WHAT DOES IT MEAN TO BE LITERATE?
DESIGNING AND IMPLEMENTING A FRAMEWORK OF INCLUSIVE LITERACY PRACTICES IN A RURAL CONTEXT

By

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ABSTRACT

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Written as two interconnected articles, this dissertation study is about identifying literacy practices that are inclusive of multiple ways of being, knowing, and doing. Using these, the purpose of this study is to create a framework of inclusive literacy practices that teachers and researchers can use—implement and refine—based on their contextual needs and expectations. Driven by the rhetorical question of "What does it means to be literate?" I use three lenses of culturally sustaining pedagogy, transdisciplinary thinking, and multiliteracies to challenge normative practices that dominate acceptable ways of being, knowing, and doing in the world. To achieve this, I conducted a two-part study. In this first part, I reviewed 170 highly cited articles to compile a framework of ten literacy practices—five for learners and five for teachers—that I call Culturally sustaining, Transdisciplinary, Multiliteracies (CTM) Practices. Using this preliminary framework, I offered a set of guidelines for teachers to implement it in their classrooms. In the second part, to test the feasibility of the framework, I situated myself in an underrepresented context in multicultural education—a predominantly white rural school, and studied the affordances and constraints of the framework. I designed an embedded case study and used ethnographic methods and critical discourse analysis to analyze the framework. I found that CTM Practices framework faced four major challenges: *forms of marginalization disguised in practices of social networking, distancing from experiences of other people and places, conflict between discourses of school and self,* and *siloed practices and definitions of literacies*. I

offered resolutions for each of the challenges, and found the framework to be adaptable to the rural contexts. I call for further implementation of this framework across new contexts to test its feasibility.

Keywords: multiliteracies, transdisciplinary, culturally sustaining, literacy practices, inclusion

To my grandmother and her stories of Pakistan.
Your stories are all I have now.

To my mother.
Your silence has taught me more about injustice than anything else.

To my wife, my reason.

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To Swati: You mean more to me than my words can do justice. As clichéd as this may sound, my world revolves around you. I drop everything to come to you, because in the end the reason of doing anything is you. I love you!

PREFACE

I was born at the top of a casteist hierarchy in a Hindu-dominant society in India. All my life, blind to my social privileges, I struggled to understand why those who belonged to the "lower caste" complained. Even as a child, the norm of serving water to our garbage man in a separate set of glassware because he was *untouchable* felt unfair. When these oppressive norms became habits, they stirred dissonance between what was considered socially right and what felt emotionally and morally right. Gradually, familiarizing myself with the history of experiences of those oppressed removed the figurative blindfold. Through close viewings of world cinema, submerged readings of postcolonialism, and research focus on multiliteracies, I started to identify and empathize with those being marginalized or systematically oppressed based on their socioeconomic status, religion, gender, sexuality, race, and other discriminatory factors.

Coming to the US, I found myself in a different situation. I was now a person of color, an immigrant, a non-American, and a non-native English speaker, among other things I had never considered to be important to my identity. A new context of my hyphenated identity emerged with a new distribution of power. I found myself answering questions that reminded me that I did not belong. A harmless jibe at my accent or an innocent sounding question about India helped unravel the practices that favored one way of being literate more than those of people like me. Comments like, "You speak good English for an Indian" reminded me of one of the more omnipresent forms of marginalization through defining what it means to be literate. "Good English" was a reminder that my internalized colonialism was people's measure of my competence. Setting and using standards that align with white, western, or colonial literacy practices has stripped many of their cultural ways of being, knowing and doing; I was just realizing that I was one of them. But, because this awareness, I could now contribute to identify

the causes of marginalization of non-dominant literacies and resolve them through academic research.

Regarding the structure of this manuscript:

I share two interconnected studies in this manuscript. The first study, a comprehensive literature review, led to the second study of implementing and testing a framework of inclusive literacy practices. I wrote these two studies independently first and connected them later for the dissertation manuscript. Therefore, there are only two chapters in this dissertation—one for each of the two studies. To make the connection more obvious, I have added a transition prose between the two chapters, and a concluding section after the two chapters. In the final articles for publication purposes, I did not include these two added sections.

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CHAPTER 1

Introduction

Defining what it means to be literate without considering power is futile, because literacy has always been defined, implemented, and measured by those in power (Knoblauch, 1990). Consequently, literacies of those without power are often socially, culturally, and disciplinarily marginalized. Social and cultural marginalization can lead to systemic inequities by race (e.g., marginalization of people of color in the United States), caste (e.g., downgrading of people of lower caste in India), religion (e.g.: missions under colonization of America, Asia, and Africa) (Crowley, 2015; de Las Casas, 1550), gender (e.g., oppressive female literacy in parts of the Middle East) and other discriminatory factors. Disciplinary marginalization can promote systemic biases in favor of notions of merit, literacy, intelligence, rationality, logic, and other factors that set the precedence for acceptable ways of knowing, marginalizing ways that do not align with common western scientific methods (Geronimo, 2010; Lawrence, 2015; Seth, 2009).

Through such systemic inequities and moves for control, people with power have often found ways to oppress those who align with different ways of being, knowing, and doing in their lifeworld (Heath, 1983; Keefe & Copeland, 2011; Ladson-Billings, 1995; Morrell, 2017; Moss-Racusin, Dovidio, Brescoll, Graham, & Handelsman, 2012; Paris, 2012). This ubiquitous inequity calls for analysis and reimagination of existing literacy practices in informal and formal learning environments—acknowledging, understanding, and fostering practices that support and promote inclusion. Formal and informal literacy practices in equality, access, and respect towards various identities, abilities, cultures, languages, disciplines, modalities, and other pluralistic factors of inclusion need to be identified and promoted across sociocultural and disciplinary contexts.

To better understand and address issues of exclusion, marginalization, and oppression across multiple contexts, I used the three lenses of *cultural-sustainability*, *transdisciplinary thinking*, and *multiliteracies* to take a skeptical and critical stance when reading the literature to identify inclusive literacy practices. Adopting the *cultural-sustainability* lens helped me look for themes of social justice, equity, identity, and power, among others (Bhabha, 1994; Paris, 2012). The *transdisciplinary thinking* lens helped look for practices that are authentic and relevant and provided space for personal interests and curiosity, while allowing for nonnormative ways of knowing (Zeigler, 1990). The *multiliteracies* lens helped look for practices that allow for multiple ways of making and representing meaning that go beyond a print-centric view of literacy (Cope & Kalantzis, 2015). Individually, I see these lenses covering distinctive facets of inclusive practices. Together, I use them to take a balanced approach to acknowledging a framework of Culturally sustaining, Transdisciplinary, Multiliteracies (CTM) Practices that can be inclusive of multiple ways of being, knowing and doing.

As a framework of inclusive literacy practices, CTM Practices for learners and teachers could provide specific guidelines for researchers and practitioners on how to foster *ten* inclusive literacy practices (see framework in Table 1). I will explain each of these ten literacy practices in further detail in this article.

Why Literacy Practices? Why a Framework?

Following Gee's (1998) definition of literacy, I consider literacy as control over multiple discourses and the command to manipulate them to achieve social and personal goals. Across multiple discourses, social, cultural, and disciplinary experiences define and morph intersectional individual identities; that is, how individuals *be* and *know*, and what they *do* in and with these

discourses. The unity of being, knowing, and doing describes what it means to be literate (Martin & Mirraboopa, 2003; Wilson, 2008).

Table 1: *CTM Practices for Learners and Teachers*

		CTM Practices
1	Learners	*exploring the unfamiliar and the familiar*
2		*analyzing scientifically and critically*
3		*humanizing people and experiences*
4		*acting by designing, creating, and implementing new texts*
5		*defining the world interpersonally and intrapersonally*
1	Teachers	*knowing learner identity, perspective, and experiences*
2		*designing and situating experiences in the real world*
3		*framing experiences critically*
4		*framing experiences aesthetically*
5		*explaining rationale explicitly*

Attempting to design inclusive ways of thinking about what it means to be literate, I seek across contexts the literacy practices that are by act inclusive of multiple ways of being, knowing, and doing. To clarify this, I share my interpretation of literacy practices. I ground literacy practices somewhere between Barton and Hamilton's (1998) and Gee's (1998) definitions. I perceive literacy practices as intangible collection of tangible discourses with which people engage using texts. Literacy practices are intangible because they shape and are shaped by "actions, interactions, dressing, thinking, beliefs, values, and feelings" (what Gee

(1998) calls big “D” Discourses) and permeate across multiple tangible things people do with texts (small “d” discourses). While actions, interactions, dressing, thinking, beliefs, values, and feelings specific to sociocultural contexts form distinctive big “D” Discourses (Gee, 2015; Gee & Handford, 2012), if I consider them thematically across Discourses, I can find shared and overarching literacy practices. Using this, I define literacy practices as *shared Discourses* across contexts. For example, humanizing as a literacy practice is intangible. That is, we do not see what humanizing looks like; all we see are its tangible manifestations in forms of the discourses in which people partake. Humanizing as a literacy practice is also made of some shared Discourses, such as believing in human rights for all, acting nice to people, dressing in culturally sensitive ways, etc. These Discourses look different across contexts but align with the same literacy practice of humanizing, by definition. So, to identify literacy practices, I would need to start by identifying the tangible discourses and find the Discourses with which they align, and then the overarching literacy practices.

For the CTM Practices framework, I used the approach of reading existing discourses in educational literature in multicultural education, and compiled five literacy practices of the learners that promote inclusive ways of being, knowing, and doing (see Table 1). I also found five literacy practices of educators—which can also be seen as pedagogical moves—that help sustain the literacy practices of learners. Using these, I offer guidelines for educators to exercise their literacy practices and foster those of the learners.

Researchers and educators can use this framework to think of inclusive learning environments in terms of literacy practices. To be inclusive itself, this framework will also have to be adaptable enough for researchers and teachers to refine and implement it across contexts (rural, suburban, urban, national, and international) with diverse populations. With this

framework, my goal is to create spaces for learners and educators to acknowledge and practice diverse ways of being, knowing, and doing.

The Three Lenses: Culturally Sustainable, Transdisciplinary, Multiliteracies

Achieving the goal of serving multiple ways of being, knowing, and doing across contexts needs a translingual, transcultural, transnational, and transdisciplinary approach to understanding literacies. I used the three lenses of culturally sustainable pedagogies, transdisciplinary thinking, and multiliteracies to create a multifaceted approach of looking at literacy practices:

1. *Culturally sustaining pedagogy* can be used to challenge discriminatory standards and embrace literacy practices based in equity and social justice (Ahmed, 2013; Bhabha, 1994; Paris, 2012)
2. *Transdisciplinary thinking* can be used to contest artificial disciplinary boundaries that pit disciplines against each other and restrict creative problem solving (Mishra, Henriksen, & the Deep-Play Research Group, 2012)
3. *Multiliteracies pedagogy* can be used to promote multiple ways of making and representing meaning across contexts that are not limited to one language or mode of expression (Cope & Kalantzis, 2015)

In this section, I explain the overlapping components and distinctive facets of each of these lenses.

Culturally Sustaining Pedagogy: Inclusive Ways of Being

Proponents of culturally sustaining pedagogy challenge the ubiquitous practices that have evolved out of colonial perspectives of defining, implementing, and assessing literacies (Paris, 2012). For years, especially in immigrant and colonized nations like the U.S., One English

perspective that aligned with White middle-class ways of being literate has defined what it means to be literate, thereby marginalizing others (e.g., Native American literacies). As more non-English speaking and multilingual immigrants come in to the U.S., they help underscore the hegemonic practice of using language (especially white ways of English) as a sole way of defining literacy as colonial and archaic, which have marginalized African American, Native and Latinx, and immigrant literacies. It exposes an unjust advantage to one language over others, and thereby one way of being literate over every other. This lens is complementary and foundational to the transdisciplinary and multiliteracies lenses by advancing the conversation around thinking beyond disciplinary boundaries by challenging, especially, language-based way of being literate.

Transdisciplinary Thinking: Inclusive Ways of Knowing

Transdisciplinary thinking evolves from a conflict between postmodernist and scientific ways of knowing the world. A transdisciplinary lens helps intentionally blur the boundaries between these two and other philosophically different approaches. While there are multiple ways of knowing—such as logical, linguistic, cultural, and emotional—there is little reason for these to contradict with each other; and ideally, they are complementary. I argue that the conflict between dualistic ways of knowing (logic vs. emotion, or scientific vs. artistic) stems from artificial disciplinary constructs and methods, and flawed ideas of binaries. A more holistic and inclusive way of knowing does not necessarily need to contradict with other seemingly opposite ways (Schiller, 2016). For example, detaching science as a discipline from language, arts, or humanities implies that it is possible to handpick science out of our lives. Similarly, it is ignorant to dismiss humanities, language, or arts as expendable in the name of science. These disciplines, and more, intersect in complex ways in human lives, and undermining one for another is not only ignorant, but also can be dangerous (as seen in recent examples of anti-vaccination movement

and climate change denial). These intertwined ways influence how we understand and define what it means to be literate. A transdisciplinary lens helps take a more complementary and humanistic approach that aims to resolve conflicting stances by creating more realistic, transdisciplinary learning spaces that are closer to learners' lived experiences and better align with future expectations.

This lens is complementary to the multiliteracies lens by breaking a siloed approach to shaping literacies and to the cultural-sustainability lens by underscoring issues of disciplinary marginalization.

Multiliteracies: Inclusive Ways of Doing

In 1996, the New London Group proposed "a pedagogy of multiliteracies," which evolved out of a need to acknowledge changing literacy practices at the intersections of work, citizenship, and identity (Cope & Kalantzis, 2015). They set out to address and embrace multiplicity in ways of making, representing, and communicating meaning, across multiple social, cultural, and disciplinary contexts (Taylor, 1997). They defined the purpose of multiliteracies as acknowledging multiple ways for learners to access, critically engage, and design their social futures to achieve success. To achieve this, they suggested, using multiple modes of representation and expression, and:

> increasing local diversity and global connectedness [and] effectively using multiple languages, multiple Englishes, and communication patterns that more frequently cross cultural, community, and national boundaries, and make [learners] competent to design their social futures. (p. 64)

Over time, limited interpretations of this vision have restrained multiliteracies research to mere multimodal literacies (Alvermann, 2017), seldom looking beyond language arts (Moje et

al., 2004). While multimodal literacies are essential to creating inclusive spaces, they are a part of a bigger inclusive narratives in the multiliteracies approach. For learners to be able to design their "social futures," multiliteracies researchers would need to look beyond siloed disciplinary meanings of literacy (Moje, 2015; Moje et al., 2004) and extend beyond normative standards. What multiliteracies has lost over time or never achieved (Jacobs, 2013; Leander & Boldt, 2013) can be reinvigorated through its marriage with cultural-sustainability and transdisciplinary lenses—as *culturally sustaining, transdisciplinary, and multiliteracies* practices.

Together, using these three lenses, I call for a dialog on our expectations and standards of how we define being literate. I challenge English and alphabet-based, disciplinarily siloed, and socially and culturally marginalized practices and offer the CTM Practices framework as a point of discussion for thinking of long-term solutions for inclusion.

Method: Compiling, Reviewing, and Reimagining Literacy Practices

I combined the three lenses of cultural-sustainability, transdisciplinary thinking, and multiliteracies to conduct a comprehensive survey of the literature. I gathered conceptual works that have discussed inclusion through themes of access, agency, deictic role of power and its relationship with identity, privilege, and oppression, and critical engagement.

Compiling the Literature

Using Cope & Kalantzis's (2015) work on multiliteracies learning processes and Banks's (Banks & Banks, 2010) multicultural education as frames of reference, I branched out to critical lenses of multiliteracies, transdisciplinary thinking, and cultural-sustainability to conduct a search across multiple online databases (e.g., ProQuest, ERIC, and Google Scholar) beginning with keywords ("culturally relevant," "culturally sustaining," "culturally responsive," "humanizing pedagogy," "inclusive pedagogy," "multiliteracies," "literacies," "multimodality,"

"postcolonial education/pedagogy," "power and education," "transdisciplinary thinking," and "aesthetics and science"). To limit myself to the top, more relevant, and established literature, I created consistent inclusion criteria of only including articles and books with the exact keyword in the title and/or abstract, which had over 200 citations on Google Scholar, and appeared on the first five pages when sorted by relevance. I used Google Scholar as a reference for the number of citations and relevance because of its advanced metadata curation and algorithms that search citations, abstracts, and full texts across the web. This resulted in 170 relevant articles and books (see Appendix A).

Reviewing and Coding

I followed Braun and Clarke's (2006) method of thematic analysis. First, I categorized the 170 articles and book under one of the three lenses of cultural-sustainability, transdisciplinary thinking, and multiliteracies, allowing for overlapping initial codes. For each article, I familiarized myself with them and identified instances of proposed pedagogies and praxis that authors of these articles (and I) would consider to be inclusive. I organized these instances using a spreadsheet. For each proposed instance of pedagogy or practice, I started to generate codes and look for patterns by constantly reading back and forward across the instances. While pursuing this, codes collapsed into themes, which I categorized into two sets of literacy practices for learners and educators.

In a second attempt, distancing myself from the original instances, I reviewed the themes and defined them to capture the sentiment of inclusion and purpose of each theme as a literacy practice. The thematic analysis resulted into a tentative framework (discussed in the next section) that includes components that scholars have considered as relevant literacy practices to create spaces that encourage inclusive ways of being, doing, and knowing.

Culturally Sustaining, Transdisciplinary, Multiliteracies (CTM) Practices

Comprehensive review of literature using the three lenses resulted into two sets of five CTM Practices—one of learners and one of teachers. Based on the literature review, I offer five key literacy practices that learners need to participate in to have confident control over multiple discourses and the command to manipulate them to achieve social and personal goals, that is, to be literate:

a. *exploring the unfamiliar and the familiar*
b. *analyzing scientifically and critically*
c. *humanizing people and experiences*
d. *acting by designing, creating, and implementing texts across contexts*
e. *defining the world interpersonally and intrapersonally*

To foster these literacy practices in learners, teachers would need to exercise the following five literacy practices:

a. *knowing learner's identity, perspective, and experiences*
b. *designing and situating experiences in the real-world*
c. *framing experiences critically*
d. *framing experiences aesthetically*
e. *explaining rationale explicitly*

It is important to note that there is no intentional hierarchy or one-on-one mapping of these practices from teachers to learners. Thinking that a literacy practice of teachers will result into a specific literacy practice of learners is unrealistic. Multiple literacy practices of teachers can influence one or many literacy practices of the learners. I see these practices intertwined with one another within and across groups.

In the next two sections, I describe the CTM Practices of learners that help understand what it means to be literate in inclusive ways, followed by the CTM Practices of teachers that can help implement those of the learners. For each literacy practice of teachers, I offer flexible guidelines for practitioners and researchers to implement and reimagine CTM Practices.

CTM Practices of Learners

Exploring the unfamiliar and the familiar. *Exploring* as a literacy practice is about learning situated in learners' lived experiences within and without school (Cazden, 2006; Dewey, 2007; Lave & Wenger, 1991). As a learner, this means having access to new, *unfamiliar* experiences that create enough discomfort to kindle a desire to explore for answers. And then, having curiosity to revisit *familiar* things from strange, learned perspectives to create a sense of extraordinary in the ordinary. These two approaches to exploring can encourage learners to (1) find similarities between their lives experiences and those of others and (2) find nuances within the lived experiences.

Making unfamiliar familiar. Exploring the unfamiliar is when learners are immersed in new, unfamiliar experiences—either by coincidence, on purpose, or through deliberation by teachers, parents, or social circles—with texts and/or contexts they have not encountered before. The goal is to familiarize these new experiences and connect them with prior or existing lived experiences (Lave & Wenger, 1991). For example, learning how something as strange as a blackhole is like an extremely heavy bird sitting on a telephone cable, bending the cable with its weight. Because exploring the unfamiliar sets the precedence and potential for new knowledge, it is crucial to guide it carefully and explicitly articulate the similarities between the unfamiliar and the familiar. Therefore, exploring needs a unique, personal, and wonder-driven approach to allow space for emotion and feelings in inquiry. It requires balancing with a scientific approach to

assure that new experiences are also based on reason and bias is mitigated to provide a more holistic and fulfilling experience for the learner (Jackson, 1998; Sagan, 2013).

Making familiar strange. Exploring the familiar involves revisiting what the learner already knows and reflecting on what it means having learnt new things. Here, making ordinary and mundane things seem unfamiliar and strange is the first step. As Shklovsky (1917) argued, exploring the familiar and unfamiliar work in and for both science and art, and help enrich understanding of other disciplines as well. In his view, something mundane can become exciting again, and something often ignored can become beautiful. It requires the proclivity to perceive familiar texts and contexts from different perspectives. For example, something as mundane as the Earth's atmosphere becomes exciting when perceived as a massive ocean of air where human beings and animals are like crabs at the bottom of the ocean floor (see Girod (2007)). The latter creates a strange imagery of a mundane, familiar phenomenon.

Analyzing scientifically and critically. While learners are working on moving between familiar and unfamiliar experiences, learning to view new and old experiences from two complementary scientific and critical lenses is crucial (Cope & Kalantzis, 2015). The scientific lens helps knowing and understanding the logic behind events, using reason, with evidence to support claims and the critical lens helps knowing and understanding that reason also comes with biases and perspectives, and there can be multiple interpretations of facts and reality (Banks, 2009, 2010). Together these lenses can become the foundation for understanding the physical and social world.

Scientific lens. Reason and evidence are considered cornerstones of scientific thinking (Descartes, 1637; Kant, 1800). They teach logical argumentation, reasoning, rationale thought, corroborating opinion with evidence, and looking at the world with objectivity. Scientific

analysis can help unearth, revise, and even fix established norms and knowledge. It helps understand the natural world and solve problems.

Critical lens. Often lost and even undermined in science, subjectivity plays a crucial role in making meaning of the world (Eco, Santambrogio, & Violi, 1988; Foster & Brandes, 1980). The critical lens here is different from the common definition of critical thinking, which thrives on objectivity. A critical lens aids the understanding of personal biases and helps recognize that even facts and objective reality involve subjective individual perspectives (Banks & Banks, 2010; Giroux, 1997). Critical analysis of the world helps understand these implicit biases in people and social systems (Morrell, 2017).

Humanizing people and experiences. Humanizing as a literacy practice emphasizes on developing emotional and aesthetic literacy to reach a clearer understanding of self and other human beings (Dolby, 2012; McAllister & Irvine, 2002). It extends from the limits of scientific analysis, where logocentrism and privileging formal, abstract logic over human emotion dehumanizes lived experiences (Cope & Kalantzis, 2015), and limits of taking a critical lens, which disregards the fundamentally human components of emotion and aesthetic that are simultaneously biological and social, and therefore, span across race, gender, and culture.

Humanizing as a literacy practice highlights emotional and evolutionary causes behind human perceptions and actions. These humanizing causes influence moods, shape how we make meaning, and warp reality in unique ways for all. To understand humanizing as a literacy practice better, I have divided it into two components: affective and aesthetic—which, like critical framing and analyzing, are tied with learners' interests, beliefs, and values, but are more grounded in socio-cognitive aspects (Freire, 2000; Girod, Rau, & Schepige, 2003).

Affective component. Thinking of humanizing as a literacy practices that can support and enrich learners' understanding of others, we can either narrow down our interest to the mental process of appraisal and expression of emotion towards others, or consider evaluating the word *feeling* as more than the sum of its theoretical, psychological parts, but still find empathy at its core, "a central characteristic of emotionally intelligent behavior" (Salovey & Mayer, 1990, p. 194).

Empathy constitutes of two domains of *empathic concern* (emotional empathy) and *perspective taking* (intellectual empathy) (Warren, 2014). Using Warren's distinction, I further elaborate both these domains using the emotional-intellectual relationship between others and self. While *empathic concern* (or emotional empathy) is about feelings of sympathy, compassion, and tenderness based on more interpersonal experiences, it is also about grief, sorrow, distress, based on more intrapersonal experiences (Warren, 2014, p. 398). *Perspective taking* (or intellectual empathy) is about imagining and feeling someone's experience in a condition and imagining and feeling how one would "personally experience another person's condition" (Warren, 2014, p. 397).

Aesthetic component. I see learning as a dialog between learner, texts, and their sociocultural contexts, where they build knowledge "combined with a deep appreciation for beauty and power of subject matter" (Girod & Wong, 2002, p. 199). Although this notion of beauty is often associated with art, having a humanizing aesthetic experience is more transdisciplinary that reaches beyond art to mingle with science, humanities, mathematics, and other disciplines that are often siloed in schools (Dewey, 2007; Mehta, Keenan, Henriksen & Mishra, in press). Also, this notion of beauty is more than the popular notion of beauty in form.

Aesthetic experience is an act of perception, and it "does not stand by itself but is linked to the activity of which it is the consequence," thus making aesthetic experience a form of intellectual-emotional response to something (Dewey, 2007, p. 56). Intellectual-emotional responses to aesthetic experiences—such as appreciation of beauty, a sense of wonder, and curiosity, and feelings of awe and sublime—are abundant across disciplines like literature, mathematics, science, and art, and can be considered crucial to promoting humanizing literacy practices (Jackson, 1998; Sagan, 2013). Learning to humanize self, others, and their experiences can help create a more empathic practice of inclusion.

Acting by designing, creating, and implementing. One of the most crucial CTM literacy practice for learners is the practice of acting. This involves creating new texts, spaces, and solutions. However, the act of creating cannot be done in isolation. It needs transfer of knowledge from other contexts and its application in new contexts (Mishra et al., 2012). For this, learners need to be able to first design ideas, create them into practical solutions and apply these to solve problems. In general, the literacy practice of acting is about using the learnings from all the other literacy practices and putting them into practical use to solve problems and reach outcomes. This involves actively designing, creating, and implementing solutions that are *functional* and *creative* depending on context (Cope & Kalantzis, 2015).

Functional action. The actions of design and implementation, when done functionally, are more pragmatic approaches where learners take their knowledge back to their lifeworld and apply it to communities to solve real problems and propose tangible solutions (Birmingham & Calabrese Barton, 2014). However, siloed definitions of disciplines limit these functional applications. Creative, transdisciplinary design and implementation complements this approach by offering spaces for non-traditional exploration and problem solving (Mishra et al., 2012).

Creative action. Creative actions often challenge pragmatic approaches and cross disciplinary boundaries to think of alternative solutions by learning from one discipline to apply to other solutions (Mishra et al., 2012). However, this creative action should not come at an expense of a justified and pragmatic application that gives people more tangible and immediate results, which are equally important.

Acting brings an activist lens to the problem-solving discourse found commonly in science and engineering domains. Acting includes designing of texts, creating them for certain contexts, and implementing them in these contexts for communication, expression, or representation. This requires the learner to be able to understand and navigate multiple texts across multiple contexts and disciplines, and critically evaluate the implications of the acts of using these texts.

Defining the world intrapersonally and interpersonally. Defining as a literacy practice for learners is about knowing what you know and what you do not know. It strengthens their existing understanding of themselves and the world through iterative revisits of their knowledge. Defining can be understood as the fundamental attempt at meaning- and sense-making (Eco et al., 1988; Lemke, 2013). Learners can do this through socially constructed interactions and their reactions to and interpretations of those interactions. I categorize these definitions into two major components: *intrapersonal* (the one influenced by understanding of self in the world) and *interpersonal* (the one influenced by social interactions). These two are complementary components, never separate and yet not the same.

Defining intrapersonally. As human beings, we try to attach labels to things, words, images, or—broadly speaking—signs and symbols, and use that categorization to further reason their meaning. We can then use it to build theories and create mental models of how the world

works (Bruner, 1990; Eco et al., 1988; Johnson-Laird, 1988). When we attempt to make sense of the world and how it works, we always see it in relation to our lived experiences (from one perspective). This perspective can be biased and influence how we make meaning (Lemke & van Helden, 2009). To overcome this, intrapersonal component focuses on conceptualization of self. Searching or knowing the answers to questions about self-identity, or self-worth, and metacognitive philosophical inquiry allows one to know themselves better. This can complement the attempt at conceptualizing the interpersonal world.

Defining interpersonally. Defining can become irrelevant if not grounded in or mirrored with social experiences (Cope & Kalantzis, 2015). Additionally, what is learned from analyzing the world and attempting to humanize it should cycle back to enrichen conceptualizations of the world. Same can be argued for creation and application. Creation and applications of certain disciplinary concepts can further help understand our mental models of how these concepts work (Salomon, 1979). It cannot be stressed enough that our definitions of the world are mere representation of the world, not the reality of the world itself. These representations can only be further improved through more experience, further analysis, mindful humanism, and active creation and application.

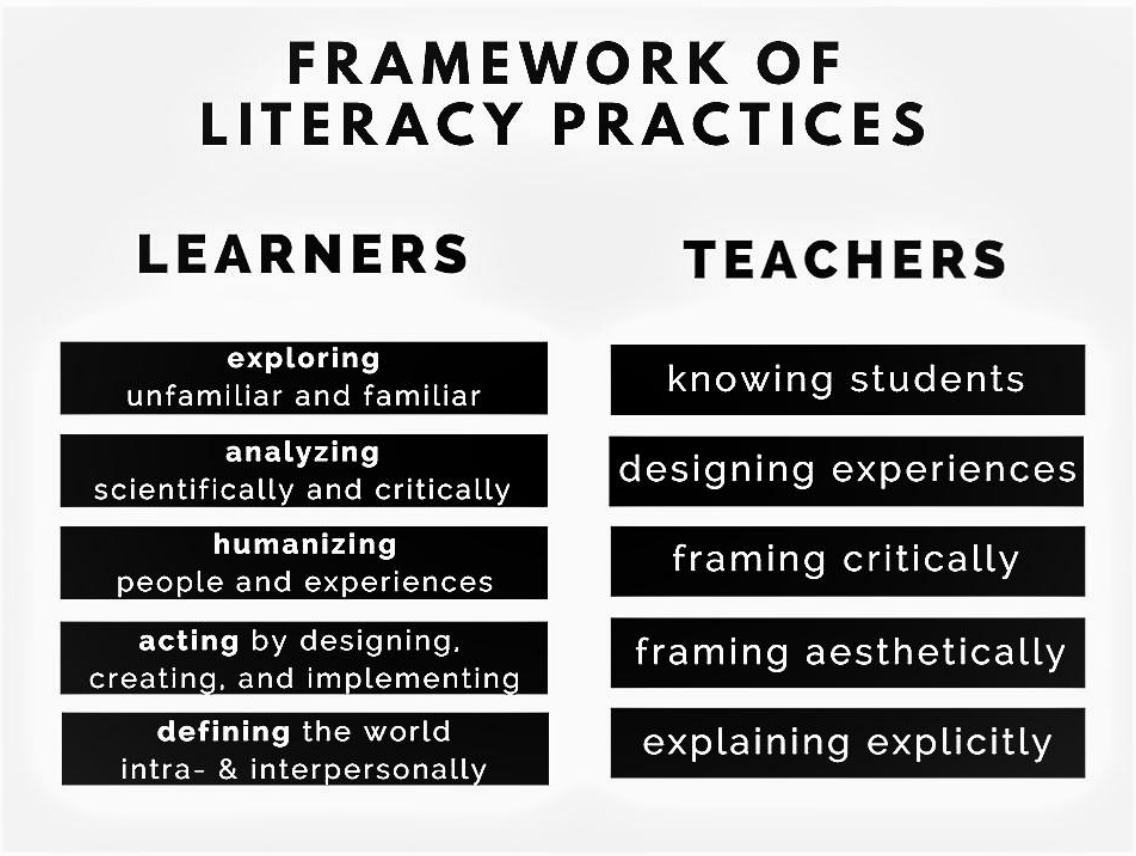

Figure 1: *Culturally sustaining, Transdisciplinary, Multiliteracies (CTM) Practices*

CTM Practices of Teachers: With Recommendations for Implementation

To foster the five CTM Practices of learners, teachers need to develop and exercise their own literacy practices. These CTM Practices of teachers (or other adults or peers in the role of an educator) help design educational spaces that encourage learners' literacy practices of exploring, analyzing, humanizing, creating, and defining. Together, these literacy practices can help teachers implement a culture of inclusion across contexts with and for populations of diverse races, ethnicities, genders, sexuality, or other makers of individual identity, including intersections of these.

Based on my review of the literature, I do not expect the CTM Practices of teachers to produce a one-on-one product of CTM Practices of the learners. Instead, I imagine teachers'

practices as essential components to design spaces for learners to exercise their literacy practices. In this section, I offer recommendations for each of the five CTM Practices of teachers.

Knowing learner identities, perspectives, and experiences. The first, and one of the most commonly occurring themes in the reviewed literature is of knowing the learners (Brown-Jeffy & Cooper, 2011). In this literacy practice, teachers need to internalize the value of knowing their learners' beliefs of their personal identity, their perspective towards themselves, others, and the world, and the nature of their experiences. To do so, they would need to create a warm, caring, and respectful learning environment, where the learners feel safe and welcome to be vulnerable. Before anything else, this requires for the teachers to be self-aware. This can be done in several ways, some of which are:

Recommendation. Showing care and warmth towards learners can help teachers create safe and welcoming classroom spaces for learners to feel open to expressing their vulnerabilities. Learning about their interests, backgrounds, and cultural, racial, or ethnic heritage can help teachers identify things that learners hold personal to them and that may be shaping their identities.

Understanding learners' understanding of the world and validating their home and community experiences provide a glimpse into learners' lived experiences and can help better appreciate the rationale behind their perspectives towards the world and themselves (Banks & Banks, 2010; Lave & Wenger, 1991). While practicing these recommendations, teachers need to be aware of their own biases and assumptions about learners' backgrounds and identities. Signs of judgment and presumption may lead to a feeling of discomfort in sharing personal beliefs.

Designing and situating experiences in the real-world. The second CTM Practice of teachers is careful designing of experiences tethered to outside of school world (lifeworld) in

ways that make sense to learners. When Lave and Wenger (1991) followed on Dewey and Vygotsky's work, they underscored the significance of designing realistic experiences for learners that allow them to think actively in terms of real-world problems and solutions. Designing experiences that are situated in real-world stories and examples stems from the understanding that human cognition is contextual; that is, it is situated in experiences, actions, and interests that change depending on context (Gee, 1998; Lave & Wenger, 1991). Therefore, it is important to create authentic and realistic experiences for learners rather than just artificial classroom settings.

Recommendation. Teachers need to (1) know and understand the experiences that learners bring with them, (2) use these experiences as points of reference in class to create familiar contexts, and (3) connect them with learners' lifeworld (The New London Group, 1996). The expectations from teachers are to implement ways to weave learners' experiences from their lifeworld with school (Cazden, 2006), and experiences of the familiar with those of the unfamiliar (Shklovsky, 1917). Cazden (2006) called the pedagogical moves of making these conscious inter-contextual connections cultural weaving.

When teaching concepts that are unfamiliar to learners, teachers need to make explicit connections to the applications of these concepts to learners' everyday life. Consider three to five key takeaways at the end of each major topic that could help learners answer the question: "why do I need to learn this?" While this practice bolsters learner understanding and appreciation of content, explicit scaffolding helps learners think consciously of making meaning and communication as they transfer their understanding to "their own social context and purpose" (Mills, 2011, p. 44).

Framing experiences critically. The word *critical* here has multiple denotations and connotations. The ones that are abundant in literature involve two: (1) reason and evidence-based analysis of the world and (2) awareness of the relationship of power with privilege and oppression (Cope & Kalantzis, 2015; Ladson-Billings, 1995; Paris, 2012). Framing classroom discourses with a critical lens, then, needs to promote use of a skeptical eye to school and lifeworld literacy events that exposes physical and social world for questioning.

Recommendation. Teachers need to engage learners to consciously consider the rationale behind the choices people make (including themselves) by evaluating the role of power through a skeptic eye. To start, teachers can take help from language arts and science lessons and frame discussions using the following components: texts, contexts, people, choices, and impact. These five components will vary across classrooms, teachers, their topics, and disciplines.

For example, when teaching topics in economics, it is important to know that *texts* include numbers, words, and visuals. Here, numbers stand for money, rise and fall of money, income and outcome of money, etc. Words stand for concepts that define rules of how money flows, where it flows from/to, etc. Visuals stand for some sort of change depending on context. *Contexts*, meanwhile, vary by country, state, economic styles, etc. These contexts involve *people* who bring power with them and influence economies. The choices they make with their *texts* and *contexts* can also influence outcomes. Finally, what may not sometimes be explicit is the *impact* of these three components (texts, contexts, and people) on human beings. What would a growth in a sector mean for people in a certain income group? Practicing naming and understanding these components can help learners look critically at their worlds and its disciplinary aspects that are often considered separate from humanities.

Framing experiences aesthetically. The literacy practice of affective and aesthetic framing of experiences advocates a holistic and humanistic understanding among learners by inspiring emotional and aesthetic literacy. Affective and aesthetic framing cover foundational aspects of the human experience, such as emotions and aesthetic, that go beyond disciplines and individual identity and preferences. As crucial as issues of identity are, for a more holistic humanistic perspective, it is also important to consider interhuman pedagogical moves that address more socio-cognitive aspects such as emotional and aesthetic experiences that are shared across social, cultural, and disciplinary contexts.

Recommendation. Teaches can start by creating positive aesthetic experiences. Creating such experiences in classroom needs carefully designing rhetoric that is framed affectively (Mehta et al., in press). First, teachers need to design moments of *wonderment*. Carefully choosing and designing texts and contexts that stir a sense of appreciation towards the content and kindles curiosity to know more. Then, building up on the wonderment, teachers need to plan a journey for their students that helps them feed their curiosity and reach a *fulfillment* (Jakobson & Wickman, 2008, p. 55). These aesthetic experiences help in dealing with learners' anticipation of how to continue, and understanding what *consummation* of tasks and fulfillment of purposes and aims feel like.

By engaging learners in emotional and aesthetic content, teachers provide them with opportunities to understand other human beings, their experiences, the human condition, and, in this process, other cultures. This richer understanding can then add to the overall inclusive, holistic, humanizing, critical, and culturally sustaining culture and provide learners with multiple perspectives to learn from, thus offering them new opportunities to succeed academically and socially.

Explaining rationale explicitly. To create an inclusive classroom setting, a teacher navigates through many roles—as a navigator of classroom discourse, a negotiator of pedagogies, a mediator of meaning, a weaver of experiences, and a moderator of policy. The practice of these multiple roles and responsibilities may overwhelm learners, who may even feel lost in teachers multifaceted pedagogical moves. One of the most important roles for the teachers then becomes to assure that the rationale behind their pedagogical moves are clear to the learners through explicit instruction (Cope & Kalantzis, 2015). However, explicit instruction is not about explaining every single move teachers make, it is about learners understanding the rationale and expectations behind their action and participation.

Recommendation. Explicit instruction would involve questioning student choices and strategies, asking them to elaborate and explain their rationale, and modeling personal reasoning and rationale through clear instruction for each activity.

Content. Teachers need to use explicit connections to other texts and student experiences to premeditate misconceptions and uproot them before they spread. Teachers have multimodal ways of exposing these misconceptions, especially when dealing with abstract concepts that cannot be easily reified through dialog. Upon elucidating the complexities of abstract concepts, teachers can then also help learners make connections to other contexts and generalize. This helps learners conceptualize the deeper, bigger meaning of something that can be abstract, complex, or obvious. For instance, understanding the theory of evolution in isolation of a standalone lecture is does not do justice to the bigger conceptualization of its generalizations. The teacher's role then also becomes to help learners realize what this means on a grander scale, and navigate transdisciplinary discussions around life, human and animal rights, racial and gender equality, and so on; thereby situating new concepts in their lifeworld.

Pedagogy. Implementing explicit explanations for rationale is not limited to content. It also involves using critical and aesthetic framing in a conscious way, knowing and understanding the affordances and constraints of diverse types of modalities and technologies, knowing administrative expectations, and designing literacy events that satisfy the school needs without compromising learners' needs. Florian and Black-Hawkins (2011) found that the subtleties of inclusive classroom practices do not always get noticed by administrative and policy perspectives. Therefore, teachers need to know which literacy events that they partake in explicitly connect with inclusive literacy practices. Explicit instruction serves learners in understanding the rational and importance of content and pedagogy and serves teachers in organizing their goals and numerous responsibilities.

Implications for Implementation

In the next chapter, I share the results of an embedded case study I conducted in a rural context to test the feasibility of the five CTM Practices of the learners, understand the challenges they face in this context, and how (and if) teachers' CTM Practices can be used to help resolve those challenges. Although for this study I chose a rural context for reasons I will discuss in detail in the next chapter, my intention with this framework is to continue implementing it across multiple contexts, varying by social contexts, cultural settings, disciplinary areas, national and international boundaries—to test whether its flexibility allows for multiple ways of being, knowing, and doing as I claim it does.

When implementing this framework, there are multiple methodological approaches I could have taken. I can imagine the implementation study (chapter 2) being conducted as an intervention study, a design-based study, or a long-term ethnography, among other approaches. I chose to conduct an embedded case study using critical discourse analysis because I find the role

of power in framing questions like what is included, who is included, who includes, who gets to be included, among other similar series of critical questions. Asking these questions, as I argue in the next chapter, requires a critical discourse analysis approach.

Irrespective of the context, the literacy practices included in the CTM Practices framework are what researchers across disciplines have found to be important for designing culturally sustaining, transdisciplinary, and multiliteracies practices. When implementing this framework across contexts, not only I intend to look at the feasibility of the framework itself, but also that of all the literacy practices that make it—as claimed by the researchers. I intentionally separate myself from this iterative and self-reflective process, so I can be critical of my own work. This is crucial because the purpose of the work is not to simply design a framework—but to design one that is practical and useful across diverse contexts.

CHAPTER 2

Power is of two kinds. One is obtained by the fear of punishment and the other by acts of love. Power based on love is a thousand times more effective and permanent than the one derived from fear of punishment. (Gandhi, 1996, p. 29)

Implementing the Framework

Educational researchers have started to identify the importance of surrounding and tackling issues of discrimination in society from various perspectives and research methodologies across contexts (Au, 2009; Moss-Racusin, Dovidio, Brescoll, Graham, & Handelsman, 2012). However, multicultural studies have focused chiefly on urban settings and students of color (Banks & Banks, 2010), often putting the onus of changing on youth and educators in these contexts. While these contexts are important to study, multicultural researchers and educators also need to study and offer practice-based solutions in understudied predominantly White and rural communities. Studying predominantly White and rural settings through progressive research approaches such as culturally sustaining pedagogies (Paris & Alim, 2014), transdisciplinary thinking (Mishra, Koehler, & Henriksen, 2011), and multiliteracies (The New London Group, 1996) can help offer practice-based solutions to address issues of inequity with populations where it often goes understudied (Nayak, 2007), and mitigate the burden of change for urban youth and educators (Paris, 2012).

Three lenses—cultural sustainability, transdisciplinary thinking, and multiliteracies—help identify the literacy practices that conflict with discrimination and subjugation of people, intentionally blur artificial boundaries across disciplinary ways of knowing, and promote multiple ways of making and expressing meaning (Cope & Kalantzis, 2009; Jewitt & Kress, 2003; Mishra & Henriksen, 2012; Mishra et al., 2011; Paris, 2012). In 2017, I used these three

lenses to design a framework of ten literacy practices (see Figure 1) for learners and teachers that can help foster inclusive literacy practices. I called the final set of literacy practices *culturally sustaining, transdisciplinary, multiliteracies practices* or *CTM Practices*.

CTM Practices of Learners and Teachers

The five literacy practices of the learners are as follows. *Exploring* as a literacy practice is about actively seeking access to unfamiliar experiences and having curiosity to revisit familiar experiences from strange, new perspectives to create a sense of extraordinary in ordinary (Dewey, 2007; P. Jackson, 1998; Shklovsky, 1917). *Analyzing* as a literacy practice is about knowing and understanding the logic behind events, using reason, with evidence to support claims and use a critical lens to find the biases and power differential that influence logic, reason, and evidence (Cope & Kalantzis, 2015; Paris, 2012). *Humanizing* as a literacy practice is about developing emotional and aesthetic literacy to reach clearer understanding of self, others, and shared experiences (Dolby, 2012; McAllister & Irvine, 2002). *Acting* as a literacy practice is about taking initiative and acting by designing solutions to problems and creating practical tools or resources to apply these solutions (Boud & Feletti, 1997; Buchanan, 1992; Mishra & Henriksen, 2012). Finally, *defining* as a literacy practice is about strengthening the existing understanding of the self and one's relationship with the world through iterative reflections on knowledge and identity (Cope & Kalantzis, 2015; Eco, Santambrogio, & Violi, 1988; Lemke, 1998).

The five literacy practices of the teachers that can help foster the literacy practices of the students are: *knowing the learner* (internalizing the value of understanding learner identities, perspectives, and experiences), *designing situated experiences* (carefully creating classroom discourses that tie with students' lived experiences), *framing critically* (framing classroom

discourses with a skeptical lens and with a self- and social awareness of inequity and injustice), *framing aesthetically* (framing classroom discourses with a holistic lens that accounts for human condition and emotions through empathy and aesthetic literacy), and *explaining explicitly* (making the connections between school, content, and lived experiences obvious to the students).

Using this framework of CTM Practices, I conducted an embedded case study to test the affordances and constraints of learners' literacy practices in a previously underserved setting in multicultural research: a socioeconomically low, predominantly White rural community in a Midwestern town of Hawkins (pseudonym) (Ayalon, 1993, 2004). I anticipated conflict between CTM and local literacy practices that would help highlight the affordances and constraints of the learners' CTM Practices and test teachers' CTM Practices to see if they can offer resolutions. I used Critical Discourse Analysis (CDA) to study the literacy practices of Hawkins and how power shaped them to identify sociocultural challenges CTM Practices may face in such contexts (Fairclough, 1992). Using the results of CDA, I offer practice-based moves to refine CTM Practices to make them more feasible across contexts.

Conceptual Framework

Literacies research of Barton & Hamilton (1998), Cope and Kalantzis (2015), Gee (2004) and Heath (1983) helped define the focus of this research on literacy practices to understand underlying social assumptions about literacies and identify room for change and growth. Bhabha (1994), Freire (2000), Fanon (2008), and Spivak's (1999) writings helped become sensitive to the role of power in defining competence and literacy. Fairclough (1992) and Gee's (2004, 2014a, 2014b) transdisciplinary approaches to critical discourse analysis informed the dissection of power embedded in the literacy practices of Hawkins.

Defining Literacy Practices

I understand literacy practices as shaping and being shaped by actions, interactions, dressing, thinking, beliefs, values, and feelings. While actions, interactions, dressing, thinking, beliefs, values, and feelings that are specific to sociocultural contexts become distinctive big "D" Discourses (Gee, 2015), if we consider them thematically across Discourses, we will find common, overarching literacy practices. Therefore, I consider literacy practices as *shared Discourses* across contexts, where Gee (2015) defined Discourses as "combinations of ways with words and ways with "other stuff" (bodies, clothes, objects, tools, actions, interactions, values, and beliefs) that can get people recognized as having certain socially significant identities" (p. 2).

Taking Nobel Peace Prize Winner Malala Yousafzai as an example, in her early years as a budding advocate of education for girls, her clothes, interactions, mannerisms, values, and beliefs aligned with a distinctive Discourse of being a conservative Pakistani girl. Over past few years, this Discourse started to intersect with new Discourses of being a feminist and a humanitarian. These intersecting Discourses help underscore her many literacy practices. Taking three of the CTM Practices as examples, in her Discourses we see literacy practices of *humanizing* (as she displays respect and value for people like and unlike her), *exploring* (as she uses her experiences to perceive old things in new ways), and *defining* (as she continually redefines her identity as an activist for girl education). However, these literacy practices are not unique to Malala's Discourses. Other people can engage in similar literacy practices across contexts and Discourses in diverse ways. My goal with this study has been to identify the literacy practices that can help foster inclusive ways of being, knowing, and doing across contexts.

Power and Literacy Practices

When searching and evaluating literacy practices that exercise inclusion, a researcher must be sensitive to the role of power and its distribution among people within the embedded contexts (in this case: Hawkins). Power is a fuel for sociocultural interactions. Having power, however, does not necessarily mean being dominant. It is more like a source of agency—essential for interaction (Johnstone, 2008). Power shapes how people be, what they do, what they know. It shapes what it means to be literate and how people engage in their literacies across contexts. It shapes and is shaped by everyday literacy practices. But, existence or lack of power can create a dynamic tension between those who have it and those who do not (Gee, 1998, 2004, 2015). One can be with power in one context and without in another. Being aware of power in and across changing contexts, therefore, is crucial; because then people can conscientiously choose what they do with the power (Brown & Yule, 1983; Fairclough, 1992).

In this study, I used critical discourse analysis to explore the possibility for power to fuel literacy practices among people in a way that they support and include—across multiple contexts—diversity of race, ethnicity, socioeconomic status, nationality, language, gender, sexuality, age, health, religious/non-religious belief, or disciplines, to feel and have the agency to be, know, and do as they wish proper without feeling marginalized (Bhabha, 1994; Fairclough, 1992; Fanon, 2008; Freire, 2000; Gee, 2004). This definition of inclusion is ambitious. Therefore, as a point of entry into praxis, I suggest that the exploration of CTM Practices can help reimagine inclusive and culturally sustaining classroom discourses.

Inclusive Literacy Practices in Rural Contexts

The rationale for working in a rural district stemmed from a lack of scholarly attention on the role of rural schools in creating culturally sustaining and inclusive literacy practices and

dearth of transdisciplinary perspectives in literacies research on what it means to be literate (Ayalon, 2004; Donehower, Hogg, & Schell, 2007; Wake, 2012). When working on issues of inclusion, naming and breaking cycles of injustice and inequity are as important as implementing new inclusive practices. It is important to start at grassroot levels and tackle injustice and inequity where it begins (Au, 2009). Historically, rural literacy practices in the United States (also Australia, Europe, and United Kingdom) have been more conservative than their urban counterparts (DeSilver, 2014; Patten, 2013). Consequently, rural settings stay less exposed to changing sociocultural trends—especially new or different people, values, cultures, and literacy practices (Donehower et al., 2007). Repercussions of disparity in literacy practices can be seen at national level when people begin to strongly identify with literacies that dominate those without power (e.g.: voting against civil or LGBTQA+ rights across the globe for traditional or religious reasons). Therefore, there is a need to find commonalities across contexts, including rural, and reimagine literacy practices that are inclusive of multiple ways of knowing, doing, and being/becoming literate.

Before digital media and accessible internet, most of the interaction with other cultural discourses had been facilitated via broadcast-based, author-to-audience media (Gilbert, Karahalios, & Sandvig, 2008) with minimal to no choice for interaction. Recently, with the availability of and access to digital and social media, interaction is possible with diverse discourses of race, gender, language, sexuality, and other social identities (that have previously existed in suppressed forms in rural contexts) (Gray, 2009). Unfortunately, the rapid pace of introduction of new discourses could also make it difficult for rural communities to find the time to process and adapt to changing literacies (Gray, 2009). While sustenance of local literacy practices relevant to rural communities is important, it is also crucial to prepare them for

practices that have repercussions beyond local communities. Schools play a central role in rural communities (Lyson, 2002) to prepare multicultural citizens who practice culturally sustaining pedagogies, think transdisciplinarily, and are multiliterate.

Method

Having my subjective experiences and background as an educational researcher to my advantage, I was contesting the extent of using myself as an instrument of research. My challenges included overcoming the hurdles of being a brown researcher with an accent and a non-normative grammatical style studying language and discourse in a predominantly white context.

Research Design

I designed an embedded case study to bind an underserved context where I could situate myself and use ethnographic methods to familiarize with ongoing discourses. The case at the middle was an 8th grade hour in a science classroom embedded in a predominantly White rural school district in a Midwestern town. Through this, my first goal was to analyze the existing literacy practices—by understanding which, I could compare or introduce CTM Practices where appropriate and evaluate their feasibility, affordances, and constraints. I used critical discourse analysis to tease apart these challenges.

Context and approach. At the time of the study, 96% of the population of Hawkins (n=8,634, year 2015) identified as White/Caucasian. The remaining 4% identified as either Latinx and/or Hispanic, African-American, or belonging to more than one race. There were no people who identified as Asian or any other race as of 2015.

In this three-month long embedded case study, I used participant observation, open-ended and semi-structured interviews, and semi-structured focus groups to gain an emic perspective of

the community and its residents (Tsui, 2012). Conducting an embedded case-study using ethnographic methods, it was important for the participants and me to know each other (Denzin, 2009; Glesne, 2006; Stake, 2005). Finding such a detailed and layered case to study needed Hawkins to welcome an outsider like me as an insider. For this, I gradually built a rapport not only with the participants in the study, but also the people that made their context. I showed sincere respect, knowledge, and interest in their practices (Glesne, 2006). Building a rapport beforehand allowed me to better understand the participants and their figured worlds—which helped improve the validity of this qualitative study (Gee, 2014b; Glesne, 2006).

I spent a little over 2 years building a rapport with a middle school science teacher, Ms. Starr. I met her through the district literacy specialist, Ms. Webb, in a teacher professional development setting helping with post-school co-curricular activities and conferences. Ms. Webb and Ms. Starr helped me enter the school setting and design spaces where I could interact with the students and get to know more about them. During this time, I familiarized Ms. Starr with this study and its purpose. Eventually, Ms. Starr and her eighth-grade science students welcomed me in their 2nd hour, where I interacted with them for over a three-month period. After first few weeks of understanding the context of Hawkins Middle School, Ms. Starr and I worked towards experimenting with pedagogical solutions to foster CTM Practices, which helped expose their affordances and constraints.

Participants. My participants included teachers, students, and parents. While I personally interacted with 32 students, I worked closely with 7 focal students to know more about them, their literacy practices, and through them, the literacy practices of their school and community. These students were Anna, Ant, Bob, Blair, Clary, Patrick, and Samantha—four identified as male and three as female. Six participants identified as white and one as mixed race.

In addition to their science teacher, Ms. Starr, who I closely worked with, I also interacted with their language arts teachers: Ms. O'Sullivan and Ms. Smith, their school principal: Ms. Harrison, and Blair's mother and a special education teacher in Hawkins: Ms. Hammond.

Procedure. Literacy practices do not present themselves to the researcher and are unobservable to the senses. Therefore, to identify them, I had to first identify the ways language was being used—in other words, small "d" discourses—observable activities of and with texts that people do across different contexts (Barton & Hamilton, 1998; Gee, 2004). These discourses could be a mixture of several activities of texts in various modes such as written, spoken, visual, gestural, among others. Texts—in various multimodal forms—shape contexts, structure events, and reveal choices (Gee, 2015). Inquiring people about their texts helps identify the tethers between discourses and Discourses. Upon further analysis, it can also reveal themes across Discourse—the literacy practices, and social elements such as power, identities, and ideologies.

To get to the literacy practices from activities of texts, I mixed Fairclough (1992, 2001, 2012) and Gee's (2014b) extensive discourse analysis toolkits. I used these toolkits to analyze the transdisciplinary and interwoven discourses from a critical perspective, which helped evaluate the realities and practices within the context of Hawkins and assess whether these realities and practices were socially just and equitable. It also helped understand power as it fueled these realities and practices and explain the causes of asymmetry of power (Fairclough, 2012). This analysis opened possibilities to offer solutions to create inclusive spaces.

Data collection. During the data collection phase, participant observation, fields notes, and local artifacts were my primary means of knowing and gaining access to empathize with the cultural system of meaning in Hawkins (Schwandt, 1997). To build a structured understanding, I journaled to support comprehensive notes of raw data, conducted semi-structured, open-ended

interviews with seven student participants along with the three teachers, the principal, and a parent, and conducted two focus groups with the seven students once in the middle and once at the end. I also collected artifacts and photographs.

From classroom participation, I had student-created documents and artifacts in form of Google slides, word documents, handwritten notes, hand-drawn visuals, collaborative project work, school-level artwork, etc. from over 32 students. From collaboration with the teachers, I had teacher-created artifacts in form of presentations, classroom activity sheets, in-class material, etc. Also, I purposefully photographed over 100 examples of discourses in the context of the school and the town.

From observations, I had over a hundred pages of field notes describing the verbal, visual, gestural, spatial, and other multimodal activities of text. For example, I went to details that included something as subtle as one student's quick casual glance at another student in response to something Ms. Starr said. Such detailed notetaking helped create a more accurate description of these discourses. To learn about the seven student participants and their contexts, I gathered participant-created multimodal compositions, over 6 hours of recorded interviews, and about 3 hours of recorded focus groups. I also collected 5 hours of interview data with teachers, the principal, and the parent.

Critical Discourse Analysis

The purpose of critical discourse analysis (CDA) is to show non-obvious ways in which texts are linked to social relations of power (Bhaskar, 1986; Fairclough, 2001, 2012). Using Bhaskar's (1986) and Fairclough's (2001) analytical frameworks for CDA, my data analysis began with a social problem that had a semiotic aspect, instead of a research question. First, in this study, the social problem I followed was implementing inclusive literacy practices. Second, I

identified the obstacles or challenges to this social problem that could help understand its affordances and constraints. To reveal these obstacles, I observed the existing discourses within the context of Hawkins. The third step was to consider whether the community of Hawkins benefited from their status quo and whether they will have interest in the "problem not being resolved" (Fairclough, 2001, p. 236). Finally, I looked at the possibilities of resolving the problem through change in literacy practices.

Discourse analysis tools. My critical analysis of Hawkins's discourses began with data collection itself. I used Gee's (2014b) several discourse analysis toolkits during data collection and during and after discourse analysis. For example, one toolkit I used for CDA was "Activities Building Toolkit." The purpose of this toolkit is to ask what practice or practices is an activity of text enacting or seeking for others to recognize? Then, I asked what social groups, institutions, or cultures support the practices in question? This Activity Building Toolkit was a part of Gee's (2014b) seven building tasks that include inquiring for significance, activities or practices, identities, relationships, distribution of social goods, connections, and sign systems and knowledge—each useful for a specific line of inquiry. I switched between these toolkits depending on the demand of the context. I wrapped these seven toolkits in a theoretical Big "D" Discourse Tool, which asked "what sorts of actions, interactions, values, beliefs, and objects, tools, technologies, and environments are associated with [the] sort of language within a particular Discourse?" (p. 181). This theoretical tool was essential for my study, which aimed to understand the literacy practices reflexively, shaping and shaped by the Discourses.

For instance, during the participant interviews and discourse analysis, I asked questions that followed the links between discourses and literacy practices, making the social elements influencing these literacy practices more evident to me. For example, in an unplanned

conversation with Ant, he shared with me his activity of sketching an amalgamation of Adolf Hitler and Abraham Lincoln.

AUTHOR: This is an interesting sketch, Ant. I know you love sketching. Could you tell me more about it?

1. I just wanted to see how it looks//
2. They are so different//
3. My sister was like, “you are horrible”/
4. But I just wanted to see, you know, how two people so different can also be one//

   …
5. These two people/ they are like opposite to me//

   [AUTHOR prompts with another question asking for the reason]
6. It is just interesting//
7. Sometimes people do things I don’t like/ and I don’t understand why they do it//
8. Because they are not always like that/ you know?

Using the identities building toolkit, I could see that Ant was trying to convey a creative or artistic identity. He was also aligning himself with philosophical and moral questioning of right and wrong or good and bad. The idea of good and bad wrapped within one person capable of doing both (lines 4-5) is different from a theological version of good versus bad prominent in Judeo-Christian contexts. Through his sketch, Ant was attempting to dissolve this binary, which implied that he was thinking in spaces that challenged the popular beliefs in his community. It was a sign of two literacy practices of students: *analyzing critically* and *acting by creating*. To bolster this claim, I needed to look for other examples from discourse analysis that would triangulate tethers to similar literacy practices.

After critical discourse analysis of all transcripts, field notes, and multimodal artifacts, I returned to Bhaskar (1986) and Fairclough's (2001) analytical framework to follow the line of questioning I had started. By now, I had identified a social problem. My next steps were to identify the obstacles and challenges, understand the discourses where Hawkins benefitted from the status quo and whether they will have an interest in the problem not being resolved.

Challenges and Resolutions for CTM Practices

The diversity of ideas in Hawkins ranged from liberal inclusiveness to conservative traditionalism, from a lack of belief to devout faith, from an utmost sense of patriotic oneness to a philanthropic vision of working social anarchy. Most of Hawkins, which I experienced from the eyes of a few residents of the community, lied somewhere in the middle of these forced binaries.

Critical discourse analysis helped understand the role of powerful social influences that controlled which literacy practices were and were not acceptable. I focused on the challenges and alignments between literacy practices of Hawkins and CTM Practices to identify the affordances and weakness of a framework of inclusive literacy practices if educators were to implement them successfully across contexts. The biggest emerging challenges fell under the following four themes:

- *Disguised marginalization:* An omnipresent asymmetry of power existing at Hawkins that marginalized the students based on their familial reputation in the community and the academic status of their parents and siblings before them in the school.
- *The distancing from experiences:* A figurative distance between students' lived experiences in Hawkins and the rest of the world. This could be of two types: social

(distancing from experiences of the people different from them) and natural (lack of experience of natural phenomena due to geographic location).

- *Conflicting discourses:* A conflict between existing discourses tied to personal and social identity and those tied to the CTM Practices.
- *Siloed literacies:* A practice of avoiding or ignoring complexity by separating things, people, and ideas based on a traditional and conservative understanding of the world.

I discuss each of these four challenges—the nature of conflicts that they present for the five CTM Practices of the learners—and offer resolutions for them. In Table 2, I display how the four challenges conflict with each of the five CTM Practices of the learners and how those of the teachers help offer resolutions.

Table 2: *Nature of Conflict and Resolutions for CTM Practices of the Learners*

	Disguised Marginalization	**Distancing from Experiences**	**Conflicting Discourses**	**Siloed Literacies**
Exploring the unknown and the known		*Nature of Conflict:* Lack of social and geographical experiences of the unknown *Resolution:* - Inclusion of socially and culturally diverse narratives - Aesthetic framing to design multisensory experiences	*Nature of Conflict:* Avoidance or dismissal of experiences that challenge one's own identity *Resolution:* - Aesthetic framing to design classroom experiences that engage in uncomfortable or threatening discourses. - Explicit connections between new content and its personal benefits (not just economic benefits such as job).	*Nature of Conflict:* Siloed ways of thinking about problems which stifle transdisciplinary creative perspective shifting *Resolution:* - Cross-disciplinary teacher collaboration - Transdisciplinary projects for teachers

Table 2 (cont'd)

	Disguised Marginalization	**Distancing from Experiences**	**Conflicting Discourses**	**Siloed Literacies**
Analyzing scientifically and critically	*Nature of Conflict*: Ignorance of asymmetry of power and how it affects society *Resolution*: - Teacher self- and social awareness - Knowing learner identities, perspectives, and experiences - Critical framing to design classroom experiences	*Nature of Conflict:* Lack of social and geographical experiences of people different from oneself *Resolution:* - Inclusion of socially and culturally diverse narratives across disciplines (including sciences) - Aesthetic framing to design multisensory experiences	*Nature of Conflict:* Avoidance or dismissal of practices that challenge one's own identity *Resolution:* - Aesthetic and critical framing to design classroom experiences that explain the value of perspectives different from one's own. - Explicit connections between content and experience.	
Humanizing people and experiences	*Nature of Conflict*: Ignorance of asymmetry of power and how it affects people *Resolution:* Aesthetic and critical framing to design classroom experiences that are situated in out of school experiences and explain the value of perspectives different from one's own.	*Nature of Conflict:* Lack of social and geographical experiences of people different from oneself *Resolution:* - Inclusion of socially and culturally diverse stories and transdisciplinary examples - Aesthetic and critical framing to design classroom experiences that explain the value of perspectives different from one's own.	*Nature of Conflict:* Avoidance or dismissal of practices that challenge one's own identity *Resolution:* Aesthetic and critical framing to design classroom experiences that are situated in out of school experiences and explain the value of perspectives different from one's own.	*Nature of Conflict:* Siloed ways of thinking about problems, which stifle transdisciplinary creative perspective shifting *Resolution:* - Inclusion of socially and culturally diverse stories and transdisciplinary examples - Aesthetic and critical framing to design classroom experiences connected across disciplines to explain the value of switching between disciplinary ways of knowing

Table 2 (cont'd)

Acting by designing, creating, and implementing		*Nature of Conflict:* Lack of social and geographical experiences of people different from oneself *Resolution:* Inclusion of socially and culturally diverse stories, role models, heroes, and their struggles through personal connections (and not just at a superficial level)	*Nature of Conflict:* Avoidance or dismissal of issues affecting people different from oneself *Resolution:* - Explicit connections between content and experience. - Designing examples situated in real world problems	*Nature of Conflict:* Siloed ways of thinking about problems, which stifle transdisciplinary creative perspective shifting *Resolution:* Aesthetic framing to foster transdisciplinary creativity, design thinking, and problem solving
Defining the world intra- and interpersonally	*Nature of Conflict*: Ignorance of asymmetry of power and how it affects self and other people *Resolution:* - Aesthetic and critical framing to design classroom discourses that promote reflection and revision—learning from failure. - Explicit connections between content and experience.	*Nature of Conflict:* Lack of social and geographical experiences of people different from oneself *Resolution:* - Inclusion of socially and culturally diverse stories, role models, and heroes through personal connections (and not just at a superficial level) - Aesthetic and critical framing to foster empathy		

Disguised Marginalization

Learners' CTM Practices of *analyzing scientifically and critically, humanizing the people and the experiences,* and *defining the world inter- and intrapersonally*, all faced a common conflict from the first challenge of marginalization of students. The nature of their conflict branched out of ignorance of the omnipresent asymmetry of power in the community—where school played a central role (Lyson, 2002). Disguised under the practice of social networking between teachers and students to create a friendly environment, a last name-based popularity

created an asymmetry in power with the community that discriminated against its youth's agency and identity both in and outside school. Both teachers and students participated in this culture that favored people based on their reputation assumed from their last names—leaving youth without prior familial membership to the school at a disadvantage. Clary helped me understand how the teachers and the community shaped this flow of power, which spanned elementary through high school.

> Clary: I can name last names right now that, if you said it [*sic*] in the high school, those teachers are automatically going to recognize you, and they are automatically going to like you. I have a teacher right now for my 6th hour. I walked over there, and I have never had her as a teacher, but my sisters went through that school and they did really good in school and everybody knows them. She automatically goes, "Oh, you're a Carnegie?" She doesn't call me by my first name. She goes, "Miss Carnegie!"

Teachers instantly recognized and assigned value to students based on the reputation of their siblings or parents if they went to Hawkins as well, or if the teachers knew them from the community. This practice also seemed to exist among the students through a popularity asymmetry that was only working for a selected few, othering the less popular students as "bad kids." A forced binary of good versus bad kids overpowered the traditional, more common forms of popularity asymmetry by sports, academics, music, etc. Here, both Bob, popular for sports, and Clary, popular for academics, could be a part of a common popular social circle.

> Clary: If you go to Hawkins, sometimes it just depends on what your last name is. That sounds so bad, but if you've had siblings and they've done great things… You're you, and it's your last name. People know you by your last name… Everyone in the high school, they'll call me by my last name.

Bob: Yeah, but last names here at Hawkins is a big thing. A lot bigger than it should be. I'm not going to say his name. There's this kid in our grade, and he's super-popular. Probably the most popular kid ever. I'm not going to say his name.

Clary: Bob, you hang out with all of them, though… It's our group that we're talking about.

Unfortunately, students who followed a sibling or parent with comparatively bad reputation, or no prior reputation in the school, had added but varying prejudice to fight. To get a "personal window" into their students' lives, teachers sought out ways to connect with the students out-of-school experiences, which resulted in students ending up in a years-long battle for reputation. Principal Harrison thought that there was an advantage in knowing the students from outside of school. However, according to her, she carefully made positive connections such as, "Hey I went to school with your mom. Oh, she was great at art!" She, too, believed that it helped her build closer relationships with her students. But she was aware that she could not do it will all the kids. So, she attempted to connect with them in other ways such as using their clothes and accessories as texts to thread new conversations.

The marginalization by reputation disguised as social networking between teachers, students, and parents was not about socioeconomic status, race, gender, or any other sociocultural factors that have been usually considered responsible for asymmetry of power among youth (De Bruyn & Van Den Boom, 2005; Geronimo, 2010; Mohanty, 2010; Villenas, 1996). It was about merit and reputation molded purely based on last/family name. Students like Samantha, who did not have a prior reputation, and was considered a "bad kid," replied to Bob and Clary's comments in the focus group:

> Sometimes, kids that are more bad at school have, probably, bad times at home. That is just how they come and reflect it at school. If your parents are always pushing you to do things that you probably don't want to do, they probably come to school and reflect on that.

In an earlier private conversation, Samantha had shared with me that "the school" considered her a part of the "bad crowd." Drawing from personal experience, she had expressed problem with labeling youth as bad based on their social circle. She argued that the existing systemic hierarchy of power forced new students into these marginal spaces from which they could not escape. Youth, like her, often rebelled to this asymmetry using multimodal texts, such as their body and clothes, to express dissent. While triangulating Samantha's claim, I found out that, on paper, she was academically as good as Clary, if not better. Despite this, the two girls were headed on different paths that their community had shaped for them.

Resolution. Intertwining some of the CTM Practices of the teachers provides resolutions to the conflict created by disguised marginalization. The literacy practices of *knowing the learners' identities, perspectives, and experiences*, *critical and aesthetic framing* of classroom discourses, and *explaining of rationales explicitly* offer resolutions.

As seen in the accounts of the students and teachers at Hawkins, the disguised marginalization of students based on their familial reputation was allowing for practices of discriminating and distancing from others unlike them. My concern is that support of such discrimination and marginalization at school-level can also foster practices that constitute other discriminatory Discourses. Unfortunately, these discriminatory practices stemmed out of a version of the teachers' CTM Practice of knowing the students. Because the teachers' literacy practice of knowing the students in also important, it raises a concern that helps highlight the

need to refine this literacy practice by adding the component of teacher self-awareness and social-awareness.

The resolution to this concern evolved out of my discussions with Ms. Starr. She had also acknowledged that knowing students by their last names was a widespread practice in school that she too enjoyed. But, after a longer conversation on the topic, Ms. Starr started to think whether this power dynamic could be creating a sense of favoritism among the students. Evaluating the repercussions of her practices, she realized that she could not stop doing a practice that had significant advantages; instead, she had to find a way to repair the negative repercussions. She wondered whether she should treat all her students as if they were her favorites. We called this "universal favoritism." Ms. Starr paused to reflect on the repercussions of her epiphany, "You have given me a lot to think about," she joked with a hint of introspection.

I found that internalization of the value of knowing the students as a literacy practice was insufficient. It needs self and social awareness (teacher introspection and analysis of repercussions) of their practices to counter the possible discriminatory effects. This counter can come from the literacy practice of *aesthetic and critical framing* of classroom discourses that promote reflection and empathy among students (see Table 2).

The Distancing from Experiences

All the five CTM Practices of learners shared the conflict of social and geographic distancing. This distancing of experiences pertains to two types: society (due to lack of sociocultural diversity in textual and lived experiences) and nature (due to lack of experience of natural phenomena due to geographic location).

I could triangulate the *distancing of experiences in society* to the teachers, their lived experiences, and those of their community. The challenge of sociocultural distancing for the

students was embedded within a bigger challenge with the adults and the community. For example, given the state and district requirements, the school followed a specific curriculum that used content-neutral standards, including expectations such as:

> Students will…investigate various examples of distortion and stereotypes such as those associated with gender, race, culture, age, class, religion, and other individual differences through classic, multicultural, and contemporary literature recognized for quality and literary merit. (STATE standard)

This gave schools the flexibility to decide the texts and the literature. Teachers often used texts that they considered classics or were meaningful to them—which is why they found them to be useful for their students to know as well. The narratives in these texts, however, were often of White characters, like the adults, children, and youth of Hawkins. Principal Harrison, who carried the onus of unpacking the standards, identified this challenge:

> American literature was my wheelhouse. I identified with the characters more, so I liked the books more, and so I tended to be heavier in the standards that addressed the issues that are rich in American literature texts. But then I realized, multicultural poetry or world topics that were current beyond the United States… It was a real eye opener for me like 'Oh…I am not covering that.'

Principal Harrison realized the lack of multicultural texts in her school and blamed it back on herself and the teachers, saying, "I felt really disappointed in myself, like why aren't I doing more of that? When the reality is, I just never gravitated to those texts for leisure or through college because I didn't identify with them." Just like the distancing of experiences could be traced from the students to the teachers, it could also be traced to the community. Depending on how the parents would react, the teachers had the choice to either circumnavigate sensitive topics

or give an option for the parents to opt their children out of the lessons. Unfortunately, the issues that the teachers had to navigate stemmed from required state standards to teach inclusion and acceptance. Principal Harrison expressed her concerns about ignorance in the community that she felt was the cause of the parents opting their children out of important lessons.

> [W]e do have some parents who get irritated when [teachers] talk about Christianity. But they also talk about all the other religions and every once in a while, we have a parent that's like "Why in the heck are you teaching about the Koran?"… and then they are like "Terrorism!"… It is difficult to get that across so… from time to time, we have parents who opt out of that particular lesson… I see that the standards force the teachers to tackle that knowing that there could be some heat or potential repercussions of it.

For the conflict raised by *distancing of experiences due to geography*, topics that needed contextual awareness highlighted the problem of disengagement with content. Despite several project-based approaches, video presentations, and collaborative group work, students showed minimal to no interest in topics like earthquakes or tectonic plates. Calabrese Barton (2003) has argued that such disengagement comes for a lack of connection to students' lived experiences. Because earthquakes and tectonic plates were foreign concepts to their lived experiences, students had no physical or emotional understanding of them.

Like tectonic plates and earthquakes, outer space is a topic often missing in lived experiences. However, in Hawkins's context, I found consistent excitement for this topic among middle school students across grade levels. The source of this excitement was Ms. Starr. Because of her 30 years of personal passion in space and astronomy, she had carefully designed a space camp program, where a committee led by her interviewed and took about ten middle school students to NASA for a few weeks. In my two years at Hawkins, I volunteered to help with this

program as a part of the interview committee. I witnessed an infectious excitement that started at the fifth grade with children dressed up as astronauts for the interviews, baked cookies shaped like space shuttles, and created multimodal artifacts to express their excitement. This excitement was a result of a carefully crafted multimodal, multisensory, embodied, and aesthetic experience on outer space that felt like a majestic franchise. It spanned from something as obvious as inflatable star-gazing labs and dark-room video documentaries to as subtle as a hint of adventure in her tone. Ms. Starr's careful aesthetic framing of discourse around outer space had kindled a sustainable interest in the community. This example helped consider resolutions for the challenge of distancing.

Resolution. Teachers' CTM Practices of *designing and situating experiences in the out-of-school world, critical and aesthetic framing, and explaining of rationale explicitly* help consider resolutions for the conflicts manifested by distancing of experiences. Particularly, as seen in Ms. Starr's work with the outer space rhetoric, careful aesthetic framing of classroom and school discourses can produce excitement about content. To test this pedagogical move, Ms. Starr and I designed two connected activities called *My Curiosities* to offer a space for students to reflect on the things they are curious about in the world, and *Scientists Like Us* to offer the students a chance to humanize scientists. In the former activity, each day for a week, students noted the sentence "I am curious about…" in their journals. At the end of each week, they picked one or two of the curiosities from that week, and explored the web to find answers (see Figure 2).

Ms. Starr and I found that the more interesting questions were those that allowed students a chance to connect classroom content with their personal interests. Bob, for instance, tied classroom discussion on earth science with his curiosity about a practical impending issue of global warming (see Figure 2). His inquiry was an instigation of a dialog: "If the Earth is

‘warming’ then can the Earth cool? Earth's core can only hold so much energy, right? It takes energy to melt the plates in the subduction zones, right?” Using logic as a way of knowing, Bob reasoned that if Earth warms then it should also be able to cool. But, he used his skepticism, which he displayed at several other occasions during my interactions with him, to question himself and raise doubt and uncertainty. “Right?” he asked at the end of two of his three questions, seeking reassurance.

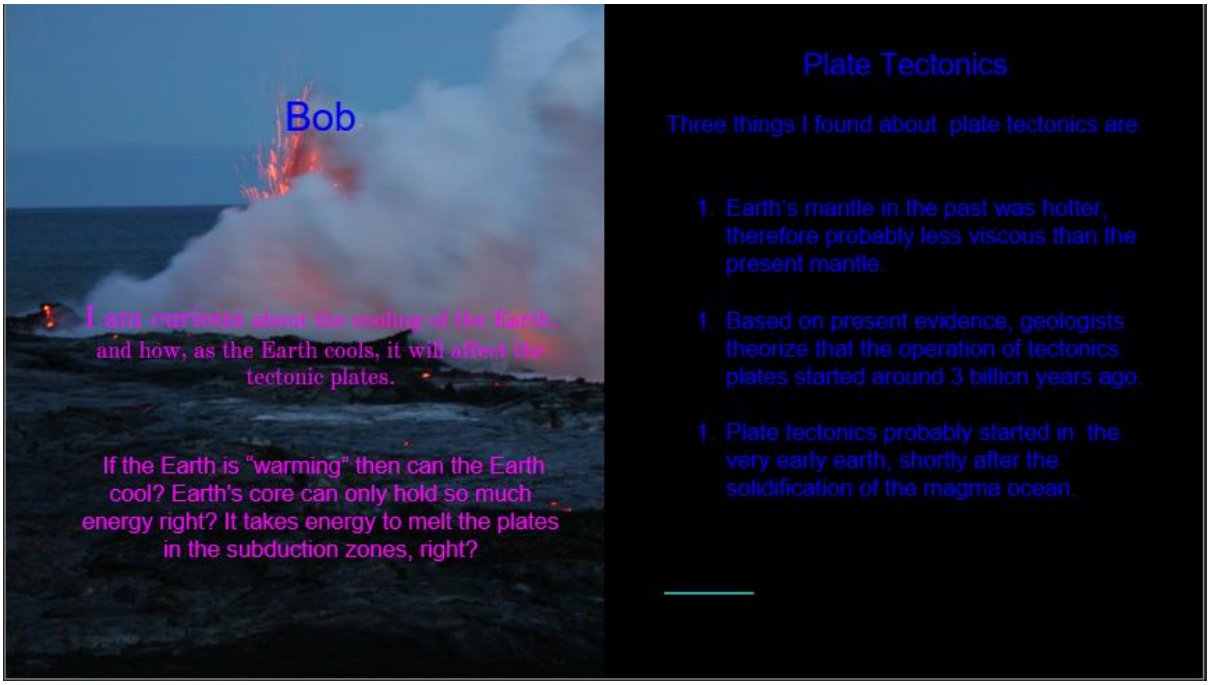

Figure 2: *Bob's My Curiosities slide on Plate Tectonics tied with Global Warming*

Based on the curiosities, we explored foreign concepts that were common in the class by tying them with an embodied experience. For example, to address curiosities about epicenter and focus of earthquakes, we started to tap our feet on the group and feel sensations at different points in our body, where the point of the foot hitting the ground was the focus, and the head was the earth’s surface with an epicenter. The harder we tapped our feet, the stronger the epicenter felt the force.

For the conflict manifested by distancing of experience in society, critical and aesthetic framing of classroom discourses, paired with explicit explanations, and the latter activity of *Scientists Like Us* offered a space to bring in stories of other role models and people unlike the students and their community, where we could replace "scientists" with other professions. In the *Scientists* activity, too, we consciously picked a diverse group of scientists to counter racist, sexist, and ableist perceptions. We made explicit connections to the achievements of Jane Goodall and her struggles in a sexist profession, Neil deGrasse Tyson's personal journey in challenging the dominant portrayals of people of African-American, Caribbean, Puerto Rican heritage, Stephen Hawkins persistence despite quadriplegia, and Michio Kaku's story of success as an immigrant (while being careful of not portraying him as a model minority). According to Ms. Starr, careful designing of classroom discourses and rhetoric gave her more control over student experiences and engagement. Tying aesthetic and critical framing with carefully designed and explicit connections to lived experiences, helped resolve the challenge of distancing.

Conflicting Discourses

Learners' CTM Practices of *exploring, analyzing, humanizing,* and *acting* faced challenges due to a rooted problem of conflict between school/disciplinary and community/personal discourses. Due to this conflict, I found that students often avoided or dismissed experiences that forced them to challenge their existing perceptions of self or their world. This discomfort is not a new challenge to teaching and learning and several educational researchers have written on it from a range of perspectives (Brickhouse, Dagher, Letts IV, & Shipman, 2000; Bruner, 1990; Donovan & Bransford, 2004; Piaget, 1964; Varelas, Pieper, Arsenault, Pappas, & Keblawe-Shamah, 2014; Yager & Yager, 1985).

In the case of this study, the conflicts between discourses were most prominent when a new discourse contradicted an existing one. For example, when Ms. Starr mentioned the age of the Earth and the Universe several times during her lesson, I noticed that a few students were inattentive. When I inquired further, I found it to be arising from a conflict with students' religious beliefs. According to Ms. Starr, parents tell their children the Bible says God made the Earth 6000 years ago. To these students, this was more ingrained in their lived experiences than the textbook discourse. Ms. Starr was aware of this belief. Her solution to deal with this was to talk about creationism in her science class and present that as "one of the many theories" of how the Earth was formed. The discourse of "creationism being one of the theories" helped ease her students because it presented them with an alternative that did not conflict with their existing discourses.

Conflicting discourses were also common in the language arts. ELA teacher Ms. O'Sullivan grew up in a big midwestern city in an affluent Catholic family. She had lived there during the Civil Rights Movement but had moved to Hawkins with her husband to bring up their kids "tucked back in the woods." If it were for her husband, he would have them move to somewhere even more rural. Perhaps because Ms. O'Sullivan believed, "Social media and technology has infiltrated in the small rural town." She considered this to be a reason similar to why she had moved from a big city 33 years ago. Using naturalistic discourses like not being "touched by the city life," she took pride in how her children did not grow up like those addicted to smartphones and enjoyed bonfires more than malls.

The distancing from youth and urban literacies that social media was bringing to their homes had several subtexts that I needed to unpack. While she grounded her rationale in

economic reasons such as finding a big house for her family of six, in her more detailed response, I found hints of conflicting discourses as being a key reason.

> I grew up in the 60s, so things were not happening in good way. The Civil Rights Movement was going on… I went to private schools because public schools were not real safe. So, when our kids came along, those were the kinds of things we thought about.

Ms. O'Sullivan's privileged upbringing seen in her private schooling had made her accustomed to some literacy practices that conflicted with what the ways of being she had witnessed in the big city. While she and her family had avoided these literacy practices for years, social media had brought new conflicting discourses to their homes. For this reason, she felt it was important to teach students about "manners and respect," the heteronormative, privileged White middle-class literacies she drew from her Catholic upbringing.

Ms. O'Sullivan's experiences colored her notions of what she considered as good manners and respectful behavior. It shaped what she valued in her teaching. However, she was still aware of her biases and her responsibility as a teacher in introducing her students to topics of discrimination. Pre-civil war and modern-day slavery were some topics she covered in her class. She expressed concern (which another language arts teacher, Ms. Smith, shared) that if she pushed for more sensitive topics situated in youth lived experiences (such as Black Lives Matter or immigration), she got resistance from parents. Instead of dealing with the resistance, as a teacher, she was convinced that role of middle school was only to lay a "surface level of awareness." She shifted responsibility on to her colleagues in the high school to introduce students to deeper issues.

In fostering culturally-conscious students, the struggle for the language arts teachers lied in their own conflicting discourses, those of the parents and the community. According to them,

since issues of race were not impending topics of interest for the community, they preferred to circumnavigate them and wait for the high school teachers to tackle them. As Ms. O'Sullivan pointed out:

> I have to walk a real fine line at what parents want [their children] to know. There are a lot of parents who do seclude themselves up here to stay away from issues. They could hide in the woods forever, and maybe they don't get out, maybe their kids don't go away to college or move to another city. But I wouldn't be doing my job if I didn't at least try to plant those seeds and make them aware, now here's where you're going to go.

Ms. O'Sullivan's comment about the role of community in tackling issues of culture and racial diversity in school tied back with Ms. Starr's perspective on the issue. When I had asked her about views on being religious while being a science teacher, she expressed her discomfort in openly talking about sensitive issues in the community. "Everybody knows everybody. If you express your beliefs [in science], you get spotted. I think it will become hard to live with such beliefs in a small community like this."

Resolution. All the five literacy practices of teachers intertwine to counter the issue of conflicting discourses. Teachers need to know their students' identities and perceptions to design and situate new experiences with careful critical and aesthetic framing making explicit connections to pedagogical moves. Knowing her students, Ms. Starr had designed a solution she thought best to mitigate the conflicting discourses in her class. But, this move had put creationism at the same level of credibility as science, which is a century old issue, especially in Judeo-Christian and Muslim-majority countries (Harmon, 2011; D. Jackson, Doster, Meadows, & Wood, 1995). On one hand, scientists claim that giving religion equal value in science classroom raises challenges for the future of society and scientific and technological

advancement, e.g.: fighting diseases, natural disasters, global warming, etc. (Dawkins, 2000; Harmon, 2011; Sagan, 2013). On the other hand, in a religious society, the presence of religious and spiritual beliefs in school is an issue of multicultural education, which further complicates ontological and epistemological stances (D. Jackson et al., 1995). In either case, the arguments for and against it are based in different perceptions of the purpose of education and science.

Teachers handle this issue in different ways: keeping creationism out of science altogether, mentioning it in informal conversations, or giving it an equal platform (Harmon, 2011; D. Jackson et al., 1995). Edwords (1981) preferred keeping conflicting discourses separate and offer a more suitable space for them, for example, in comparative religious education, because, according to him, teaching creationism in science is a categorical error. Brickhouse et al. (2000) also agreed that students need constructive spaces to find their own answers rather than being amid conflicting discourses. They also found that, when given suitable non-conflicting spaces, students found personal ways of keeping both discourses.

While I have been arguing in this article for a need for more transdisciplinary spaces that allow for creative pursuits, discourses that conflict with each other to an extent of hindering learning are a reminder that transdisciplinary spaces do not mean a lax breaking of disciplinary silos. There is a need for new transdisciplinary contexts that offer students with a space to resolve their conflicting discourses. I recommend that this will require teachers to reorganize their teaching silos into spaces that align based on visceral experience and intrinsic motivation more than heteronormative, archaic disciplinary structures still present in schools. This would mean blending disciplines based on their common pursuits, skills, or traits such as curiosity (e.g.: mixing arts and science discourses), problem-solving (e.g.: mixing discourses in mathematics, design, and engineering), self-reflection (e.g.: mixing philosophy, language arts, and

humanities), critical thinking (e.g.: mixing science and philosophy), and mixing the pursuits themselves when appropriate. For teachers' literacy practices, this will require careful designing of learning spaces and critical and aesthetic framing of the discourses, among other pedagogical moves.

Siloed Literacies

Three CTM Practices of the learners (*exploring, humanizing*, and *acting*) faced three conflicts from the challenge of siloed literacies. The first conflict was between a traditional and siloed ways of thinking about knowledge and the perception of the purpose of school and education. This conflict restricted student curiosity, transdisciplinary creativity, and problem solving—skills considered crucial by educators and researchers (Mishra & Mehta, 2017). The second conflict stemmed from English-centric was of thinking about what it means to be literate that have often marginalized non-English, immigrant, African-American, Native, Latinx, Eastern and Asian ways of knowing (Heath, 1983; Paris & Alim, 2014). The third conflict, a common challenge beyond the rural context of Hawkins, was a traditional print-centric notion of literacy that forces the ability to be able to read and write to the center of defining what it means to be literate—thereby marginalizing creative, non-traditional moves for doing and expressing (Jewitt & Kress, 2003; Kress, 2003).

Students' perceptions of literacy seem to be a mélange of what they learn from their parents and teachers. On one hand, parents and teachers may not be consciously addressing the question of what it means to be literate. Instead, implying through their discourses, they may be hinting at more traditional, English and print-centric views. On the other hand, for teachers who are aware of multimodal literacies, they have to answer to the expectations of standardized testing, which forces them to return to print-based methods of assessment. I found videos,

Google slides, sketches, and multimodal projects all to be secondary forms of texts that students created to get a "hands on" experience. Teachers still expected students to express understanding in written word for full credit and final assessment.

The challenge here is manifold. First, the teachers have had their share of trouble with translating the expectations of research and new standards into practice. Ms. Starr found the standards to be too vague, and she did not feel she had the resources to interpret innovative research. She preferred something explicit with examples of implementation of multimodal literacies and assessment in class "without getting in trouble." Second, even if teachers were open to the idea of adapting to new ways of making and representing meaning, it required a technological skill set that they needed assistance with before being independent. Third, a more complex challenge facing Hawkins was the test of breaking disciplinary and cultural silos.

Ms. Starr often blended social science, language arts, and mathematics in her science classroom. She considered teaching science in isolation as "stupid." "The world out there does not draw a line for you between subjects. Like math stops here, language begins here," she resonated the need to blur disciplinary boundaries. For this, she collaborated with her math and social studies colleagues to have special transdisciplinary weeks. Although still working in their isolated subject hours, students worked on bigger cross-cutting projects where they needed skills and knowledge from different disciplines to reach an outcome. Although the challenge of siloed literacies could not be overcome with a week of transdisciplinary projects, the teachers had found a place to begin.

Principal Harrison, too, thought she could not blame her teachers (because they did not have the time to reimagine the curriculum) or the state (because they are "so far removed"). According to her, the burden rested on her and the community. "[We] have always been taught in

a silo. So, in my mind, I think we're doing a hell of a job … But I don't know any different, I'm ignorant in that way." Even though she still thinks it is in her power to break the silos and just redesign the hours, she is then answerable to the superintendent, the school board, and the community:

> I think it would probably take the very community that we live in. I think it really would be a community effort to break down those silos… I think sometimes we get so used to doing what we always have done, and just praying and hoping that it somehow is a different result. What do they say, that's the definition of ignorance, right?

Resolution. Teachers' CTM Practices (*designing and situating experiences in the out-of-school world,* and *critical and aesthetic framing of discourses*), when adopted at the administrative level by the principal, can help resolve the conflict manifested by siloed literacies. First, school-driven transdisciplinary spaces, design challenges to promote creative problem solving and critical thinking, and transdisciplinary project-based learning are some initiatives that the principal can implement to encourage teachers to experiment. This solution needs to appear from higher administration because it requires an agent with a view of the bigger picture and someone who can act as a mediator between the teachers and the state and district expectations.

Second, critical and aesthetic framing approach to resolution of siloed literacies is about bringing equity, critical, and humanizing discourses into disciplines that escape them in the name of irrelevance. STEM-based discourses continue to silence voices and ways of people of color that need to be blended together using an equitable pedagogy. This is a resolution that, once again, is out of the reach of the teachers. Principals and administrators in predominantly White school districts need to identity that there are more than just White ways of being, knowing, and

doing in the world, which their student need to be aware and respectful of to be culturally competent citizens. From this study, I find four useful steps to achieving this. First, administrators need to acknowledge and be aware of the importance of cultural sensitivity and how they can introduce that across disciplines. Second, they need to carefully select course material that includes culturally sensitive texts for each disciplinary silo defined by the state standards (Banks, 2009). Third, teachers need to be aware of their own prejudices towards these texts, especially when, for some teachers, critical discourse in their disciplines may be a new experience. And finally, teachers need to help students analyze the texts critically for implicit bias and perspectives, especially what it means in their disciplinary context. Implementing these critical dimensions of multicultural education can help blur the boundaries between disciplinary siloes while managing the state requirements—a pragmatic approach to integrating inclusive literacy practices in predominantly White schools.

Discussion

This embedded case study, conducted using ethnographic methods and critical discourse analysis, is an attempt at designing a set of inclusive literacy practices that can be used across contexts. I see it as a humanizing research approach to rethink pedagogy, especially for White teachers in predominantly White schools—a context often underrepresented in multicultural research.

I used literacy practices to rethink inclusive classroom practices because literacy practices cut across discourses and are independent yet malleable of their contexts. Defining a literacy practice in general terms across contexts will be completely different when situating it within a context. Creating as a literacy practice, for example, means different things for a cook and a builder—yet they both participate in something similar intellectually and viscerally.

Taking this approach, I designed the CTM Practices with a goal to implement and test them across multiple contexts to study its adaptability and affordances. The first of many contexts I intend to test these in was the rural context of Hawkins.

Testing CTM Practices in Hawkins Middle School setting, I found that while they face varying yet familiar challenges, they still manifested flexibility and adaptability for revisions. Through this study, I found that while each literacy practice of the learner faced challenges, those of the teachers offered resolutions. Before this study, I saw literacy practices of teachers in parallel to those of the students. But, upon analysis and completion of this study, I reconsider them as pedagogical moves to foster literacy practices of the learners.

The CTM Practices shared in this study should not be considered as *the* solution for designing inclusive classroom practices. Considering them as one final set of literacy practices to use as a yardstick contradicts its purpose. Like all frameworks, researchers and educators should question and refine it. I consider it to be a work in progress.

The threads of stories that surfaced out of my research at Hawkins present a hopeful yet convoluted struggle in reimagining what it means to be literate. While the teachers see social change and progress, the students show a systemic social asymmetry in power. This implies challenges for implementing literacy practices of inclusion as they conflict with existing literacy practices of conventionalism and tradition. Still, the teachers, including Principal Harrison, foresee eventual success in implementing the CTM Practices.

Specifically, each of the themes of the CTM Practices face different challenges. For the literacy practices of the learners, as mentioned above, *exploring the unfamiliar and the familiar* was split based on the challenges it faced. The aesthetic framing can help design experiences that can make familiar experiences seem strange and new seem ordinary. Inclusion of social and

culturally diverse narratives also assist in bridging the gap between learners' lived experiences, disciplinary content, and people unlike them who are often not found in their community. Transdisciplinary projects and clarity in design can also help learners make the connections between school, self, and their figured worlds.

For the literacy practice of *analyzing scientifically and critically,* teacher self- and social-awareness was the starting point of any critical or skeptical thought. Their awareness helped them know their students better and frame their discourses in ways that encouraged practices of humanizing and critical thinking. Analyzing also tied with the third literacy practice of *humanizing people and experiences.* Teachers at Hawkins felt that their objective was to help students be skeptical and critical, but, given their personal beliefs, some students often shut down when it came to being skeptical, perhaps, because they generalized it to questioning their religious beliefs. Aesthetic and critical framing of classroom discourses could help them humanize the "others." However, the stories about people from racially, ethnically, and culturally different contexts often had students detached. Principal Harrison, for this reason, sees importance in her role as an interpreter of the standards, so she can implement more global and humane stories about different people and ideas.

For the fourth literacy practice of *acting by designing, creating, and implementing,* students who were internalizing critical and scientific thinking were also thinking about acting to solve problems. In fact, all the students I talked to, at some point, expressed concerns about application of what they study in school. I found a gap between teachers' and students' interpretation of the purpose of the content.

Finally, the literacy practice of *defining the world interpersonally and intrapersonally* intersected with the purpose of school. Given the advent of internet-based technologies, I found

teachers to be valuing disciplinary understanding more than memorizing facts. According to Ms. Starr, "[Students] need to know the core ideas about disciplines to communicate with people. You cannot ask people to hold while you search for facts," she joked with a hint of sincerity. Teachers agreed that while access to factual information through technology eases some rote aspects of teaching and learning, it opens up discourses to make sense of self and the world. They felt that knowledge about the world and stories of other people are the only way to help students know themselves better and their place in the world.

In conclusion, although the CTM Practices faced practical challenges in the rural district of Hawkins, the teachers and the students acknowledged and valued its need. Across conversations, the need for a change collided with comfort and security. I understand that the participants in this study are willing to adapt these practices as they wish to be more competent citizens, but the action to bring that change is still absent. Lack of an impending reason to act for change may be a reason behind the practical challenges of implementing the literacy practices of inclusion.

CHAPTER 3

Concluding Remarks

The question, "What does it mean to be literate?" is rhetorical. Asking it helps unravel hegemonic approaches to defining literacy that continue to marginalize people by social, cultural, and disciplinary ways of being, knowing, and doing. As multimodal ways of reading and writing become more accessible and affordable, they exposed to us the biases in our traditional definitions of literacy. With the advent of social media and internet-based new spaces, transdisciplinary ways of knowing are breaking from their silos and local literacies are coming out to global platforms. In this, Culturally Sustaining, Transdisciplinary, Multiliteracies (CTM) Practices remind us that using one type of text, language, or culture to measure literacies of all is marginalizing to many other ways of being literate. By using the CTM Practices framework, I can argue that being literate means to be an empathetic, culturally-conscious individual who understands self and the world. To be literate is to be able to control multiple discourses consciously and confidently and manipulate them to achieve social and personal goals. When we know that these discourses vary by context and command over them, using one culture as a standard to define literacy should be discarded as obsolete (Comber, 2015).

Speaking specifically to the two sets of five literacy practices in this article, I acknowledge that through this framework I am attempting to propose a set of guidelines to manage the innate social complexities and messiness of teaching and learning. The implications of this framework are for teachers and researchers. Like the rural context shared in this dissertation, I will continue to implement this framework across learning contexts to test its feasibility and expose its affordances and constraints. Doing this, will help refine and strengthen the framework to serve the purpose of equity and inclusion. I encourage other researchers and

educators to do the same, because issues of inequity and injustice need to be tackled from all directions, all the time (Au, 2009).

The purpose of this framework is to help foster inclusion in learning environments across social, cultural, disciplinary, and national boundaries. Its symmetric two sets of five literacy practices may seem structured, but I propose that we see these as ingredients for a recipe of inclusion. They can exist individually, but when they come together, and cooked with love, always with room for improvement—being more than the sum of its parts.

APPENDIX

APPENDIX: Literature for Review

Culturally Relevant

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