aids like charts, diagrams, graphs, and multimedia presentations to illustrate complex concepts and make abstract ideas more concrete, enhancing their students' understanding. They also used supplementary materials such as worksheets, handouts, and educational games to reinforce concepts and provide additional practice opportunities for students. Distinctive from their countries of enculturation, the ISMTs often used manipulatives, models, and hands-on materials to help students grasp abstract concepts.

The second domain of FfT, the learning environment, was the biggest cultural shift for the ISMTs and their biggest challenge. The themes that emerged in this domain were respect, accountability for learning, classroom management, and flexibility. Coming from a culture where only students were held accountable for their learning and the teacher's primary objective was to teach the curriculum to the United States where teachers are also held accountable for student learning, the ISMTs experienced many transformations in their teaching practices. Before coming to the United States, the teachers were culturally valued and respected by students and their parents. For the ISMTs, their perceived lack of respect and student accountability in the United States was a cultural shock, especially their observations of how some students responded

to teachers and administrators and how they did not value their education. The cultural disparity in terms of the learning environment caused some of ISMTs to struggle with classroom management as evident in their evaluations as the main area they needed improvement. As stated previously, Mercado and Trumbull (2018) defined classroom management as the steps a teacher takes to maintain order and keep students engaged in learning. The ISMTs therefore had to learn how to cultivate a respectful and affirming classroom environment, foster a culture for learning, and support positive student behavior to improve their classroom management and promote student learning. The ISMTs transformed their teaching practices by building positive teacher–student relationships to get to know their students and gain the trust of their students. The teachers learned to communicate expectations, classroom rules, and assert consequences to establish a positive learning environment. To cultivate a culture for learning, the ISMTs set high expectations, created a safe and supportive environment, and recognized and praised students' hard work, improvements, and achievements. These additions to their teaching practices also helped promote positive student behavior and improve their classroom management. Another effective teaching practice the ISMTs utilized was designing their classrooms for learning. The ISMTs never had their own classrooms in their countries of enculturation, therefore having the opportunity to organize their classroom was a tool they used for student learning. The ISMTs expressed enjoying the flexibility of designing their rooms to reflect the goals of their lesson. Coming from teacher-centered designed classrooms where the seats are in rows facing the teacher and the board, the ISMTs switched to student-centered designs for their classroom by incorporating grouped seating and stations for collaborative learning and diverse learners.

Given the ISMTs confidence in their content and pedagogy, they did not face many challenges with implementing their instruction and creating learning experiences. The only

effective teaching practice in the third domain of FfT where they voiced having to negotiate was engaging students in learning. The theme for engaging students was active learning. As discussed previously, in the ISMTs' countries of enculturation, learning was perceived as the responsibility of the student and the students took charge of their learning and they were attentive and motivated to learn. Therefore, in their countries of enculturation, student engagement was inherently present because students were accountable for their learning and the ISMTs focused on teaching. This is not to say that the ISMTs did not engage their students in learning, but they had a teacher-centered approach. The teachers changed their approach in the United States to a student-centered learning environment to encourage their students to be engaged in learning and to become active learners. They also applied real world experiences, games, bell-ringer activities, and questioning techniques to engage their students.

For the last domain of FfT, the principled teaching, the themes that emerged were evidence-based, support network, and willingness to grow from the teaching practices they developed, which were documenting student progress, engaging families and communities, and contributing to school community and culture. These were additive teaching practices that in some cases the ISMTs felt pressured to incorporate. Documenting student progress was important to monitoring their students' academic growth and aided the ISMTs in their instructional decisions, but the teachers also voiced that documentation for them was a way to protect themselves and provide evidence they had completed their job in the learning experience. Accountability for learning according to the ISMTs is heavily placed on the teacher; therefore, to promote student learning and accountability, they built a support network through parents and their communities. By initially building rapport with parents, they were able to leverage the parental relationships to support their students behaviorally and academically. To expand their support network and to

gain effective practices to employ in their classrooms, the teachers also sought opportunities to grow professionally. The ISMTs' willingness to grow and contribute to their school community and culture was evident through mentorships, collaborating with their colleagues, attending professional developments, obtaining higher degrees, and becoming an ambassador at their school.

As the international secondary mathematics teachers integrated the teaching practices they brought, adapted, or acquired, they influenced student learning in their classrooms. Moreover, the ISMTs leveraged their familial capital and strong content knowledge to enhance student learning. ISMTs viewed their classrooms as extensions of their families, nurturing a deep sense of care and belonging among their students. This familial perspective led them to value their students as they would their own children. Consequently, they fostered an affirming environment conducive to learning. ISMTs also harnessed their cultural wealth, incorporating elements of both their own culture and their students' cultures into their teaching methods. This infusion of cultural richness contributed to the creation of an inclusive and affirming learning environment. Furthermore, ISMTs' exceptional depth of knowledge in mathematics played a pivotal role in influencing student learning. With their depth of content knowledge, ISMTs created engaging lessons; provided meaningful, interdisciplinary, and cultural examples; and explained complex concepts through scaffolding to promote understanding. Finally, the teachers facilitated critical thinking and problem-solving skills of their students by asking thought-provoking questions and guiding them in analyzing and synthesizing information.

Cultural fusion for ISMTs manifested in their teaching practices through several key processes. They engaged in acculturation as they adapted to the cultural norms of the new school setting. Simultaneously, they retained elements of their country of enculturation, leading to

cultural maintenance. Interactions with other international teachers and the pressures to conform to common U.S. teaching practices also played a role in their intercultural transformation. Consequently, ISMTs developed unique and effective teaching approaches by fusing practices from their countries of enculturation with those of their current school setting. They skillfully integrated diverse cultural aspects into their teaching, thereby transforming their teaching practices. Furthermore, their adeptness in cross-cultural communication further enriched their teaching practices. Their cultural fusion process allowed the ISMTs to transform their teaching practices by drawing inspiration from their diverse cultural experiences and perspectives.

Limitations and Delimitations of the Study

Qualitative studies typically involve small sample sizes, and the focus is on understanding specific cases or phenomena in-depth rather than making broad generalizations. Therefore, a limitation of this qualitative research is my findings are specific to the context in which the participants were pooled and may not be easily generalized to larger populations or different contexts. The context is another limitation of the study as a result of having participants from different schools. Selecting participants from different schools introduces a variety of factors that can influence the experiences of each participant. The schools of the participants selected were discussed in Chapter 3 and although they were different, the schools shared similar characteristics as supported by the semblance of classroom dynamics shared by the ISMTs. Lastly, the fact that the participants had not taught in their countries of enculturation in twenty-five years, or more is a limitation of the study. In twenty-five years, significant societal and cultural changes can occur. Participants' recollections and interpretations of past events may be influenced by the norms, values, and understandings of the present, that may differ substantially from those at the time of the events. Moreover, people tend to remember events that had a

significant emotional impact on them while forgetting more mundane details. Over a long period, this selective memory can result in a narrative that emphasizes certain aspects of an experience while omitting others.

A delimitation of my study was my decision to select participants with the most years of teaching experiences. The reason I selected participants with an extensive background in teaching was to increase the depth of rich data to be collected and ensure each participant had several years of experience teaching in both their country of enculturation and in the United States. The selection of ISMTs with an extensive teaching experience in the United States also meant that the participants had not taught in their countries of enculturation in over twenty-five years or more and their experiences in those countries may no longer be relatable to experiences in those countries in the present day.

Implications

There are three main implications for ensuring the success of international secondary mathematics teachers and international teachers in general that can be deduced from this study. The first implication of this study is that each international teacher hired should complete at least one semester of a practicum as a gradual release strategy. International teachers like the ISMTs in my study are often hired and placed immediately into a new cultural setting with little to no training on the required cultural changes needed to effectively teach in this new setting. As noted by the ISMTs in my study, this practice is a disservice to both the international teacher and their students because the teacher is learning as they go and most likely not presenting the best version of themselves as was the case for the ISMTs in my study. Standard teacher preparation programs in the United States include mandatory student teaching that allows a prospective educator to gain practical classroom experiences under the guidance and mentorship of an experienced

teacher. Student teaching provides experiential learning, skill development, and effective mentoring. Likewise, international teachers would benefit from the experiences of a practicum before they are released into the classroom.

A second implication of this study is that providing a successful mentor for any international teacher hired within a school sets a positive trajectory for their success. Each ISMTs expressed that having a good mentor or teacher that they collaborated with was a pivotal factor in their success. A mentor can model effective teaching techniques, classroom management strategies, and assessment methods, all of which are beneficial to improving teaching practices of an international teacher in a new school and cultural context. Moreover, like a new teacher, international teachers need assistance in understanding the school's policies, procedures, and culture. A mentor can help the international teachers navigate the educational institution, build relationships with colleagues, and integrate them into the school community. Lastly, a mentor can reduce the feeling of isolation felt by international teachers by giving emotional support when they encounter difficulties in the classroom or face professional challenges.

A third implication of this study is to assign guided professional developments for each international teacher to complete within their first few years of teaching. The ISMTs of my study all discussed how professional development opportunities were beneficial to their growth and success in the profession. Having a guided professional development that centers around the challenges faced by the ISMTs in the study such as using technology, classroom management, and addressing diverse learners can further set them on a trajectory for success in the classroom.

All three implications should be presented to recruitment agencies, schools, and administrators that are hiring international teachers. The involvement and communication

between all parties involved can generate opportunities to incorporate these implications and create a more successful and sustainable career pathway for international teachers. Application of these implications can foster effective cross-cultural communication, cultural sensitivity, and bridge perceived differences to reduce challenges and adopt a more positive and inclusive teaching environment for both international teachers and members of their school community.

Recommendations for Future Research

With the completion of this study, I recognize there are many aware opportunities for future research into the key factors that determine the success of ISMTs and international teachers in general. The recommendations for future research include, but are not limited to, further explorations into the lived experiences of new international secondary mathematic teachers, how mentorship and collaboration shape experiences of ISMTs, and the lived experiences of ISMTs from other countries of enculturation than those examined here, and how to produce high-quality teachers in the United States particularly in STEM (science, technology, engineering, and mathematics) fields. Capturing the experiences of ISMTs who recently moved to the United States will provide data on recent trends of education in their countries of enculturation and reveal any similarities or differences in the teaching practices they negotiated to become successful teachers. Conducting a comparative analysis between ISMTs who receive mentorship and collaboration and ISMTs who worked in isolation can highlight the benefits of mentorships and the effective practices gained by ISMTs. Expanding to other countries of enculturation for ISMTs can explore similarities or variations in findings among different demographic regions that can support and/or add to the findings of this study of the teaching practices ISMTs have to negotiate in a new cultural context. Researching the success of ISMTs can also impact STEM education as these are the subject areas most international teachers are

hired to teach. The growing number of international teachers specifically in STEM fields in the United States highlights a broader challenge in the U.S. education system, that is the need to improve teacher education to produce more domestic HQTs and reduce teacher turnovers. Recruiting international teachers is a temporary solution but investing in domestic teacher education especially in STEM fields and retention can have long-term economic benefits by reducing the costs associated with teacher turnover and recruitment. By addressing these potential research areas, mathematics education researchers and scholars can contribute to a better understanding of the lived experiences, challenges within their teaching practices, and trajectory to becoming effective teachers of international secondary mathematics teachers, ultimately improving the quality of mathematics education in the United States and across the globe. Furthermore, addressing the production of more domestic HQTs and STEM teachers, is necessary for the long-term health and effectiveness of the U.S. education system. My hope in providing these recommendations for future research is that the associated research findings will have a domino effect that expands to other subject areas and creates lasting and beneficial outcomes in education.

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APPENDICES

Appendix A

Georgia Department of Education
TEM Scoring Guide and Methodology

TEM Scoring Guide and Methodology

Components of the TEM

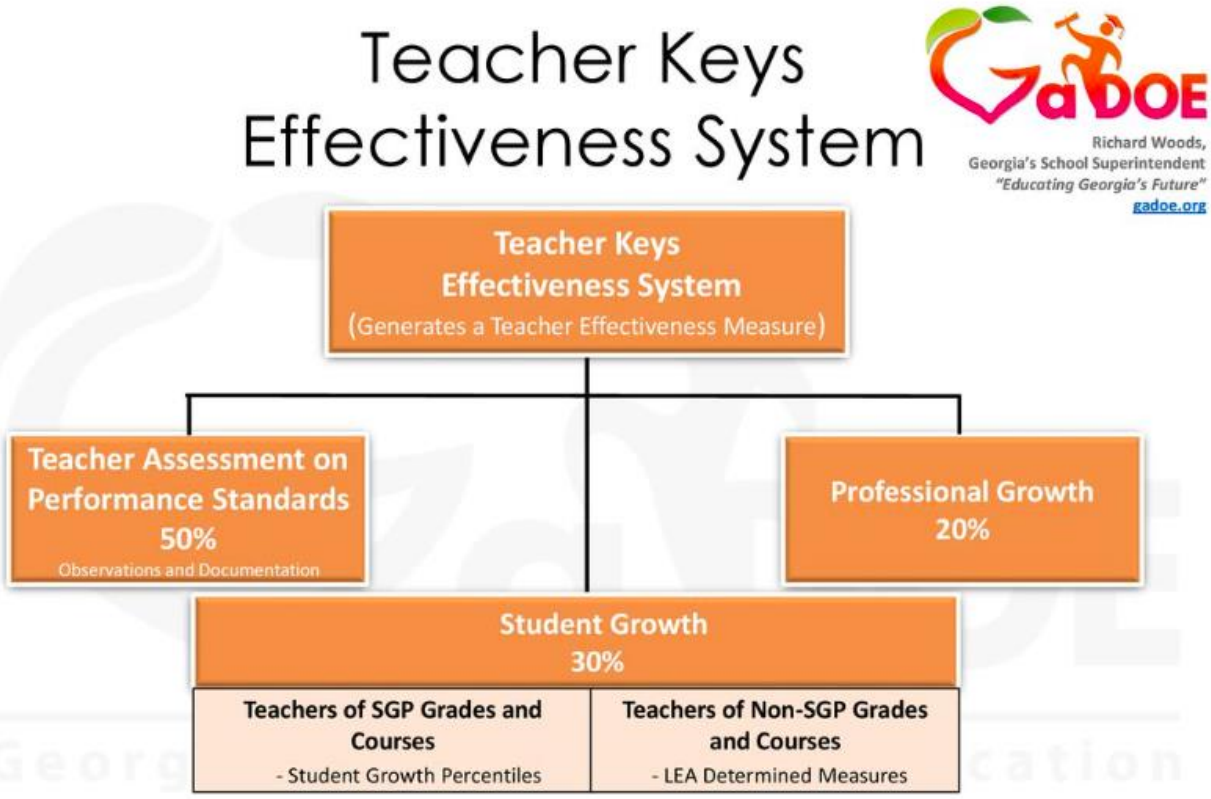
- The **Teacher Effectiveness Measure (TEM)** consists of two components: (1) Teacher Assessment on Performance Standards (TAPS), and (2) Student Growth. These two components contribute to the overall Teacher Effectiveness Measure (TEM) for each teacher.
- **General Score Scale:** Exemplary, Proficient, Needs Development, Ineffective
- **TAPS**–The TAPS component of TKES provides evaluators with a qualitative, rubrics-based evaluation method by which they can measure teacher performance related to ten quality performance standards that are scored from 0 to 3 (sum score can range from 0-30).

Final Ratings	TAPS Summative Cut Scores
Level I	0-6
Level II	7-16
Level III	17-26
Level IV	27-30

- **Student Growth**
  - **Student Learning Objectives (SLOs)** – The measure of student growth for non-state-tested subjects. The aggregate measure of SLO performance for all non-tested courses taught by a teacher will be used in calculating his or her TEM.

Rating Levels	Student Results
Level I	< 50% High Growth and Expected Growth
Level II	≥ 50% and < 65% High Growth and Expected Growth
Level III	≥ 65% and < 90% High Growth and Expected Growth OR ≥ 90% Expected Growth AND < 30% High Growth
Level IV	≥ 90% High Growth and Expected Growth AND ≥ 30% High Growth

Appendix B



TAPS Domain and Standards

PLANNING
1. Professional Knowledge 2. Instructional Planning
INSTRUCTIONAL DELIVERY
3. Instructional Strategies 4. Differentiated Instruction
ASSESSMENT OF AND FOR LEARNING
5. Assessment Strategies 6. Assessment Uses
LEARNING ENVIRONMENT
7. Positive Learning Environment 8. Academically Challenging Environment
PROFESSIONALISM AND COMMUNICATION
9. Professionalism 10. Communication

5 Domains
10 Performance Standards

Appendix C

Institutional Review Board Approval

Mail: P.O. Box 3999 In Person: 3rd Floor
Atlanta, Georgia 30302-3999 58 Edgewood
Phone: 404/413-3500 FWA: 00000129

July 21, 2022

Principal Investigator: Christine Darling Thomas, PhD

Key Personnel: Olubuyide, Monisola I, Doctoral; Thomas, Christine Darling, PhD

Study Department: Middle & Secondary Education

Study Title: A NARRATIVE INQUIRY OF INTERNATIONAL SECONDARY MATHEMATICS TEACHERS' CLASSROOM EXPERIENCES IN AMERICA AND THEIR INFLUENCE ON STUDENT LEARNING

Submission Type: Exempt Protocol Category 2

IRB Number: H22568

Reference Number: 369564

Determination Date: 05/05/2022

Status Check Due By: 05/04/2025

The above-referenced study has been determined by the Institutional Review Board (IRB) to be exempt from federal regulations as defined in 45 CFR 46 and has evaluated for the following:

1. Determination that it falls within one or more of the eight exempt categories allowed by the institution; and
2. Determination that the research meets the organization's ethical standards

If there is a change to your study, you should notify the IRB through an Amendment Application before the change is implemented. The IRB will determine whether your research

continues to qualify for exemption or if a new submission of an expedited or full board application is required.

A Status Check must be submitted three years from the determination date indicated above. When the study is complete, a Study Closure Form must be submitted to the IRB.

This determination applies only to research activities engaged in by the personnel listed on this document.
It is the Principal Investigator's responsibility to ensure that the IRB's requirements as detailed in the Institutional Review Board Policies and Procedures for Faculty, Staff, and Student Researchers (available at gsu.edu/irb) are observed, and to ensure that relevant laws and regulations of any jurisdiction where the research takes place are observed in its conduct.

Any unanticipated problems resulting from this study must be reported immediately to the University Institutional Review Board. For more information, please visit our website at www.gsu.edu/irb.

Sincerely,

Jamie Zaikov, IRB Member

Appendix D

Eligibility Questionnaire

Name: _____ (Print assigned code here)

Pronoun(s): _____

Date: _____

Background Information

1. Age Range (write the letter choice that describes your age range): _____
   a. 18–24
   b. 25–34
   c. 35–44
   d. 45–54
   e. 55–64
   f. 65 and over

2. Where were you born (country of enculturation)? How long did you live there?

   _____

3. Which nationality do you identify with? _____
4. Which ethnicity do you identify with? _____
5. Did you live in another country or countries apart from the one mentioned in #2 before coming to America? If so, for how long?

   _____ _____

   _____ _____

6. Did you come to the United States alone or with family?

   _____

7. Do you have any kids? If so, how many kids? Do/Did they attend school in the United States? If so what grade levels did they attend in the US?

   _____

   _____

   _____

_____

Education

1. As a student in your country of enculturation, what was the highest level of mathematics you were taught (elementary, middle, secondary, undergraduate, graduate, doctoral)?

   _____

   List the mathematics course(s) you completed at this level.

   _____

   _____

2. List the degrees you have obtained and the country the degree was conferred in.

   _____

   _____

   _____

   _____

3. Did you receive any awards or recognitions during your secondary education and/or post-secondary education? If so, list the awards.

   _____

   _____

   _____

   _____

   _____

Teaching Experiences

1. List the countries where you have been teacher? Include if you were certified to teach in the country?

   _____

   _____

   _____

2. How many years have you been a teacher or taught as a teacher in each country?

_____

_____

_____

3. Have you taught in public school? _____
   Have you taught in private school? _____

4. Where and what content did you teach?

   _____ _____

   _____ _____

   _____ _____

5. What grade level(s) have you taught?

   _____

   _____

   _____

6. Did you teach at a secondary school in any of the countries listed in #1? If so, include the country and how many years did you teach at the secondary school(s) in the country? What content area did you teach?

   _____ _____ _____

7. Have you been evaluated using Teacher Keys Effective System (TKES)? If so, how many times did you receive proficient or exemplary as your teacher effectiveness measure?

   _____ _____

Appendix E

Georgia State University
Department of Middle and Secondary Education
Informed Consent

Title: A Narrative Inquiry of International Secondary Mathematics Teachers' Classroom Experiences in America and Their Influence on Student Learning.
Principal Investigator: Dr. Christine Thomas
Student Investigator: Monisola Olubuyide

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate the lived teaching experiences of international secondary mathematics teachers. You are invited to participate because you are mathematics teachers who was born outside of the United States. A total of 4 participants will be recruited for this study. Participation will require: (1) completion of a 15-minute eligibility questionnaire, (2) a total of three, 60-90 minutes interviews that will be conducted virtually via Zoom, and (3) a 90–120-minute focus group interview conducted virtually via Zoom.

II. Procedures:

If you agree to participate, you will be asked to complete a 15-minute eligibility questionnaire to determine if you meet the requirements to take part in the study. Once you are determined to be eligible, you will be asked to take part in three, 60–90-minute interviews, about your experiences of teaching secondary mathematics. During the interview sessions I, the student PI, will ask you about your experiences in secondary mathematics classrooms outside the United States. In interview session II, you will be asked questions about your experiences teaching secondary mathematics in the United States. In the third interview, we will review the transcripts of the first two interview for accuracy and I will ask follow-up questions if necessary. After the completion of the three interviews listed above, you will be asked to complete a 90–120-minute focus group interview with all the participants of the study to explore and gather more in-depth information on your experience as an international secondary mathematics teacher. In any of the interviews, you may choose not to answer questions that may bring up any difficult issues or emotions for you. I will ask you questions that you can respond to by indicating your choice of possible answers I offer you. The interviews will be video recorded to ensure accuracy. The recordings will later be transcribed and destroyed after a year beyond the completion of the study. For confidentiality purposes, your name will not be recorded, and all transcribed data will use pseudonyms and all identifiable data will be removed.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may not benefit you personally. Overall, this research may benefit society by increasing the awareness of international teachers' experiences in teaching mathematics to students in grades 9-12 in the United States.

VI. Voluntary Participation and Withdrawal:

Participation in research is voluntary, you can withdraw anytime from participating in the study. You do not have to be in this study. If you decide to be in the study and then change your mind, you have the right to drop out at any time. To withdraw from this study, please contact the principal investigator using the phone number or email provided below. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VII. Confidentiality:

We will keep your records private to the extent allowed by law. Only Dr. Christine Thomas and Monisola Olubuyide, will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP)). We will use an assigned arbitrary code rather than your name on study records. The information you provide, and recordings will be kept on a password protected computer in a secured room. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally. The data will be destroyed by shredding paper documents and deleting electronic files and erasing recordings within a year after the completion of the study. The data derived from this study could be used in reports, presentations, and publications but you will never be individually identified.

VIII. Contact Persons:

Contact Dr Christine Thomas at cthomas11@gsu.edu and Monisola Olubuyide at 678-491-0860 or molubuyide1@student.gsu.edu if you have questions about the study or your part in it, if you have concerns or complaints about this study, if you think you have been harmed by the study. The IRB at Georgia State University reviews all research that involves human participants. You can contact the IRB if you would like to speak to someone who is not involved directly with the study. You can contact the IRB for questions, concerns, problems, information, input, or questions about your rights as a research participant. Contact the IRB at 404-413-3500 or irb@gsu.edu.

IX. Copy of Consent Form to Participant:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research and be audio recorded please sign below.

_____	_____
Participant	Date
_____	_____
Principal Investigator or Researcher Obtaining Consent	Date

Appendix F

Interview Guide and Questions
Narrative Inquiry of International Secondary Mathematics Teachers' Classroom Experiences in the United States

Thank you for meeting with me. You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigator or Georgia State University. Your decision will not result in any loss of benefits to which you are otherwise entitled.

(Turn on recording)

Thanks for agreeing to be interviewed for this research study. The purpose of this study is to explore the lived teaching experiences of international secondary mathematics teachers in classroom in the US. I'm hopeful that the information you and the other participants share with me will help provide information that provides insight into the lived experiences of international secondary mathematics teachers in classrooms in the United States.

In order to understand your experience as an international secondary mathematics teacher, I would appreciate learning more about your mathematics experience as a teacher in your country of enculturation and in the United States and how you have negotiated your teaching practices in the classroom. I have a set of questions to guide our conversation. I want to understand your experiences, and thoughts about your teaching experiences, factors that may have affected your teacher practices, and how you perceive being a successful teacher. Do you have any questions about what I've said or about the purpose of the interview?

Interview Questions: For these questions, we will focus primarily on your lived experiences in (insert participant's country of enculturation).

1. How do international secondary mathematics teachers negotiate their teaching practices relative to their native country experiences and teaching styles to become successful teachers in the U.S.?

2. How do international secondary mathematics teachers impact student learning in the classroom?

3. Tell me about growing up in (insert participant's country of enculturation).

   Follow-up question: What cultural norms are still evident in your life today from (insert participant's country of enculturation)?

4. Think back to when you were a student and describe your experiences in mathematics classrooms in (insert participant's country of enculturation).

   Follow-up questions:
   a. Describe the type of student you were in (insert participant's country of enculturation)? Were you the same in your mathematics classes as in other subjects?
   b. Did you have a mathematics teacher(s) or any other teacher(s) that stands out in your educational experience? If so, why do they stand out?
   c. How were you taught mathematics?

d. What experience(s) as a student, would you say prepared you for teaching in (insert participant's country of enculturation)? What experience(s) as a student in (insert participant's country of enculturation), prepared you for teaching in the United States?
e. Did you have any other experiences that could have prepared you for teaching in the United States such as studying, working, and/or living abroad when you were a student?

5. (If Applicable) As a teacher, describe your experience teaching in a mathematics classroom in (insert participant's country of enculturation).

   Follow-up Questions:
   a. What led you to become a teacher?
   b. What would you say is the primary reason you teach?
   c. How did you teach mathematics in (insert participant's country of enculturation)?
   d. What did you do differently when teaching mathematics in (insert participant's country of enculturation) than how you were taught mathematics as a student in (insert participant's country of enculturation)?
   e. What unique skill, tools, ability, or knowledge do you bring into the classroom?
   f. How did you foster student learning in your classroom?
   g. What was considered student responsibility, teacher responsibility, and parent responsibility in terms of student learning in (insert participant's country of enculturation)?
   h. Were you evaluated in your native culture? Describe how you were evaluated. What was the result of the evaluation(s)?
   i. Did you consider yourself a successful teacher in (insert participant's country of enculturation)? Why or why not?
   j. Were you involved in any clubs or activities in your school?

6. Did you have a mentor or collaborate with another teacher?

   Follow-up Questions:
   a. What resources did you have and support structures?
   b. What would have improved your teaching experience in (insert participant's country of enculturation)?

7. Were there opportunities for professional growth in your school(s)?

   Follow-up Questions
   a. Were professional development opportunities available? Describe the professional development(s) available to you. Were you required to attend the available professional developments?
   b. Were there any organizations that protected the rights of teachers in the country (such as a union)

Appendix G

Recruitment Email

Monisola Olubuyide
Doctoral Candidate – Mathematics Education

STUDY TITLE: A NARRATIVE INQUIRY OF INTERNATIONAL SECONDARY MATHEMATICS TEACHERS' CLASSROOM EXPERIENCES IN AMERICA AND THEIR INFLUENCE ON STUDENT LEARNING

Dear (Participant's Name):

My name is Monisola Olubuyide and I am the principal investigator for a narrative inquiry study to investigate the lived experiences of international secondary mathematics teachers in the United States. I am looking for participants to join the study to add to the limited research on international teachers. The hopes of the study are to give voices to international teachers, bring awareness to how international mathematics teachers negotiate their teaching practices to be successful, and to reveal the assets international mathematics teachers bring to the classroom that positively influences student learning.

If you are interested in being a part of my research study, you will be asked to complete a 15-minute eligibility questionnaire to determine if you meet the requirements to take part in the study. Once you are determined to be eligible, you will be asked to review and sign a consent form. Additionally, you will take part in three, 60- 90 minutes interviews, about your experiences of teaching secondary mathematics. After the completion of the three interviews, you will be asked to complete a 90-120 minutes focus group interview with all the participants of the study to explore and gather more in-depth information on your experience as an international secondary mathematics teacher.

If you have any questions or concerns, please do not hesitate to contact me at molubuyide@gmail.com. Thank you for your time and consideration.

Sincerely,
Monisola Olubuyide
xxx-xxx-xxxx
molubuyide@gmail.com