Multimodal Digital Storytelling and Transnational Communication:

Fostering Inclusive Design Spaces for Emergent Plurilingual Youth

By

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A dissertation submitted in partial fulfillment of

the requirements for the degree of

Doctor of Philosophy
(Curriculum and Instruction)

At the

UNIVERSITY OF WISCONSIN-MADISON

2020

Date of final oral examination: March 2nd, 2020

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Acknowledgements

I would like to express my deepest appreciation to my Ph.D. advisor Dr. Maggie Hawkins for her great support and guidance throughout the journey of my dissertation project and my doctoral studies. Thank you for all of your thoughtful feedback on all of my drafts. Thank you for challenging me with high standards so that I can be very confident and proud of my work today. You have not only guided me professionally in my academic career, but also have inspired me to live a happy and meaningful graduate school life. I am very grateful for having you as my mentor, professor and friend.

It was my great pleasure to work with the teacher and students in my research site. I am sorry that I can't list their names here in order to protect their privacy. This dissertation would not have been done without their trust and willingness to welcome me to be part of the community and to learn with them.

I thank my professors at the University of Wisconsin-Madison. My classes with Drs. Stacey Lee, Kate Vieira, Li-Ching Ho, Catherine Compton-Lilly, Simon Schweber, Gloria Ladson-Billings, Michael Apple, and Maggie Hawkins (and others) introduced me to trans-disciplinary perspectives of learning and education. These scholars have inspired me to become an educational researcher pursuing questions of equity in learning and education for underrepresented students and teachers. I am very grateful for all of the insights, methods and tools that you introduced to me to broaden my understanding of education.

I would like to extend my deepest gratitude to my families for your unconditional love and support from my birth. To my Grammy and Granddad, Mr. and Mrs. Crain, thank you for always being there for me to inspire me to follow my dreams and to be myself. To my Grandfather and Grandmother for raising me in a warm-hearted family of peasant paintings. I thank my parents for giving me life and for teaching me to be strong. I also thank all of you and my uncle, Mr. Fan Gaoqi, for always picking up my phone calls and replying to my text messages to help me to go through my writing days regardless of the different time zones.

My deepest appreciation goes to my friend, Dr. Sandi Mond, for your thirty-year friendship and strong belief in me and my scholarship. Thank you for all of the phone messages you sent to me with the firm sentence, "I know you can do it", no matter where you were in the world. Without you, this journey would not have been possible.

Thanks also to my colleagues and friends who have lightened my doctoral journey: Laura Hamman, Kyaw Win Tun, Anneliese Cannon, Alissa Blair, Ed Warrs, Sue Nibley, Timothy Coursen, Amy Miller, and Sam Gee.

I wish to thank my husband, Dr. Fengfei Ma, for all of the meals you have cooked for us, for all of the road trips and games you offered to refresh my mind during my writing days, for all of the days and nights you companied me to write my thesis at home, tea bars, coffee shops, airports, and libraries, for all of the moments you listened to me, and for your pure love that is planted in my everyday life.

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Abstract

With the rise of modern technology, sites of knowledge have shifted from page to screen, offering hybrid spaces for 21st century learning across borders, modalities, semiotic resources, time and space (Jewitt, 2006; Kress, 2000) However, few empirical studies have been conducted from a critical lens to investigate how digitally mediated social interactions shape learning (for youth) that embraces multiple modes of meaning making with concerns of (in)equity, privilege, power and social relations (Hawkins, 2018). Drawing on sociocultural theories of learning (John-Steiner & Mahn, 1996; Vygotsky, 1978), this study, through the lens of multimodality from a social semiotic approach (Archer, 2014; Kress, 2000), explores how emergent plurilingual youth living in communities of poverty claim their multilingual and multimodal human rights to represent themselves and communicate with their global peers in digitally mediated spaces. Data came from an out-of-school project that digitally links youth globally through creating digital stories of their lives and communicating together on a dedicated website. Findings show that digitally mediated multimodal and transnational engagement can fostering inclusive design spaces for emergent plurilingual youth and teacher facilitators to co-shape their representation, communication and learning as agents of social change (Ball, 2009), attending to power relations, privilege and access.

Chapter 1

Introduction

Considering that the 21st century is featured as increasingly hybridized, global, digitized and multimodal, learning is no longer "geographically tied to a desk, the school library, the book", or "teachers who demand all eyes up front" (Luke, 2003, p. 398). Digital technologies enable learning and communication not only to take place in physical places but also in digitally mediated spaces. Specifically, sites of display of knowledge, learning and communication are shifting from print to screen, offering new types of social (inter)actions and human-computer interactivities (Hassett & Cruwood, 2009; Kress, 1998; Lam, Warriner, Poveda, & Conzalez, 2012). At the same time, digital platforms also stimulate global flows of resources, connecting people from different places. The changes in learning contexts facilitate more modalities and resources in meaning making and negotiation, for instance, gestures, texts, movement, touch, sounds, and image, which urges us to rethink what counts as knowledge, learning, communication and education (Bezemer & Jewitt, 2009; Hull, Stornaiuolo, & Sahni, 2010; Jewitt, 2008).

Unfortunately, educational theories and curricula have privileged linguistic modes as key sites of meaning making and a central objective of preparing and evaluating youth in schools (Bezemer & Jewitt, 2010; Flewitt, 2011). Forms of communication other than the language of power—for instance English in the U.S.—have been often undervalued by schools. The monomodal and monolingual education has caused the full range of youth's knowledge and repertoires to become invisible, and social relations to become unhealthier and more unequal (Archer, 2014; Bezemer & Jewitt, 2010). Though research has been

conducted to study how technology-mediated environments facilitate learning and communication (Fradd & Lee, 1995; Linn, Gerand, Matuk, & McElhaney, 2016), little attention has been given to how emerging technologies and digital platforms shape learning for emergent bi/plurilinguals and make multimodal learning more accessible for these students to become successful. Meanwhile, children who are living in poverty have less access to quality education and advanced technology resources and have been given less attention by scholars studying the affordances of technology and globalization on learning, as Hawkins (2014) addresses:

> it would be difficult to argue that there are places that are unaffected by global movements and flows, the particular logistics – who and what move how, when, and where—differ significantly… We must, however, use caution in conceiving of a world where everyone has equal ability, and resources, to move at will, or where all movement is seen as a matter of choice and ample resources. Everyone does not travel, and there are places where populations are more bounded and stable and where, as of yet, people (especially youth) may not have frequent direct transglobal contacts. These places are also impacted by globalization, but exactly how and to what effect needs careful attention, especially in the design of educational initiatives and engagements. (p. 93-94)

Therefore, one critical issue is that there is a significant gap in material and symbolic access between children from higher-income communities and those from communities (and families) of poverty who disproportionately fare less well in schools and societies due to lack of access to resources, technology, and quality education (Archer & Newfield, 2014; Cummins, Brown, & Sayers, 2007). It is the latter group of youth, who have been largely ignored by multimodal researchers and transnational projects, who are the focus of this study.

In addition, with the increasingly diverse features of our learner populations in a global context, there is a widening gap in educational resources among the developed,

developing and least developed counties. Within any county, there is also gap between those who live in wealthier communities and/or families and those who live in impoverished communities. In developed countries, such as in the U.S., the gap is distinct due to the significant difference of social and cultural factors. In U.S. public schools, approximately 9.6 percent, or 3.8 million students, (ranging from 0.9 percent in West Virginia to 20.2 percent in California) are English language learners (ELLs) (National Center for Education Statistics, May 2019). These students bring profound cultural and social knowledge of their languages, cultures, homes and communities (Ladson-Billings, 2013). However, schools in the U.S. often define them as "non-native speakers" from a deficit perspective. These students, who often speak another language at home with their families in the U.S. and extended ones in other counties, are provided instruction in the language(s) of power, for instance, English, in a monomodal way, which denies their human rights to voice and to be heard equally by using their preferred modes to express themselves and communicate with others in and out of school.

Specifically, educational theories and curricula have privileged a narrowly defined conceptualization of "language" from a (mono)linguistic perspective, and writing and speech as the central goal of training and assessing *emergent plurilingual youth*[1] in school (Flewitt,

[1] In this study, I use the term *emergent plurilingual youth* to address the diverse features of my research participants' linguistic landscapes, as they come from multiple-layered linguistic and cultural worlds. This term highlights plurilingualism as all of the sociocultural semiotic resources that youth possess (García and Kleifgen, 2008; Li & Hawkins, 2020). I follow García and Kleifgen to move from terms such as limited English proficient, English language learners (ELs), English learners (ELs), and culturally and linguistically diverse children to emergent bi/plurilinguals to recognize their bi/plurilingualism, which highlights students' resources, strengths and assets, rather than unfairly criticizing what they lack. It positions students as agents in learning and education.

2011; Bezemer & Jewitt, 2010). Thus, "forms of representation and communication other than linguistic modes have been characterized as 'marginal' and merely supportive of language" (Jewitt, 2006, p. 7). Access to a range of semiotic resources and multimodal pedagogies is often closed down in formal education settings, which has caused emergent plurilingual youth's knowledge to become invisible and undervalued (Jewitt, 2006; Archer, 2014). Emergent plurilingual youth are often assumed to be the same as monolingual students, therefore, they are often educated in a monolingual and monomodal way with "unreasonable time limits placed on students to develop their academic English" (García and Kleifgen, 2008, p. 26). This leads to invisibility and undervaluation of emergent plurilinguals' knowledge in formal educational settings, which has deprived them of their human rights to participate and to be heard equally. In this study, I argue that every child has a multimodal right to define themselves rather be defined by the "mainstream". Children's multimodal ways of representation and communication should be considered as resources.

In this study, I acknowledge that monomodal and monolingual approaches have become problematic. I eschew monomodal practices in favor of those that are multimodal, embracing all modes of learning and communication as having equal status in meaning making socially and culturally. Because few empirical studies have been conducted investigating how digitally mediated multimodal social interactions shape learning and communication for underrepresented youth, such as emergent plurilingual youth, beyond classroom contexts, I conducted a qualitative case study in an out-of-school project investigating how emergent plurilingual youth, who are living in under-resourced communities, engage multimodality in digitally mediated translocal and transnational

encounters and communications. I take the position that learning does not only take place in formal schooling, but also is evidenced in a range of social interactions and digitally-mediated activities outside of school when learners are engaged in communication with peers in interwoven spaces and places translocally and transglobally (Gutiérrez and Rogoff, 2003).

Research Questions

The guiding research questions for this study are:

Question 1: How do emergent plurilingual youth make meanings multimodally and transnationally through digital communication with global others?

- What counts as children's repertoires and evidence of learning in the 21st century?

Question 2: How can we understand youth's language, literacy and identity development through a lens of multimodality in a global and digital context?

- What kinds of understandings of self and other can be (re)built and (re)constructed through transmodal transnational representations and communications?

Question 3: What kinds of adult facilitation can be provided to support youth's creative and critical roles in these engagements for socially and culturally just relations in the digital and global age? What spaces can be created for researchers and practitioners to co-create such multimodal design spaces for youth?

In order to gain understandings of these research questions, I conducted a qualitative case study of a particular site in a project, Global StoryBridges, in which children living in under-resourced communities around the globe engage in digitally mediated representation and communications with one other. I employed an ethnographic approach, being a participant

observer in project meetings and activities, in order to understand how emergent plurilingual youth make meanings multimodally and transnationally, and how they negotiate their translocal and transnational identities through a lens of multimodality. This study aims to consider how the images of youth's worlds are digitally and collaboratively portrayed by them in one local project site, and how these digital selves have transnationally been perceived, interpreted and negotiated by the linked global youth from other project sites across place and space.

Dissertation Structure

There are seven chapters in this dissertation. Chapters One to Three provide the framings of the study, including the research focus and questions, theoretical literature reviews, and a review of research design and methods. In Chapter 2, I review concepts of multimodality as conceptual, representational, pedagogical and methodological tools in facilitating and shaping emergent plurilingual youth learning in digitally mediated spaces. Chapter 3 provides a detailed narrative of the research design, the research site, as well as the methods used to collect and analyze the research data.

Chapters 4 to 6 provide data analysis and findings from three perspectives: digital storytelling as translocal multimodal (re)design; multimodal redesign through online transnational communication; and multimedia group facilitation as co-design of learning. Chapter 4 situates data in translocal contexts investigating the social processes of digital story design and production in a local project site in the Midwest U.S., and discusses how these multimodal engagements have enabled youth to negotiate their multiply-layered social roles as digital storytellers for global peers. In Chapter 5, I investigate how the U.S. local site was

engaged in transnational communications with global peers through digitally mediated encounters. Following the New London Group's (1996) concepts of design, this chapter considers how the out-of-school project afforded the participants available resources for digitally mediated interactions with global others and interactivities with digital platforms and devices. Chapter 6 discusses the adult facilitation strategies that were utilized to facilitate project activities. I consider what was noticed and what was unnoticed by the adult facilitator in the US site as she was facilitating the group meetings that led to different learner experiences and engagements. Chapter 7 concludes the findings, future directions and implications of the study in 21st century learning and education.

Chapter 2

Theoretical Framework

Drawing on sociocultural theories, this study, through the lens of multimodality (Kress, 2010), explores how emergent plurilingual youth living in under-resourced communities and/or families, claim their multimodal human rights to represent themselves and communicate in transnational transmedia spaces. A critical sociocultural view of meaning making takes learning as occurring through situated social interactions in changing contexts, and builds on what learners know and bring to the social situation embedding all social relations in issues of privilege, access and power (Hawkins, 2014; John-Steiner, & Mahn, 1996; Perry, 2012; Vygotsky, 1978).

Following Vygotsky, "learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers" (p. 90). According to Vygotsky, learning is mediated by using tools and by making signs in constructing meanings. The former, according to Vygotsky, is internally oriented, leading to changes in subjectivity, while the latter is externally oriented, resulting in "changes in objects" (p. 85). Learning occurs through mediated activities by linking functions of signs and tools. When children are using tools to make signs, they need to co-construct a shared sociocultural system, in which meanings are mediated, negotiated and transformed by social interactions and collaborations. This speaks to a multimodality perspective, considering meaning making and learning as a collaborative process embracing all available semiotic resources and modalities of representation and communication. In this study, I consider emergent plurilingual youth' multimodal social interactions with their peers

and facilitator, and their interactivities with multimedia platforms and digital devices, which co-shaped their senses of selves and global peers and their understandings of the interwoven places and spaces where they live across boundaries, cultures, people, resources, and time.

Multimodality

Multimodality comes from sociolinguistic perspectives of communication, in particular the work of Michael Halliday (1978) on language as a social semiotic system. A lens of multimodality moves beyond language to highlight that meanings are not conveyed only through one specific modality but embodied in culturally-situated modal ensembles and complex semiotic resources (Albers, 2007; Albers & Murphy, 2000; Bezemer & Kress, 2016). The predominant power of language has been challenged by multimodal researchers to embrace all means of learning and communication (e.g., drawing, digital storytelling, poetry, collage, web blog creating and interaction, etc.) in meaning making (Kress, 2010; Pahl and Rowsell, 2011).

From a multimodality perspective, meaning is made through multimodal assemblages and semiotic resources. In the rapidly changing cultural and technological landscape, we need to understand the process of meaning making and negotiation not only translocally but also transnationally and transdigitally through new ways of representation and communication (Bezemer & Jewitt, 2010; Jewitt, 2014; Kress and Van Leeuwen, 2001; Van Leeuwen, 2005). Kress and van Leeuwen (2001) even state that "there is no monomodal culture' and 'to live in any culture is to live in a multimodal culture" (p. 4). In Kress's (2000) words:

> It is now impossible to make sense of texts, even of their linguistic parts alone, without having a clear idea of what these other features might be contributing to the meaning of a text. In fact, it is now no longer possible to understand language and its

> uses without understanding the effect of all modes of communication that are co-presented in any text. (p. 337)

The concept of multimodality attends systematically to a sociocultural interpretation of a range of forms of meaning making across language, images, sounds, gestures, body movement, touch, feel, and the use of time and space (Kress, 2010). Grapin (2019) poses weak and strong versions of multimodality in meaning making and learning. According to Grapin, the weak version of multimodality takes language as the centralized mode in meaning making, and non-linguistic modes as compensatory scaffolds for developing linguistic skills. The strong version of multimodality "posits language as one mode, among many, needed to engage in rigorous learning" (p. 15). Through analyzing the shifts from the weak toward strong version of multimodality in content standards with English learners (ELs), Grapin argues that the shifts are "transformative for ELs" (p. 22) because they empower students to bring in and transform their "full semiotic repertoires" as they are engaged in communication, learning and meaning making.

Meanwhile, emerging visual and virtual technologies have not only facilitated new social interactions but also more interactivities between people and digital devices, screens, platforms, spaces, and applications (O'Halloran, 2014). This change not only enables us to read but also listen, watch, touch, click, and produce new information on digital devices and platforms. The ways that we access and release information have become multimodal, multimedia, and multisensory. In addition, affordances of *hyperlinks* connect new interactions and transformation between words, images, sounds, videos, and other resources (Gardner & Yaacob, 2009; Jewitt, 2013; Luke, 2003).

Multimodality and contexts of learning

The use of multimodality provides new learning and communication tools in and out of school contexts. Bezemer & Kress (2016) identify students' placement of body and navigation in space as signs of engagement in classroom settings, which facilitates learners' modes of focus and interests in the specific design of the learning environment. They advocate that teachers should position learners as agents and learn from students' multiple modes of engagement in the class, designing their instruction to motivate students' engagement and learning (Bezemer & Kress, 2016; Diamantopolou et al., 2012; Kress, 2010). Scholars in science and mathematics education have used visual representation to makes scientific concepts more comprehensible and accessible for young learners (Jewitt, 2013, 2014; Linn, Husic, Slotta, & Tinker, 2006; Nixon, Smith, & Wimmer, 2015; Wilson, 2008). Wilson (2008), for example, exemplifies how a sixth-grade science teacher helped her students to understand the different phases of the moon by supplementing the content unit with models, demonstrations, and videos of the earth in relation to celestial bodies. Through introducing the scientific concepts in a multimodal way, the teacher potentially made difficult concepts understandable and interesting to students. The non-print forms of knowledge representation, defined by Wilson as *multimodal texts*, convey meaning through multiple sign systems such as gestures, spoken words, written words, numeric equations, photographs, graphs and diagrams. Through engaging with multimodal texts, the teacher and students co-design the learning content and co-construct their understandings of the scientific meanings.

In technology-enhanced learning, there is a shift to integrate learners' knowledge and repertoires into learning contexts (Bezemer & Kress, 2016; Hawkins 2018; Linn & Eylon,

2011; Linn & Hsi, 2000; Linn, Lee, Tinker, Husic, & Chiu, 2006). For example, in a case study exploring students' learning of the mathematical concept of 'bounce' in a digital programming game environment with resources of Playground, a programing tool, Jewitt (2013) observed that students used gaze and gestures to address the meaning of 'bounce' in the digital game. Meanwhile, the process of representing the meaning of the concept through programming the game provided learners multimodal design spaces to become creative knowledge designers to transform their abstract understandings across different modalities and resources.

Linn and her research lab colleagues conducted plentiful research in the Web-Based Inquiry Science Environment (WISE) program, studying affordances of the technology-enhanced and web-based environment on science learning and teaching through a knowledge integration framework (Chiu & Linn, 2011; Linn, Clark, & Slotta, 2003; Linn, Gerand, Matuk, & McElhaney, 2016). A knowledge integration framework "involves making thinking visible, providing social support, making science accessible, and promoting autonomy for life-long science learning, to develop learners' coherent understanding" (Petra, Jaidin, Perea, & Linn, 2016, p. 265). Lemke (2001) argues that science education must embrace a sociocultural perspective to view "science, science education and research on social education as human social activities conducted within institutional and cultural frameworks" (Lemke, 2001, p. 296). This is significant to emergent plurilinguals, because they are living between and across different linguistic, cultural, or/and religious worlds and their knowledge cannot be considered as fixed, but rather as an ongoing system which need to be integrated into all subject matter in schooling.

Gutiérrez and Rogoff (2003) believe that learning does not only takes place in formal institutional settings, such as schools, but also is evidenced in a range of social practices and interactions outside of schools. Furthermore, visualization technologies have made more new modes accessible and visible in representation and communication, which has expanded our understanding of what it means to be fully literate and good learners in the new age (Albers & Harste, 2007; Hull, 2003; Jewitt, 2008).

Studies have been conducted in out-of-school contexts to investigate youth multimodal multimedia engagement, digital storytelling, and the role of adult facilitation (Hawkins, 2014, 2018; Hull, Stornaiuolo, & Sahni, 2010; Leander, Phillips, & Taylor, 2010; Li, 2020; Li & Hawkins, 2020;). Halverson (2010) defines storytelling as multimodal expression of ideas through multimedia to construct the complexity of identities. According to Halverson, multimodal digital storytelling provides *transition spaces for* youth who are marginalized in mainstream institutions to have an alternative opportunity to represent who they are and to explore a positive sense of self before they fit into their communities. In Li and Hawkins' (2020) recent study with global youth in out-of-school programs, they find that cultural film making and online transnational communication expand plurilingual youth's *figured worlds* (Holland, Skinner, Lachicotte, & Cain, 1998) and mediate social (im)mobilities.

Multimodality and equity

In this study, I recognize that the accessibility of the materiality in multimodality is not equal from a global standpoint. Archer & Newfield (2014) refer to two types of access: access to materials, including access to computers, Internet, and other multimodal material resources; and access in symbolic terms, which includes forms of knowledge, self-reflexivity,

meaning making, and local and global practices. One critical issue is that there is a significant gap in material and symbolic access at both home and school between lower-income and higher-income areas, and between developed and underdeveloped cities/countries (Cummins, Brown, & Sayers, 2007). It is the latter group of under-resourced youth on whom this study focuses. In this study, I acknowledge that multimodality is tightly linked to issues of "relations of power, social boundaries and inequality, and political or commercial agendas" (Archer, 2014, p. 189).

Multimodal Research

In multimodal research, one of the goals is to make more modes of representation and communication visible, recognized, analyzed and valued in meaning making, following Bezemer & Kress (2016) on the objectives of multimodal research:

> the aim is to document, analyze and evaluate what is learned, not what is not learned. It is to notice and render visible learning that often goes unnoticed, and that, in being taken for granted, has been and too often still remains invisible. (p. 61)

Though approaches for multimodal research are still in an early stage of development in both scope and scale from both micro and macro perspectives (Bezemer & Jewitt, 2010), researchers have explored integrated methods in education (Miller, 2007; Stein, 2000), linguistics (Domingo, 2012), new literacy studies (Jewitt, 2008; Walsh, 2010), and social semiotics (Adami, 2013; Bezemer, Diamantopoulou, Jewitt, & Kress, 2012) that combine multimodality with ethnography (Dicks, Flewitt, Lancaster, & Pahl, 2011; Dicks, Soyinka, & Coffey, 2006; Kress, 2010), interaction analysis (Norris, 2004, 2006, 2012), conversation analysis (Bezemer & Mavers, 2011), and critical discourse analysis (Gee, 1999; O'Halloran, 2008). Norris (year), for example, applies a multimodal approach to discourse to investigate a notion of 'relevance' in multiparty interactions in an accounting office setting, with four participants: the accountant, a visitor, the researcher, and the assistant. She addresses traditional approaches to discourse analysis that focus too much on linguistic modes, which

can misinterpret the simultaneous social interactions and are not adequate for a full analysis of the complexity of new forms of communication. Taking a multimodal approach to discourse and interaction analysis allows the orchestration of all relevant communicative modes and a deeper sense of the power relations between the social actors from a critical perspective. Bezemer and Jewitt suggest that researchers "link multimodal analysis with broader social theory" and "underpin multimodality on anthropological and social research" (2016, p. 16) to develop multimodality as a methodological tool from both a micro- and macro-level.

A Social Semiotic Approach to Multimodality and Learning

This study applies a social semiotic approach to multimodality and learning to "emphasize what is shared communicationally" (Kress, 2011, p. 46) in digitally mediated cross-cultural communications involving "coordinating language with ways of acting, interacting, valuing, believing, feeling, and with bodies, clothes, non-linguistic symbols, objects, tools, technologies, times, and places" (Gee, 1999, p. 25). A social semiotic approach to multimodal learning and communication focuses on the fluid and creative act of assemblage-which modes were selected to make meanings from whose interests- but also how the cultural and social modes interacted with/or across each other. It provides a more integrative framework and inter-disciplinary approach for understanding and theorizing meaning making in social and cultural contexts (Jewitt, 2014). It attends systematically to the social interpretation of a range of forms of meaning making and negotiation (i.e., modes) such as images, sounds, music, gestures, body posture and the use of space.

Social semiotics, coming from Michael Halliday's (1978) theories of systemic functional linguistics (SFL), offers concepts, methods and frameworks for understanding

visual, aural, embodied, and spatial aspects of interaction and environments (Kress, 2010). Jewitt (2014) elaborates and compares the three major perspectives between approaches to multimodality: *social semiotic multimodal analysis (*Kress and Van Leeuwen, 2001; Van Leeuwen, 2005), which places the sign-maker at the center; *systemic functional grammar approach to discourse analysis (SFG-DA)* (O'Halloran, 2008), emphasizing the metafunctional systems behind the social semiotic resources; and *multimodal interactional analysis* (Norris, 2006, 2012), moving away from interaction as a linguistic performance to a view of multimodal ensembles.

Multimodality in a social semiotic perspective challenges the privileged status of speech and writing as the dominant modes in people's everyday communication, and integrates affordances of all modes in meaning making and negotiation (Bezemer & Kress, 2016). It addresses language as part of meaning making, but meaning is not located within only one specific mode; rather it is embodied and negotiated in modal ensembles through social interactions (Albers, 2006; Albers & Murphy, 2000; Bezemer & Jewitt, 2010; Bezemer & Kress, 2016; Jewitt, 2014). The reconceptualization of meaning making from a social semiotic perspective to multimodality has expanded our understanding of what counts as literacies, languaging, knowledge, learning and communication in the increasingly digitalized and globalized world (Albers & Frederick, 2013; Archer, 2014; Hornberger, 2007; Jewitt, 2014; Ntelioglou, Fannin, Montanera & Cummins, 2014; Li Wei, 2011).

Modes and affordances

In a semiotic approach, following Bezemer and Jewitt (2010), *mode* is privileged as an organizing principle of representation and communication, therefore, it is a central unit of

analysis. Mode is constructed by a "shared cultural sense" (p. 5) within a community of a set of resources. Jewitt (2014) addresses that one of the starting points of multimodality is to consider all modes (e.g., text, image, sound, and gesture) of meaning making as having equal status, although it is not to say that they are always taken as equal in every social event. Meanings are made and negotiated in ensembles across different modalities, semiotic resources, and multimedia spaces.

Bezemer and Kress (2016) point out, "The resultant meaning of the sign complex is more than the sum of its constituent parts" (p. 23). It speaks to the notion of the "*affordances*—the potentials and constraints for meaning making" (p. 23)—of the multimodal *complex*, highlighting the situated meanings of modal assemblages and their social functions in different contexts. One mode may be viewed as apt for a social event in one context while it might not be considered to carry the same meaning potentials, or function as a mode at all, in another setting due to the differences between cultural worlds (Agar, 1994). For instance, if you are looking for a taxi in China and put out your thumb, it is likely that most taxi drivers will not stop for you because this is not recognized as a mode of getting a ride in this context. Therefore, modes for making meanings are contextually situated. They cannot be fully understood without "linking multimodal analysis with broader social theory" and "underpin(ing) multimodality on anthropological and social research" (Bezemer & Jewitt, 2010, p. 16) from both a micro- and macro-level.

Signs of learning and engagement

According to Bezemer and Kress (2010), the aim of a social semiotic multimodal approach is to make more modes visible and accessible and to focus on what modal resources

students bring to learning contexts. In one of their studies in classroom settings, Bezemer & Kress investigate signs of engagement, which they treat as modes of students' focus and interest in the class. For example, they pay attention to a student's placement of the body and navigation in space, which reflects students' interests in or indifference to learning in the specific design of the learning environment. They advocate that educators should learn from their students' multiple modes of engagement, such as gestures, body movement and eye contact, in the class and redesign their practices to motivate students' engagement and learning. This speaks to Kress's (2010)'s notion of motivated signs. Following Kress, signs are motivated, shaped and shared by sign makers' interests in different modal affordances – social functions—to convey meanings in situated circumstances. In Kress's words:

> The sign is the central concept of semiotics. In the sign, meaning and form are not used in one entity. In a Social Semiotic theory, signs are made— not used— by a sign-maker who brings meaning into an apt conjunction with a form, a selection/choice shaped by the sign-maker's interest. In the process of representation sign-makers remake concepts and 'knowledge' in a constant new shaping of the cultural resources for dealing with the social world. (2010, p. 62)

Sign makers' design decisions as evidence of engagement

A social semiotic perspective to multimodality highlights the agentive and interactive roles of sign makers as multimodal designers and producers, as they are negotiating meanings through making a series of modal choices out of "the availability of modes, their materiality and their affordances" (Kress, 2010, p. 76) to creatively design their own learning pathways. In this study, I argue that it is crucial for educators and researchers to understand these learning paths designed by learners, as Kress has addressed:

> The inner constitution of the sign reveals the interest of the maker of the sign. That is of greatest significance as a heuristic and an analytic means, whether

> straightforwardly in ordinary everyday interaction or in forms of research…. Positing that relation between 'sign' and 'world' is crucial; it opens the possibility of a path to understanding what in the phenomenon or object to be represented was treated as criterial by the maker of the sign at the moment of representation. That can lead to an understanding of the sign-maker's position in their world at the moment of the making of the sign. Such a hypothesis is of fundamental importance in all communication…. (Kress, 2010, p. 65)

Following Kress, understanding learners' design decisions is crucial because it reflects how the world has been perceived and communicated by the sign makers as the most significant part of learning. It speaks to the notion that learning is a multimodal design process and multimodal design is a learning process, as Bezemer and Kress (2016) state, 'every sign and every sign complex is a sign of learning', and 'every mode offers its own distinct route to learning' (2016, p. 61). According to Bezemer and Kress, learning is evidenced in every sign designed, produced, and transformed. New learning takes place when meanings in one sign system are *transformed* into another (Siegel, 2006).

In this study, by *multimodal design*, I refer to not only youth's cultural designs of their video stories through collaboratively interacting with local peers, but also their digital designs that involves engaging in human-computer interactivity as they are touching the screens and keyboards to digitally communicate with their global peers. The two designs are often interwoven with each other as learning contexts in today's world tends to become more hybrid. As learners are engaged in multimodal design, they are making a series of design decisions, which position learners as agents of their learning and communication locally and globally. In this study, in order to understand youth's digitally mediated transnational designs, I found that Hawkins's notion of transmodalities is helpful for me to "move beyond named categories of 'modes', to a view of semiotic resources" (Hawkins, 2018, p. 64) and the

social effects of semiotic change in transnational communications in digitally mediated spaces.

Transmodalities

In her recent transnational communication studies, Hawkins (2018) points to a *'trans-' turn*, or *'trans-' perspective*, in applied linguistics to address the "simultaneous co-presence and co-reliance" (p. 64) of modal resources and relationships that shape meaning making, not only through representation but also communications. Hawkins (2018) developed a transmodalities approach in understanding meaning making as "a response, in large part, to new and rapidly changing contexts of mobility, and new global configurations of people, resources, and communications" (p. 75). Concepts and approaches of *transmodalities* have been developed to highlight modal movement and transformation in multimodal engagement, pointing to the intersection of resource movement and social (im)mobilities with issues of (in)equities, materiality, access, privilege and power (Hawkins, 2018, 2020; Li & Hawkins, 2020; Shipka, 2016; Newfield, 2014), in Hawkins's words:

> Transmodalities attends to meaning-making across the arc of transmodal communications, such that, while production and assemblage may be the starting point, the spaces and timescales traversed, as well as the contexts and processes of reception and negotiation, are given equal weight. And lastly, transmodalities references transcendence and transgression, where inequitable relations of power can be dismantled and reconfigured, affording equal access, value, and representation to all participants in transmodal interactions. (2018, p. 65)

From a transmodalities perspective, meanings are not only made through modal assemblages, but also are interpreted and negotiated though social interactions or communications across people, resources, place, time and space. Bezemer and Kress (2016) bring together multimodality, learning and communication through detailed empirical investigations and

analyses of sign-makers and their meaning making and negotiation in multiple contexts, such as museums, hospitals, schools, companies and home environments. They define 'communication as learning' and 'learning as communication' (p. 3). In comparing the examples in distinct social settings, they explore who makes what signs for whom and how, in what social contexts and with what power relations, all of which make contributions to theorizing and understanding learning and communication. Particularly, in this study in youth's digitally mediated representation and communication, the notion of transmodalities is helpful to understand youth's video production as a first step of meaning making, then their transnational communication as part of the meaning negotiation process across physical places and digital spaces, and local and global interactions.

Towards the New Age: To Consume or To Design? To Teach or To Facilitate?

The multimodal and transmodal turn in learning and education demands a redesign of learning environments and materials to meet the needs of increasingly diverse groups of learners and learning contexts. When today's learning is no longer necessarily tied to a desk, a textbook, a teacher, a chalk board and a student, what counts as learning and what can teachers do to embrace the change to better support learning? Unfortunately, the old assumption of 'teachers always know what's going on in the classroom' (Ayers & Alexander-Tanner, 2010) has become a problematic one in this age of increasing digitalization and globalization. Learning today can take place anywhere, anytime when one holds an iPad or smartphone searching information online to gain the knowledge she or he needs immediately from a digital database, even in the absence of a teacher. Technology has largely changed our ways of knowledge-seeking and information transformation, from print to screen, from

physical place to transmedia spaces, facilitating new forms of languaging, literacies, and social engagements locally and globally (Hassett & Curwood, 2009; Kress, 1998; Lam, Warriner, Poveda, & Gonzalez, 2012). What counts as knowledge, literacy, and learning needs to be expanded, in Walsh's (2009) words:

> Proficiency in literacy indeed requires multimodal literacy, that is the practices of talking, listening, reading and writing together with processing the modes of image and sound and movement. (p. 2)

Kress (2010) recognizes multiliteracies on screens "require new forms of movement" (p. 29) in semiosis and these "semiotic movements" (p. 29) reshape learning pathways and learners' interests in representation and communication. New modes of representation and communication facilitated by digital screens, such as touch and click, shape new means of social participation and engagement. Following Kalantzis, Cope, Chan, and Dalley-Trim (2012) in their work on multiliteracies, the goal of education in today's world is to prepare multiliterate people, people who are able to 'move comfortably between the many literacies of work, public and community life; and able to communicate through multiple and changing media.' (p. 7). That is to say, we need to prepare new learners who can become confident in making meanings and collaborating with their peers through multiple platforms, media, tools, and spaces. Siegel (2006) calls for a hybridity of multimodalities and multiliteracies for a social justice goal in education through full "development of a semiotic toolkit" (Siegel, p. 72) that builds access to multimodal multiliteracy practices, embracing all literacies, including reflective drawings, body movement, and other digital forms of representation and communication. In her words:

> Multimodalities and multiliteracies have appeared on the literacy landscape at the very moment when literacy is shrinking to fit federal and state educational policies that place severe limits on what it means to be literate, and thus, on *who* can be literate. In our enthusiasm for all that is "new" about multimodalities, it is critical that we not lose sign of the fact that these two cultural storylines are on a collision course, with schools being held to a monomodal, autonomous view of literacy. Reframing our work as social justice may allow us to maintain political clarity while we read and reread the signs. (p. 75)

In this study, I advocate that the goal of multimodal learning and education is to provide alternative and inclusive spaces for learners, wherever digital engagements and learning occur, to mobilize their semiotic resources for social change. Apple (2000) calls on educators to embrace new technologies to design new learner and teacher roles and interactions, in order to break out of the "official knowledge" for "democratic education" (Apple, 2000). We must reform our educational goals to prepare for future leaders rather than followers. In order to do so, the traditional teaching model which positions adults, such as teachers, as the knowledge authority, and children as those who are recipients of information has been problematic (Freire, 2005). According to Freire, the role of teachers is to engage their students in a series of "process of discovery" to "contribute to the gradual transformation of learners into strong presences in the world" (2005, p. 62).

Particularly when Internet search engines, such as Google and Wikipedia, can offer us immediate answers about the world through screen touch, keyboard typing, and mouse clicking, we need to redesign the teacher's role in supporting learning towards a more facilitative and communicative direction. In this study, I claim that a multimodal learning and education approach positions learners as knowledge designers and producers, and teachers as facilitators engaging young learners to agentively participate and interact in and across new hybrid learning environments (Bezemer & Kress, 2016; Bezemer & Mavers, 2011; Jewitt,

2006; Kalantzis & Cope, 2012; Scribner & Cole, 1981). This study provides empirical data as evidence of potential benefits of shifting from a *teaching approach* to a *facilitation approach* in mediating youth's discovery of their learning pathways using their available resources and creative ways in communicating with the increasingly developing world.

Conclusion

This study seeks alternative ways and methods to redefine representation, learning, and communication in digitally mediated contexts, embracing a sociocultural view that embraces and orchestrates youth's entire repertoire of modal resources and interactions, with an emphasis on transforming cultural and social contexts (Perry, 2012). I take learning as a series of multimodal design decision-making processes and transnational communications when students are engaged in bringing in, integrating and mobilizing multiple semiotic resources with linked social beings across multiple spaces and places (Birr, Luke, Davies, & Street, 2009). This dissertation aims to raise more recognition of children's repertoires and agency through this empirical study in an out-of-school global and digital learning environment to provide experimental and heuristic spaces for educators and scholars to reconsider the ongoing roles of 'learners' and 'experts', and what relations and spaces can be rebuilt among global youth, adult supporters, and researchers.

In the next Chapter (Chapter 3), I discuss the setting where this study took place, and the research design and methods. In Chapters 4 and 5, I apply a multimodal design approach to consider learners as agentive, creative, and critical knowledge designers and producers to cultivate more socially just relations in digitally-mediated translocal and transnational communications. In Chapter 6, I address facilitation and discuss the possibility of bringing in

a social justice facilitation approach (following Hawkins's notion of social justice teacher education, 2011) to prepare critical multimodal learners, addressing issues of ownership, relations, access, privilege and power.

Chapter 3

Settings and Methods

This study seeks to understand how emergent plurilingual youth make and negotiate meanings multimodally and transnationally through digital representation and communication with global others in an out-of-school global digital storytelling project, entitled Global StoryBridges (GSB). It considers how digital stories of the youth's worlds were portrayed by one of the GSB project sites in the U.S., how those digital representations were perceived, interpreted and responded to by youth from other global sites, their subsequent negotiations, and how engagements were facilitated by adult facilitator. It aims to highlight youth's interests and agency in co-constructing knowledge and identities and to critically reflect on the adult facilitators' role in facilitating such engagement across modalities, media, resources, places, time and space.

I conducted a qualitative case study of one site in an out-of-school project, Global StoryBridges (GSB), in which I used ethnographic methods by being a participant observer in project activities, and multi/transmodal approaches to data analysis (Hawkins, 2018; Kress, 2010; Li & Hawkins, 2020). According to Creswell (2007), a qualitative case study draws on multiple data sources to provide "an in-depth understanding of a case or cases" (p. 78). Conducting qualitative research has a goal of understanding the complexities and details of people, issues, contexts or settings, and social interactions, which "can only be established by talking directly with people, going to their homes or places of work, and allowing them to tell the stories unencumbered by what we expect to find or what we have read in the literature" (Creswell, 2007, p. 40). In this dissertation study, I designed a qualitative case study research project in order to understand the complexities of youth's meaning making, negotiation and transformation in one local GSB site and those that were linked to it through global digital storytelling and online communications. This study draws on multiple data sources from both

online and offline settings to understand the complexities and multi/transmodalities of youth's digital representations and cross-site communications. I used an ethnographic approach to participate, observe and record the local project activities in the field to understand the cultural embeddedness of modal interaction and transformation and how meanings were negotiated and mobilized through the "arc of communication" among the global youth, and between youth and adult facilitator (Hawkins, 2018, p. 61). The combination of ethnographic approaches and multi/transmodal analyses in this study "offer insights into not only the moment of production but into the entire process of meaning construction and negotiation across place and space" (Hawkins, 2018, p. 63). This approach situates youth's multimodal interactions in specific social and cultural contexts, as Flewitt (2011) addresses, "while multimodal analysis captured something of the communicative complexity of the studied field, ethnographic approaches to data collection and interpretation helped to situate that complexity in particular social, cultural and historical contexts" (p. 307).

Global StoryBridges Project

This research takes place in a Global StoryBridges (GSB) project site. I have been working as a researcher, facilitator and coordinator with the larger GSB project since 2011. It links youth globally to collaboratively explore their worlds through making digital stories and communicating together via a dedicated website. Project youth participants live in under-resourced communities and/or families in Uganda, Kenya, China, Mexico, India, Vietnam, Spain, Honduras, the UK and U.S. (not all included in my data collection) at elementary (10 to 12 years old) and high school (14 to 18 years old) levels. This study focuses on the elementary-school-aged sites in Uganda, China, Mexico, and U.S., where youth were learning English in their schools. In each site, youth are organized and facilitated by an adult facilitator as they meet weekly (biweekly in China). The project was designed to empower

youth as they agentively make group decisions on what to represent and communicate translocally and transnationally. During meetings, they collaboratively create digital stories about their lives and communities to share with global peers (on the project website), deciding on themes and topics together, then capturing video footage and artifacts to craft their stories on iMovie or other digital video making platforms. They also watch and respond (on a chat space on the website) to digital stories from other global sites. Through this engagement, youth master the basic skills of videotaping, video editing and project website navigating (including video posting and responding online), and enhance their language and literacy skills.

The Research Site

While my data comprises all of the video and online chat postings from all project sites involved in the exchanges which I analyzed, in order to gain an in-depth and detailed understanding of youth's representation and communication in this digitally mediated transnational space, I conducted ethnographic research focusing on the participant group in the U.S. site in an urban school in Wintertown[2], located in the Midwestern part of U.S. To be clear, GSB is not part of school curriculum. Some sites are located in community settings, some, such as this, are located in schools, but all meetings and activities take place outside of school hours except for the site in China. In the Wintertown site, youth met weekly on Mondays from 3:30 P.M. to 5:30 P.M. in a school classroom throughout the academic year. This site was opened in Fall 2016. My ethnography period was for the entire 2016-2017 academic year, from the start to the end of the first year of the Wintertown site.

[2] All names of places and people in this dissertation are pseudonyms to protect the privacy and confidentiality of research participants.

Focal site selection

I selected this site as my research site because of two considerations. Firstly, this site was a new GSB project site, so I was able to collect data for an entire academic year from the start of the new site. Secondly, my data access was ensured by the support of the adult facilitator, Ms. Miller. Due to my years of project experiences in multiple GSB sites, I understood the importance of gaining support from a community person to ensure the continuity and resilience of the project weekly meetings. In addition, in an interview with Ms. Miller, she explained that youth in this school district used iPad or Chromebook in their school for a focus on the 'four C's' of 21 century learning: critical thinking, communication, collaboration and creativity. Thus, leveraging available local resources in this site, children were provided iPads and a MacBook during project meetings for photographing, video-taking, video editing and project website navigation. Because project activities were held in Ms. Miller's classroom during an after-school time, the group was able to use the smartboard to share the computer screen. They also had activities outside of the school for their video-recording.

Participants

In this project site, there were thirteen youth participants, ranging from 10 to 12 years of age. They were culturally and linguistically diverse; all were of Hmong or Latino origin. All spoke either Hmong and Spanish as their home language, and were learning English. The adult project facilitator, Ms. Miller, served as a first-grade teacher in the Wintertown Elementary School. I have known Ms. Miller throughout my doctoral career; we were students at the same university together. She, as a Spanish-English bilingual teacher, has taught in rural and urban schools for over ten years. During the time period of my data collection, she was planning to apply for a doctoral program, and she is currently a doctoral student in education while teaching as a first-grade teacher. She also obtained a bachelor's

degree in English as a second language education and health promotion and wellness, and a Master's degree in global education. With her teaching experience and interests in multimodal transnational learning, she works as a GSB project facilitator to engage youth to connect with global peers through digital story making and online communication. She invited me to work with her and to collect my dissertation data in her site.

The facilitator's role was designed by the project director; the facilitator does not teach but rather facilitates the group meetings and empowers youth to agentively and collaboratively make project decisions. As we worked together, I was aware of the interwoven relations between us: classmates; colleagues; friends; collaborators; graduate students; educators; and co-participants in the GSB project, which later had an impact on my ongoing data collection and analysis. I have addressed this in my analysis in Chapter 6.

Data Sources and Research Phase

Following Hawkins (2014), researching in a transnational context is challenging due to the distance for data collection, and the need to include perspectives of all linked participants across place, space and time. In order to overcome this difficulty and gain perspectives from both meaning producers and respondents across the global sites, this study was designed to focus on the digital stories and online chat posts by all project sites while attending closely to the meanings represented and constructed in my primary focal site, Wintertown in the U.S. One of the strengths of this, as I have addressed, is that I had consistent access to the group meetings in this site to participant, observe, record and study what actually happened in the local site, which was closely linked with what took place in the digital and transnational settings. I aimed to not only observe the meanings made on digitally mediated platforms afforded by the digital tools (e.g., GSB website, iMovie platform, smart phones, iPads), but also capture what actually occurred (e.g., the local interactions and digital story making processes) in the field to study complexities and trans/multimodalities of

youth's meaning making and negotiation by situating the case in one local site and linking it with the global ones.

Data comprise: GSB project website data including videos produced and responded to by the Wintertown site and the relevant online chat postings between this site and the other linked sites; and ethnographic data including: fieldnotes and videotapes; interviews with youth and adult facilitators in multiple sites in the U.S., China and Uganda; and youth produced artifacts (e.g., videos, photographs, reflective drawings and texts[3]) in the Wintertown site. Table 3.1 provides the data sources and a general timeline of the dissertation research.

Table 3.1 Data Sources & Research Phase

Data Sources			**Phases**				
			Sep-Dec 2016	Jan-Jun 2017	Jul-Aug 2017	Sep 2017-Feb 2020	March 2020
GSB website data (e.g. videos, video comments & transcriptions of the videos)			X	X	X		
Ethnographic Data	Group meeting observations in Wintertown site (Mondays 3:30-5:30 PM)		X	X			
	Fieldnotes		X	X	X Uganda		
	Weekly group meeting videotapes		X	X			
	Youth-produced reflective learning artifacts (e.g. drawings, photography, written texts, digital text, etc.)		X	X			
	Interviews	Group interviews with youth	X	X	X Uganda		
		Interview with adult facilitators	Wintertown		Uganda	China,	
			X	X	X	1st in Sep 2017 2nd in Sep 2019	
Analysis	Video and audio/video recording transcriptions, analytic memos, coding, and analysis		X	X	X	X	
Write and Revise Chapters						X	X
Dissertation Defense							X

[3] All youth-produced texts are quoted verbatim in this study.

GSB project website data

To investigate how youth made meanings through digitally mediated transnational communication, I collected data from the project website, including detailed description of the website design and affordances, digital stories posted by the Wintertown site and the ones responded to by this site, and video chats in which the Wintertown site was involved. This part of the data focuses on language(s) that were used and spoken by the children on the project website, literacies production in both the videos and online chats, and sociocultural aspects of video representation and online communication. Data collected from the project website provided a "final" version of youth's digital participation across the global sites. However, this set of data sources alone is not adequate to answer the questions in detail of how meanings were co-constructed in specific social settings. The next section discusses the ethnographic data sources to draw an on-going picture of what happens in the field. This data offered me understanding of an "actual version" of how the online engagement actually took place in specific local settings.

Ethnographic data

I positioned myself as a participant-observer in the real-world local context of the Wintertown site to generate a set of detailed ethnographic data to capture how the online representations and communications were collaboratively produced in the offline settings and how the meanings traverse, mobilize and transform across the different social and cultural contexts. The ethnographic data, drawn from and constructed in a "real world context", considers not only the participant (emic) but also researcher (etic) perspectives (Flewitt, 2011), as I account for my own positioning in the study. It comprises: fieldnotes and videotape; youth-produced drawings and videos; and semi-structured interviews with youth and adult participants.

Weekly participation-observation fieldnotes and videotapes

I attended Wintertown site meetings weekly to document the activities and interactions throughout the 2016-2017 academic year. I participated, observed and recorded the weekly project group meetings for approximately 2.5 hours per week. In order to let my participants "get used to my presence" (Walsh, Bakir, Lee, Chung, & Chung, 2007, p. 52) and to get familiar with the "strange" Chinese woman in their program, I spent time in the field before beginning to collect data (beginning in September 2016). Following Walsh and colleagues' (2007) suggestion that using digital videos in field-based research can record the details of the social interactions of young children's everyday lives better than written records can, I videotaped the weekly group meetings to detail my observations, and to "document" the digital storytelling process and to "trace the development of the stories over time" (Halverson, 2007, p. 158).

I wrote weekly observation fieldnotes (see Appendix A for observation protocol) during and after each of the site meetings, following Miles and Huberman's (1984) suggestion that data collection and analysis should be interwoven from the beginning of the research by taking notes, memos and diaries to track the stories and researcher's reflections of the events from both theoretical and methodological views. The researcher fieldnotes in this study embraced multiple components of the project, for instance, observations, researcher's prior experience regarding the observations, theoretical and methodological readings and reflections combining the generated data, emergent ideas and questions, and research decisions (Newbury, 2001; Borg, 2001). The fieldnotes helped me to make connections between the earlier and the most recent fieldwork and allowed a closer look back and forth across the whole data set. As time went on, the most recently generated data helped further clarify and inform the prior understanding of earlier events in the study.

Youth-produced reflective drawings

Youth's reflective drawings were also collected and analyzed to include youth's "multifaceted ways of knowing" (Kendrick & McKay, 2004, p. 109). At the end of the first-year engagement, Ms. Miller asked each youth to draw their GSB learning experience as part of the project reflection. Youth drew on papers using pencils to show what they had learned, experienced and remembered about their participation in the GSB project. I took digital photos of all youth-produced drawings using my iPhone. In order to understand the drawings from the youth's perspectives, I talked to some individual youth at the park and recorded the conversations as they were explaining to me what they drew and the meanings of their drawings.

In this study, I consider youth's drawing as valuable research data and an important part of youth's repertoires, through which I was able to access their gains from the GSB project by analyzing the criterial images of what was captured in their drawings. Kendrick and McKay (2004) adopted Vygotskian sociocultural learning theories and conducted image-based research with first and second graders in Canada. They claim that youth's "graphical forms of representation" (p. 126), such as drawings, are often undervalued, which resulted in teachers' and researchers' narrow perception of children's learning and meaning making. This study, following Kendrick and McKay, views youth's drawings as "additional and alternative ways" (p. 124) of reflecting their project participatory history, stories, and reflections. Through inviting the participants to contribute what they had learned and having unstructured follow-up conversation, I was able to see how they positioned themselves in which kinds of social and cultural contexts as they gave examples and detailed information.

Interviews

I conduced semi-structured group interviews with the youth participants and individual interviews with adult facilitators in multiple project sites in the U.S., Uganda, and

China (see Appendix B for the youth interview protocol, and Appendix C for the facilitator interview protocol). I interviewed the Wintertown participants—youth (as a group) and Ms. Miller— twice: once at the beginning of the project, and again at the end of my research period. I also conducted a group interview with the Ugandan youth participants and an individual interview with the Ugandan adult facilitator in July 2017 while I was onsite in Uganda. I interviewed the two teacher facilitators in the Chinese site through WeChat, a popular Chinese social media app, in Fall 2019. All of the interviews were videotaped and transcribed into English. The taped and transcribed interviews allowed me to "trace perceptions of children participants, their respond to their narratives and experiences in the project and their changing relationship to their stories over time" (Halverson, 2007, p. 158).

During the youth interviews, I used a role-play model in all group interviews to empower my interviewees to lead me to understand what they experienced and learned in the project that was significant to them. I asked questions such as: "Imagine that I am a new student in your class and I am interested in GSB project and curious about what you did in the program. How would you introduce the project to me and make me feel interested in joining you?" I learned that when I used this method in group meetings, youth felt more comfortable to talk with me about their activities and learning. This approach provided an alternative space for youth to discuss what they had gained and learned from the project, enabling me to better understand how these emergent plurilingual youth identify their knowledge of practices and the available resources around them for representation and communication.

Table 3.2 shows the three dissertation research questions with sub-questions, data sources and the corresponding data processing methods that I used for further analysis. The following section details the process of data analysis for the data represented in the table.

Table 3.2 Research Questions, Data Generation and Data Sources		
Research Questions	**Data Sources**	**Data Processing Methods**
Question 1: How do emergent plurilingual youth make meanings multimodally and transnationally through digital communication with global others? Sub-Question: What counts as children's repertoires and evidence of learning in the 21st century?	GSB website data Weekly group meeting participation-observation Videotaping Semi-structured interviews with youth and facilitators	Video logging, website affordances, and transcript Fieldnotes, youth-produced reflective video and drawings, and transcripts Transcripts Transcripts
Question 2: How can we understand youth's language, literacy and identity development through a lens of multimodality in a global and digital context? Sub-Question: What kinds of understandings of self and other can be (re)built and (re)constructed through transmodal transnational representations and communications?	GSB website data Weekly group meeting participation-observation Videotaping Semi-structured interviews with youth and facilitators	Video logging, website affordances, and transcript Fieldnotes, youth-produced drawing, and transcripts Transcripts Transcripts
Question 3: What kinds of adult facilitation can be provided to support youth's creative and critical roles in these engagements for socially and culturally just relations in the digital and global age? What spaces can be created for researchers and practitioners to co-create such multimodal design spaces for youth?	Weekly group meeting participation-observation Videotaping Semi-structured interviews with facilitators	Fieldnotes and video recording transcripts Transcripts Transcripts

Data Analysis

This study extends discourse analysis from monomodal towards a social semiotic multi/transmodal discourse analyses to study meaning making, representation and communication across linguistic and non-linguistic modalities, cultural models, people,

semiotic resources, media, place, time and space. *A social semiotic multimodal discourse analysis* (Kress, 2010; Kress & Van Leeuwen, 2001) attends to "emphasize what is shared communicationally" (Kress, 2011, p. 46) across place, space and time, involving "coordinating language with ways of acting, interacting, valuing, believing, feeling, and with bodies, clothes, non-linguistic symbols, objects, tools, technologies, times, and places" (Gee, 1999, p. 25). By applying methods of multi/transmodal analysis in this study, I identified a series of multi/*transmodal moments* (Hawkins, 2018; Newfield, 2014) and *critical incidents* (Li & Hawkins, 2020) among the Wintertown youth and the project facilitator and their global peers. Hawkins (2018) positions transmodal analysis as "not only processes of semiosis across time and space, but also to the effects" (p. 56). Specifically, in this study, I not only analyzed the semiotic changes, or modal interactions, of youth's engagement in human-computer interactivities and in social interactions with local and global peers and facilitator; but also, the semiotic effects (the transformation of modal assemblages) and social effects (on human relations and understandings attending to issues of (im)mobility, power and equity) (Li & Hawkins, 2020). I found that Wortham and Reyes's (2015) approach to discourse analysis across pathways of linked events was helpful for me to analyze the multi-source data and cross-site interactions by following their five analytical steps: mapping and selecting linked social events, identifying relevant cross-event social context, configuring salient indexical signs, tracing pathways that travel across the linked events and contexts, and identifying and analyzing emerging cross-event social processes (see Wortham & Reyes, 2015, p. 24 for components of discourse analysis within and across events). The following sections further discuss my analytical cycles and data processing, and analytical tools and methods.

Analytical cycles

In the first cycle of data processing, I revisited youth-produced artifacts, including their reflective drawings and videos, interviews with youth and adult participants, and online video chat posts, aiming to identify the indexical sign complexes including: 1) participants' noticings and recognition of their project experience; 2) emerging events that were mentioned frequently in multiple data sources; 3) transmodal moments and critical incidents, in which modal resources were (im)mobilized and in what sociocultural and sociopolitical contexts. These noticing points addressed by the participants indicate the *"criterial features"* (Bezemer & Kress, 2016, p. 44) of participants' interests, which shaped their meaning making and remaking. It served to highlight what was considered as most salient and significant for the participants by being part of the transnational transmodal digital storytelling project.

In the second cycle of data processing, I used the indexical sign complexes to guide me to selectively transcribe and code the ethnographic and website data by situating those participant-pointed noticings and moments in the specific cross-event contexts. For example, I used the youth-produced reflective drawings and their oral descriptions of the drawings to direct the selection of GSB video and group meeting videotapes to be transcribed, coded and analyzed in Chapters 4 and 5 to reflect youth's noticings of their digital participation, translocal and transnational engagement, and what they considered to be most significant to be counted as their knowledge and learning from their eyes and pencils. For example, as I will further discussed in the analytical chapters, youth drew one-way traffic signs as part of their learning through encountering the different affordances of traffic signs across the global sites. I, then, revisited the relevant data sources involving group discussions on the traffic signs, including fieldnotes, videotapes, interviews, GSB videos and online chat posts, to link emergent sign complexes with the situated social events and contexts. In this way, I was able

to not only include participants' perspectives but also selectively sample, transcribe and code the video(tape) data as a deductive approach for further analysis (Jewitt, 2012).

In the third cycle, I used MAXQDA Analytics Pro software to selectively transcribe and code the cross-event data identified from the first two cycles to generate analytical themes and categories. I transcribed and coded the video recordings in a timely manner guided by Saldaña's (2013) *The Coding Manual for Qualitative Researchers*. I used in vivo coding for the analysis of the group meetings and interviews, including participants' voices by using their words to reflect their learning in the project. I also condensed the number of in vivo codes and provided a re-analysis of the initial work through cross-coding with the researcher's reflective and analytical memos. I collected, weaved, and re-ordered the sub-codes, categories themes, and concepts across the multiple data sources. I understand that transcription and coding in qualitative research are ongoing socially and culturally mediated research practices, which require researchers to devote plenty of time and labor (Hamo, Blum-Kulka, & Hacohen, 2004). I revisited my video logging data and linked them with relevant website data, then selected the cross-sections to be transcribed and coded. This is another way, besides through youth's reflective drawings as I have discussed in the above section, to engage myself, the researcher, to embrace to my participants' noticing points to guide my selection of video data transcription and analysis. For example, as I interviewed the adult facilitator twice, she frequently pointed out her challenges and corresponding strategies working with the GSB Wintertown youth, which has guided me to recognize the significance of the facilitator role in youth's digitally mediated transmodal transnational engagement. This later propelled me to write Chapter 6 to answer the third research question (see Table 3.2).

Analytical tools, concepts and methods

In order to understand youth's meaning making and negotiation process in transmodal transnational encounter, I applied Bezemer and Kress's (2016) notion of *design* focusing on

the fluid, creative and interactive act of youth's modal selections and resource recognitions in the sequences of their local video producing, and their (un)noticing moments in their online transnational communications with global peers. I identified four multi/transmodal designs in Chapter 4 from a translocal lens--framing stories, videoing selves, editing selves, and uploading selves—to highlight youth's interests in digital story making and editing. In Chapter 5, I considered youth's meaning negotiation through the "*arc of transmodal communication*" (Hawkins, 2018, p. 61) highlighting how the cultural stories were responded to, and by whom, in what social contexts, what sorts of meanings were mobilized and not mobilized in encounters, and what this resulted in in terms of social equity. In order to understand youth's understandings of selves and others from their perspective, I analyzed the youth's reflective drawings and end-of-year summative videos, in which they reflected how their sense of selves had been changed before and after the project, and what they had learned from global others as part of their identity reconstruction and mobilities. I aimed to gain an in-depth understanding of children's diverse ways of learning, representation, and communication locally and globally, across language, identity, people, place, media, resource, space and time.

In Chapter 6, I provided detailed analysis to answer the third research question. In order to understand the role of adult facilitator in youth's transnational transmodal engagement, I mapped the youth-facilitator interactions across my interview data, fieldnotes and transcripts and generated the noticing and disregard in her facilitation and in social effects of youth's project participation and engagement from a critical lens. For instance, two of the noticing points are: 1) facilitator's use of place as resources in her facilitation; 2) facilitator's multimedia approach in digitally engaging the youth participants. I found Hawkins's (2014) notion of *place as a mediational resource* in transnational transmodal communications and *transmodalities* as critical analytical tools were helpful for me to

understand the transmedia transmodal facilitation strategies in two interrelated group meetings I identified as indexical events for analysis, *First Day of GSB project in Wintertown*, and *Watching and Responding to "Making Piñata for Christmas"* (a Mexican video watched by Wintertown youth and facilitated by the adult facilitator).

Multimodal Data Presentation

I applied a *multimodal transcription* method in my data presentation of this study, integrating written texts with youth-produced drawings, video stills, photographs, diagrams, and computer-generated line drawings of videotape screenshots to provide visual and contextual information to compensate for the inadequacy of the text-based transcription (Bezemer & Mavers 2001). Following Beemer and Mavers, multimodal transcripts, such as computer-generated line drawing, "provides more details of space, depth and background" for data analysis (p. 202).

In this study, I transformed project group meeting videotape stills into computer-based line drawings using the *Photo Sketch* [4] app. By this means of data presentation, compared to screen shots, it helped to not only present the whole picture of the group meetings that a video still can do, but also keep participants' facial expressions without blurring faces. In this study, I considered participants' facial expression and eye tracking directions as valuable data sources in studying youth's multimodal meaning making and communication. This part of data can be well kept in line drawings or photo sketching because it makes faces less recognizable; however, we often need to blur faces in photo data, which makes the data invisible. In addition, line drawings and photo sketching can also emphasize the key analytical points. This was helpful, particularly, when I was presenting youth's noticings as they watched videos. For instance, as it will show in the analytical chapters, for instance, in Chapter 4 (see Figure 4.4, 4.5, 4.6, & 4.7), photo sketching can

[4] https://itunes.apple.com/app/id600380311

make some analytical modal representations (e.g., gestures and eyesight directions) stand out to indicate youth's interests, recognition and engagement in transmodal transnational digital storytelling and communications.

Researcher Positionality

In this study, I position myself as an "insider" with eight years of close involvement as a coordinator, facilitator, participant, observer and researcher in the global community of the GSB project. Particularly, in the Wintertown site, at the beginning of my field visits, I was considered as a specialist in video making and the GSB website to answer technical questions. I was also asked by the adult facilitator to confirm that she was doing everything correctly because I was viewed as a "more experienced" GSB member. However, while entering this new site as a newcomer, I was not part of the social and cultural community. I come from a different linguistic, social, and cultural background, and I am conducting ethnographic research "learning a second languaculture" and "encounter(ing) between two languacultures" in the field (Agar, 2006, p. 2). Therefore, my "outsider" role can limit my understanding of the sociocultural interactions in my focal site. By using an ethnographic approach in my study, my perspective was to study how my participants' engagement in the GSB project, rather than to direct their participation and decision making in the project activities. For example, I was asked by my youth participants to explain the Chinese videos they watched from the GSB website because I was considered as a Chinese expert who share the cultural worlds represented by the Chinese GSB children. In order to not have my insider role overly affect my focal participants' decision-making processes in the project, I was honest with my participants, indicating that I knew the answer but would like to provide them the opportunity to present those questions to and communicate with their global peers who produced the digital stories.

I have learned that I have been negotiating my insider and outsider roles all through my field visits, data collection and analysis, and dissertation writing. I was learning from my participants' perspectives, what they did and in what social contexts, and I let them guide me as to what can make their learning experience a better one through digital storytelling and transnational communication. Therefore, I hold the view that I cannot define in this study who they are in my research, yet they represented themselves in different social events, in which I participated, observed, recorded, and analyzed by bringing in my own researcher interests, experience, knowledge, and background. Thus, I consider the data collection and analysis in my study as a co-generation and co-construction processed by both my focal participants and myself as the researcher.

Limitations

As I participated, observed, and researched in the focal site, I recognized that one of the limitations of this study is that I was not part of the community because I come from a different sociocultural and sociolinguistic background. Therefore, I may not be able to fully represent an emic understanding of the interactions and negotiations in the sites.

A second limitation is that, due to the physical distance between the different project sites, the design of the study foregrounds the Wintertown site in the U.S. to generate ethnographic data, although I also traveled to the Ugandan site and conducted field visits and site interviews. Although the data samples include videos and online chats from the linked project sites, it cannot adequately include all of the youth participants' perspectives in the study. It is worth considering how the linked participants construct their understandings of their learning experience and social relations in other project sites. This can be a limitation for many ethnographers, as Lareau (2011) notes:

> Ethnographers watch, listen, ask questions, and take notes as they join study participants in their daily activities… gathering information this way requires a great

> deal of time, energy, and patience, so ethnographic researchers must limit their sample size. (p. 335)

A third limitation is that, although I have included multimodal transcripts in this study, I recognize that multimodal representational modes in academic writing, including what I have done in this qualitative case study, are limited. There is a need for multimodal researchers to develop new methods, tools, software and concepts to present their research in multi/transmodal ways so that more modalities and resources can become visible in data representation and analysis.

Conclusion

Through this case study in the Wintertown GSB Project, I hope to move beyond the traditional monomodal approach that privileges language as the predominating power in emergent plurilinguals' learning and communication. I aim to develop a reconstruction of youth's representative and communicative repertoires, facilitating shifts of social relations in education from hierarchical towards more open, participatory and equal relations (Bezemer and Kress, 2016; Bezemer & Mavers, 2011). I recognize that approaches for multimodal research are still in an early stage and much has to be explored in the future to develop a meta-language of multimodal data collection, representation and analysis, and 'meta-semiotic' tools to gain new perspectives in understanding youth learning and adult facilitating in online and offline settings. While more modes are accessible and available in multimodal research, there is still a range of modes that might be recognized but not be recorded or analyzed effectively, for instance, modes and resources of smell, touch, and feeling, which can result in a reduction in multimodal analysis if those modes are ignored or misinterpreted.

Chapter 4

Digital Storytelling as Multimodal Design and Redesign

This chapter focuses on how emergent plurilingual youth in one U.S. project site inhabited their designer roles and made agentive decisions through four stages of digital storytelling. I investigate how these learners recognized and used their social semiotic resources to digitally represent themselves across different modalities and spaces with awareness of their global audiences. In particular, I discuss how these children mobilized their understandings of their digital stories through online transnational encounters with their audiences and how meanings were collaboratively co-constructed by these global peers.

Multimodality attends to social interpretation of a range of interwoven modes of meaning designed and produced through diverse semiotic resources, including languages, images, sounds, gestures, music, and use of space and place. The notion of design, following Bezemer and Kress (2016), highlights the interactive features of meaning making and the agentive role of sign makers. By interactive features of meaning making, I mean that meanings are shaped by both the interaction between social beings but also the interactivity between humans and digital devices (e.g., computer, camera), places, objects and social media.

When the process of design takes place, sign makers draw on their knowledge, skills, backgrounds and life experiences to make a series of modal decisions. For sign makers' distinct modal preferences, attention and interests, what is to be designed and how to design it is often varied. As Bezemer and Kress concluded in their analysis, "There were variations in what was selected for presentation, what was highlighted and how it was arranged signifying

the children's distinct interests and identities" (2016, p. 50). According to Kress and van Leeuwen (2001), when sign makers design something, they are simultaneously designing forms of knowledge, social actions and semiotic modal choices. Depending on who they are, they often make a series of "design decisions" (p. 63) to use different modal assemblages to design the "criterial feature" (Bezemer & Kress, 2016, p. 44) of their cultural worlds, and the ways in which they interact with others in a particular circumstance; and vice versa—the multimodal design process also reshapes sign makers' sense of self. Following sociocultural learning theories and social semiotic multimodality perspectives, learning is evidenced through social interaction and interactivity, through which the sense of selves are negotiated, reconstructed and transformed.

Meanwhile, as learners in the 21st century encounter the rapid growth of new technology, digital media and increasing diversity, they are offered more possibilities of representation, interaction and communication (trans)locally and (trans)globally. For instance, storytelling as a tool of learning and voicing is not limited to textual and audio forms, but has been expanded in an assembled version that allows more modal affordances across language, sound, music, image, movement, gestures, spaces, and so on. Digital storytellers are also offered virtual spaces not just to post their video clips but also to receive feedback from their potential audiences and communicate back and forth. This speaks to the notion of design shifting learners from a follower role to a designer role, from sites of receiving information towards sites of critically participating in knowledge co-construction.

However, differences in socioeconomic resources still result in differential benefits from the multimodal turn in education. In other words, children who have fewer resources are

often considered not capable of being challenged through multimodal learning (Emert, 2014). Emergent plurilingual youth, especially, are viewed as those who do not take ownership of the modes (for instance, language) of power in and out of school. Without recognition and value of these children's rich social and cultural resources and knowledge, schools and society often unfairly rank them as minorities and non-native speakers who are considered to lack the modes of school-based discourses, and, thus, who need to be saved or "rescued" (Emert, 2014, p. 412). As Lambert (2013) states, "those that lose will be nobodies" (p. 3), with no voice in the society. This is not because they do not have the skill or knowledge to voice ideas, but because their modes of knowing and learning are not fully recognized. According to Lambert, digital storytelling, as a way of multimodal learning, empowers the less privileged to speak out and to be heard, which is shifting from an "empathetic reaction" (Emert, p. 412) to our learners towards a culturally responsive perspective that highlights what learners already have instead of what they do not have.

In this chapter, I define multimodal design in the local digital storytelling domain as series of complex social processes interweaving different modalities of meaning making and communication motivated by the storytellers' interests of self-representation, prior life experience, and the digitally mediated space. This definition is intended to highly value sign makers' multiple "repertoires of practice" (Burke & Bowsell, 2007, p. 335) that involve different forms of multimodal recognition and engagement, which signals learning in physical and digital spaces. In this study, designing digital stories is complicated, as discussed in the following sections. They are not only designed for the youths' self-owned goals, but with awareness of their potential audiences from diverse cultural groups. Hull and

Katz (2006) define this kind of self that is represented as "storied selves" (p. 45) based on who the presenters prefer to be and how they tend to relate to others in the present and future. This speaks to the notion that design is not a fixed combination of modal ensembles or choices. Rather, it is dynamic social process co-constructed by all of the relevant social beings, spaces and places.

To understand how youth take on their roles of becoming designers, analysis needs to be situated in particular settings and in specific social moments. Focused on one US project site, this chapter will offer illustration and analysis of the sequences (see Figure 4.1) of how the youth participants engaged, presented stories and performed the social activities involved in the particular "semiotic domains" (Gee, 2007, p. 19) of their digital storytelling with awareness of their global audiences. Figure 4.1 shows the four interrelated design processes: *forming stories*, *videoing selves*, *editing selves*, and *uploading selves*. The plural form of *selves* is to address the collaborative and dialogic feature of the youth engagement and social interactions in the GSB project. Activities and productions are not individually produced/performed, but rather negotiated by the group. Therefore, it shifts "digital selves" from an individual to a group perspective.

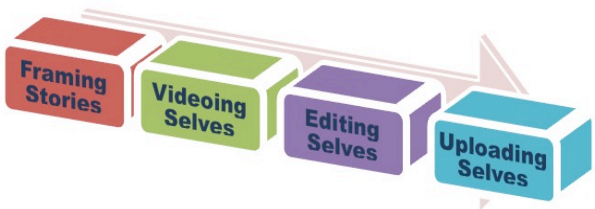


Figure 4.1 Multimodal Design of Digitalized Selves

Framing Digital Selves

The aim of the project is to offer youth spaces to share their lives and communities through digital storytelling and global communication. Thus, the first project procedure was to frame the stories about their lives that the youth group intended to share with their global peers. This step involved group discussions on potential topics for their digital story, and the ways of carrying out the videography plans. In order to frame the content and forms of their digital representation, the youth participants needed to make a series of design decisions collaboratively based on their willingness to share stories, interests of representation, available semiotic resources and prior cultural knowledge of themselves and their communities.

Guided by the facilitator's question, "If we are making a video for our friends, what do you think might be something that is important to share with our global peers?" (Fieldnotes, October 10, 2016), youth were engaged to brainstorm the main topic for their video and ways of recording (see Figure 4.2).

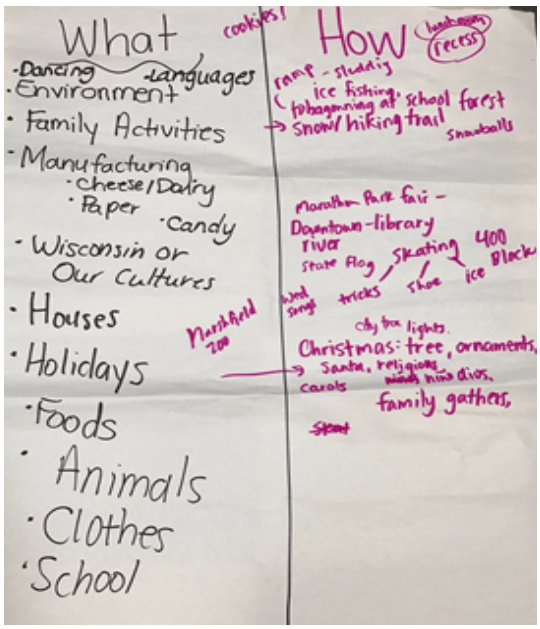


Figure 4.2 Poster of The Brainstormed Topics

From the poster, there were three main themes: local places (e.g., parks, downtown, school, snow/hiking trails, etc.), family activities (e.g., family gathering, etc.), and cultural artifacts (e.g., Christmas trees, ornament, Santa and lights, foods, dancing, etc.). The focal topics for the children's storytelling were not given by an official authority, but were collaboratively constructed by the youth with a generalized transpositional consideration of what might be interesting to their global audiences.

By the end of the year, two videos (*Wintertown Downtown Tour* and *Our School*) were produced and shared on the project website as the final digital productions that the youth felt best represented their lives and communities, and a third one (*Local State Park*) was still in production. When talking about how to achieve their videoing goals, the group recognized their available resources, including digital devices, the school transportation facility and their cultural communities, that they could access. For instance, Sophia suggested, "We can go to get on a bus and go to a community and record what we see." (Fieldnotes, October 10, 2016) Michael added, "We can take iPads back home for short video clips." (Fieldnotes, October 10, 2016). The following excerpt shows the group's reception of why these topics were important for them to record and share with their global peers.

> Researcher: What did you record this year?
>
> Michael: We recorded like the R. Mountain trip, Um, downtown and also recorded school things.
>
> Ms. Miller: Why did you choose those topics, why did you think those were important to do a video on?
>
> Sophia: Because it is part of our city in Wintertown.
>
> Ms. Miller: For you all here, why do you think that was an important thing to showcase? Why did you want to share about those things?
>
> Emma: So, they would know how it looks like in our city, and our school, how our schools look like in different places.

> Researcher: Wow! That's interesting.
>
> Michael: I've been here for a year. There is an idea sheet (see Figure 4.2) where we put down our ideas and we had lots of ideas like downtown and stuff like that. So those could do that. Because they probably don't know about the United States in a small town.
>
> Ms. Miller: Especially Wintertown, right.
> Michael: Yes. Wintertown. Because it is kind of a small city compared to the bigger cities.
> (Wintertown Group Interview Transcripts, May 8, 2017)

In the above excerpt, the group stressed that they recorded these topics for their global peers because "it is part of our city" and "they (global peers) probably don't know about United States in a small town." Through showing videos including their downtown life, they expected their global audiences "would know how it looks like in our city, and our school, and how our school look like in different places." It signals children's awareness of their potential audiences who they perceive not to know much about them and their cultural worlds, and who would be interested in watching the topics they selected to present. It signals children's recognition of the possible diverse ways of living in the world and their desire to share their ways of living to contribute to potential global understanding and communication.

Videoing Selves

The second procedure was to be physically present in the recording places and digitally represent the sense designed by the group in the video framing process described above. In order to conduct the video design process, the youth participants needed to discuss the shooting angle, specific locations for videography, other representational modes used in the video, and the group cooperation model. This requires multidirectional modal assemblage and transformation across people, places, sound, lights, color, and spaces. For example, in the first video (*Wintertown Downtown Tour*), children represented their downtown by

showing the Christmas lights, Christmas pine trees, the snow, buildings, McDonalds, and relevant information about those images. They inserted subtitles, images, sounds, music, speech, and so on in their digital stories to share their unique view of the city. The video ultimately started with a black screen with white subtitle "WELCOME TO WINTERTOWN, WISCONSIN" and the *Cup Song* performed by Emma, Jacob and Emily as background sound. Standing along the downtown street, the group took turns to introduce themselves, "We are international. We are here in downtown for representing our city. Although they aren't all classmates, we are all working together… This is our first video. We hope to share with other people and other different countries. We communicate with everyone." (Ibid; Video Transcription, March 13, 2017). The second scenario (see Figure 4.3) transitioned to a McDonalds restaurant where Luna held a cup of hot chocolate and introduced the "common drink" (Fieldnotes, December 12, 2016) they drank in winter "to keep our body warm" (Video Transcription, March 13, 2017).

Figure 4.3 Wintertown Downtown Tour Video Screen Shot

Figure 4.4 and the following fieldnotes reflect how youth positioned themselves as cultural videographers to video their cultural place, McDonalds, and its "famous drink" (Fieldnotes, December 12, 2016), hot chocolate, as part of their winter culture in the U.S., and how the translocal engagement shaped their representation of themselves. During the week prior to this meeting, the group had discussed and agreed to record the holiday lights, cupcake store, the snow, and city buildings in their *Downtown* video.

> The group meeting today starts with good news that our request of a school bus is approved by the school principal to take us to downtown today for the video recording. Everyone seems very excited for the trip. Ms. Miller says that she would treat people to hot chocolate in McDonald's as it is cold outside. While waiting for the hot chocolate, Sophia and Michael suggest we videotape the McDonald's and hot chocolate, as Michael says, "We should record this because it is very popular in the United States." Then, everyone agrees and Sophia holds the camera standing in the hallway of McDonald's. Michael and Luna point to the different spaces of McDonald's (areas of resting, ordering, soda picking, etc.) and discuss with Sophia of the recording angle and methods (e.g., holding the camera stable and move slowly following the speakers' movement). They then decide to record the McDonald's menu, soda machine, orange seats, cashier desk, hot chocolate and its different areas. Michael and Sophia talk in the video. When the camera switches to Luna who just gets her hot chocolate and wants to introduce it, Sophia begins to talk to Luna like a movie director (see Figure 4.4), "Three, two, one! Action!" Luna holds her hot chocolate talking to the camera, "This is what people like to drink in the winter to keep themselves warm. It is called hot chocolate." (Fieldnotes, December 12, 2016)

Figure 4.4 Video Recording in McDonald's

From the excerpt above, there are three points that are worthy of discussion. First, the quote "Three, two, one, action!" called by Sophia and Luna mediates their agency and engagement in video making, which signals how the youth participants viewed themselves as videographers and digital storytellers. It is notable that the signs of engagement signal their orchestration of speech, images, objects, movement, sounds and gestures to digitally show how people use the space of McDonalds' for different social functions, including resting, ordering, purchasing, dining, meeting and so on. One of its drinks, hot chocolate, was videoed as a cultural icon that is "very popular in the United States" and "common in winter" (Video Transcription, March 13, 2017). The fast food restaurant and its featured drink were considered typical in and representative of their downtown life with a generalized consideration of their potential audiences, as Luna emphasized, "it is probably not popular in other places" (Fieldnotes, December 12, 2016). Second, the inclusion of McDonalds' in their video became an emergent cultural design, which occurred while the group physically interacted with the place (McDonald's) by being treated for hot chocolate. For these youth, McDonald's played a significant role, establishing boundaries, which includes themselves as those who share this cultural icon and excludes others who they imagine do not.

Third, the participants' engagement in discussing shooting angles and recording skills (e.g., "hold the camera stable and move slowly following the speakers' movement") were shaped by the video makers' particular designs of the video scenes, their sense of inclusion and exclusion and their videography skills. The video might be produced differently by a different video filmmaker who moved the camera in different angles, and by speakers who presented different speech (e.g., language, tones, speed, etc.) in the recording. It speaks to the

notion that videoing is culturally shaped for the designers' distinct interests and technology skills. In summary, all of the four perspectives discussed above reveal the children's role as active cultural knowledge designers. In this instance, the youth designers drew on their semiotic resources of cultural models of McDonalds, winter, movie making, and other cultural scripts to perform the act of movie-making.

Editing Digitalized Selves

After collecting all of the artifacts of their digital story, including video clips, photographs and audio recordings, the next step was to assemble these multimodal artifacts together and edit them into an integrated video in iMovie. In this process, the youth group needed to use the movie editing software to digitally redesign their story across different modalities offered by the available digital and physical spaces, including language, image, sounds, video, speech, gestures, music, and technologically mediated actions.

Wintertown Downtown Tour video editing

The following fieldnotes show an example from my fieldnotes of how the youth video producers leveraged their semiotic resources to re-arrange the content and the modal ensembles of their Wintertown Downtown Tour video while making decisions about video editing.

> The group came around the computer and started editing the beginning part of the *Wintertown Downtown Tour* video through iMovie. Sophia sat in front of the computer. When asked what to put first in the video, Sophia pointed to the working space of iMovie where it shows the video clip of the group discussion and said, "The last part (where the group introduced themselves). I think we should put the introductory part at the beginning." Sophia tried to move the last part of the clips to the beginning in the iMovie working space but she did not know how to do that so she asked me to show her how to copy, paste and undo the action in iMovie. I showed her by pressing command and C, V, Z on the keyboard. Ms. Miller reminded the group, "So, we have the lights Grand Theatre,

> the trees and the building, which do we put first? What do we want to put next after 400 Block (a street sign)?" Jacob said, "The light thing." Sophia added by pointing to the iMovie screen (see Figure 4.5), "I think we should put everything outside together, and when we were inside of McDonald, we should put that at the end. In that way, it goes in parts." Ms. Miller affirmed Sophia's suggestion, "OK. I see. You want to do all inside and then outside." Ms. Miller asked Sophia to move the video clips on the computer. Then, Sophia used the mouse and keyboard shortcuts I showed her to move the video clips. (Fieldnotes, February 13, 2017).

Figure 4.5 Video Editing- Sophia Pointing To The iMovie Screen

The excerpt above shows how the video editors made decisions on re-arranging the modal choices (moving images, video clips) and content structure, and their technological practices. In order to implement these semiotic activities, they needed to invest in their available resources, including the "internal grammars" (Gee, 2007, p. 28) of video editing through iMovie and external support from the adult facilitators (Ms. Miller and myself) to redesign the digital story that was to represent their everyday life. By internal grammar, Gee refers to the "principles and patterns in term of which one can recognize what is and what is not acceptable or typical content in a semiotic domain." (p. 30). The excerpt reflects children's ongoing knowledge development of the internal grammars of digital stories in order to leverage what iMovie can offer them to rearrange their digital story, and their recognition of my expertise as technology support.

For instance, before moving the introductory part to the beginning of the video, they needed to know what options iMovie offered them, including: splitting video clips into two parts; cutting the introductory clip, then using keyboard shortcuts to drag it to the beginning, and so on. Meanwhile, Sophia's gesture of pointing, clicking and dragging reflected physical signs of engagement in the video editing design domain. Her bodily-embedded gesture and movement made the design meaning more explicit and direct, which complements what other modes, for instance speech, cannot afford in this particular circumstance. Her action seeking help from me shows her recognition of the available resources, which she can use to redesign the assembled digital story. All of the modal recognition and re-assemblage and signs of engagement evidenced signs of ongoing learning in the digitally mediated space, which in turn led to more complicated design activities involved in the project, for instance, video music editing and production.

Our School video music production and editing

The following section looks closely at how music editing and production evidenced the youth participants' signs of engagement and signs of learning as they were working on their second video production, *Our School*.

This video runs for 3 minute and 18 seconds. Youth introduced their school and displayed images of their school gate, science classroom, gym, school walls, music classroom, staff members, school cafeteria, school library, pre-K space and so on. After approximately 1 minute and 35 seconds, the scene transitions to a school wall in green, on which it showed multilingual texts saying, "Welcome", for which they orchestrated the subtitles, "There are the languages spoken. For example spanish hmong and english" (Video

Transcription, May 2, 2017), images and sounds (background music and speech "These languages are most spoken in our school. This is how we speak 'welcome' in Hmong - 'Zoo sab txais tog.' This is how we speak it in Spanish- 'Bienvenidos.' " [5](Video Transcription, May 2, 2017) to reflect the multilingual nature of their school life. The background music was produced by the youth themselves through GarageBand software and airdropped (see Figure 4.6) to the project computer to be integrated into their video through iMovie. At the end of the video, it shows scrolling subtitles in yellow (with black background), backgrounded by their speech and self-produced GarageBand music to indicate the digital storytellers' authorship of their music design and production,

> We made the music in the video using GarageBand. GarageBand allows you to compose music by yourself. People who contributed were Michael, Jimmy, Mario, May, and Jacob. Emma also did make some music.
> (Video Transcription, May 2, 2017)

It is notable that music was considered as a significant mode of self-representation in their *School* video. The following fieldnotes show how the video music was re-designed and re-edited in the local site through a series of group negotiations and collaborations. The music discussed and edited in the following excerpt was composed by two self-produced GarageBand music clips. Their discussion was focused on: 1) if the two pieces should be integrated into one; 2) how it sounds when integrating the two music pieces together in iMovie; 3) how to edit the integrated music to best fit the other modes of the video, for instance the speech and the content.

[5] This and all youth-produced texts are quoted verbatim in this study.

Jacob: (While listening to the new music pieces- see Figure 4.7, Jacob is shaking his body to follow the rhythm with a facial expression that indicates his enjoyment.) These two should be put together.
Emma: (Follows Jacob's suggestion and drags one of the music pieces under the other piece in the iMovie working space and replays the video clip with the mixed music effect.) (The group listens to it together.) Let's make it quieter and shorter. We can make the video quieter, so it doesn't sound noisy.
Me: I love the idea.
Emma: We got to fix this, as it is a mess. (She asks me how to undo her action in iMovie and I show her to press Command and Z on the keyboard. Emma shows me an appreciative smile.) Oh! Here we go! Now, let's listen to it. OK. Listen. (The group watches the working video again.) We should make this quieter because you know you guys are talking (in the video). Should we put this (points to Michael's speech in the video) louder?
Jacob: Yes.
Macy: It just feels like the music goes and it blends to something different.
Michael: Yes, it blends, it blends together. (Puts his hands together to show Macy that the two music blends together.)
Ms. Miller: OK, do you like it a little more blended?
Michael: Yes, as it blends. I think, yeah.
Ms. Miller: What do you think, Macy?
Michael: We should have a transition between those two (putting his hands apart in the air).
Macy: Yeah.
Michael: We can do collaboration. So, like we have both ideas and then we can combine them.

(Group Meeting Fieldnotes, April 17, 2017)

Figure 4.6 Michael And Jacob Airdropping Their Music Pieces To The Computer

Figure 4.7 Listening To The Music Pieces Together

From the excerpt, the group took the music editing as multimodal design spaces and themselves as active designers, as Michael said with excitement, "We are music producers!"

(Fieldnotes, April 17, 2017) By spaces, I mean both the physical space where the translocal communications and interactions take place, and the digital space where the digital editors interact with the displays of webpages and iMovie App.

In the music design spaces, signs of engagement across different modalities were notable. For example, Jacob's body shaking gesture, the group's music taste and opinions on the original music clips ("too loud, it blends"), Michael's hand waving gesture, and Emma's mouse dragging and interaction with the screen were used to display their engagement in making music redesign decisions. Second, the group not only put everyone's music together in the movie editing space, but they collaboratively provided feedback on the music produced by their peers. For instance, in order to make the music fit the video content (e.g., the speech by Michael and Luna in the video), they decreased the volume of the music and increased the volume of the speech. It also signals collaborative negotiation based on the group editors' taste in music that they thought would best match the story content without overpowering the speech in the video. The idea of collaboration was not only explicitly voiced by Mario but also was clearly reflected as the group was discussing how to "fix" the music and negotiating different opinions among their local peers. All of the signs of negotiation discussed above across different modalities and resources point to "the act of designing meaning, and to the actor/s doing the design work" (Hawkins, 2018, p. 61). It shows children's transmodal translocal engagement, which involves their "intertwining of semiotic resources", attending to "how resources interact with one another to form meaning different than what may be understood by the simple addition of their components and attributes." (Hawkins, 2018, p. 60).

Uploading Digitally Designed Selves

After the video editing and finalization, the produced videos were posted on the dedicated project website[6]. Through the act of uploading their digital stories on the web page, youth were able to navigate the project website, design a title for their story and a brief summary, and learn video uploading skills. Through the *design of the project website* (see Figure 4.8), web users can make navigation decisions on their own.

Figure 4.8 Global StoryBridges Website Home Page

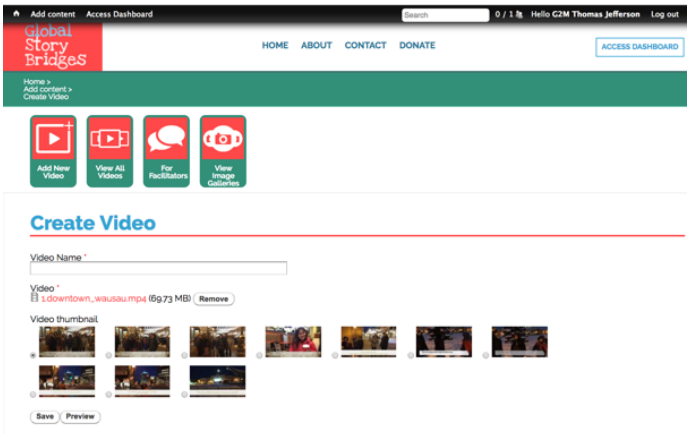
They can not only *read* but also *write* on the display, which expanded the modes of interactive acts, or *learners' design*. By learners' design on the online platform, I mean the ways in which web users interact with the display through leveraging different modalities of online engagement (e.g., searching, clicking, playing, pausing, etc.) based on their interests and prior knowledge of the web experience.

In order to upload their digital story on the website, the storytellers need to click on the 'ABOUT' button in dark blue on the top, which directs them to four different options in

[6] The link to the Global StoryBridges project website is http://www.globalstorybridges.com/

blue text boxes with symbols and language of the actions: Add New Video, View All Videos, For Facilitators, and View Image Galleries. By clicking on the 'Add New Video' icon, it directs the users to the video uploading page, in which the video uploaders need to type the name of their video, choose which file to upload from their desktop (with a limitation of the file type as mp4), and click on buttons of 'upload', 'preview' and 'save' to complete the act of video uploading.

When the group worked together to upload their first video, which involved a series of learners' design decisions. For instance, when asked what name they wanted to use for the video they were posting, Jacob suggested using the name of *Wintertown Downtown Tour* and others agreed to let Mario type. The linguistic forms were also noticed by Michael, "It's the title, so you have to do all in capitals." (Fieldnotes, March 13, 2017). After clicking on the icon for Upload, the web page automatically shows different 'Video Thumbnails' (see Figure 4.9) (screen shots from the video) as the possible preview images for their video. The group decided on the first one because "it includes everyone" (Fieldnotes, March, 13, 2017). Through this step, the translocal design of the digitalized story was posted on the project website.



4.9 Video Uploading Webpage

Discussion

Through analyzing the four interrelated design processes, I claim that digital storytelling as a series of multimodal (re)design processes is a complex system. It involves transformations of visible, audible and tangible modal ensembles, as the project youth framed, designed, edited, and digitally posting their storied selves. It involves ongoing participation, translocal engagement and negotiation in learning and in learners' identity re-formation in this situated environment. Youth's multimodal ways of participation and interaction in turn contributed to reshaping their learning environment, in which they became involved in semiotic changes of resources and modal ensembles, and of their sense of selves.

In social learning theories, as Vygotsky (1962) indicates, learning happens when people interact with each other in particular social and cultural contexts. The digital storytelling design process within the collaborative structure of the project requires intensive social interactions among the translocal video makers, and interactivity between the participants and the place and space. This shifts the sites of authority of knowledge towards learners themselves. Learning in this way, as Bezemer and Jewitt (2010) recognize, shifts from structured towards less structured principles. This is reflected by the GSB youth in their digital storytelling activities discussed above, and in their reflexive interviews and artifacts, all of which evidence signs of learning and "transformation of singular print-based literacy into hyphenated, plural, or multiple literacies that acknowledge the diversity of information sources and media that people access, negotiate, and redeploy in everyday contexts" (Bezemer & Jewitt, 2010, p. 398). The following sections, integrating the previous analyses of the four video design sequences and drawing from the youth group's reflective artifacts

and interviews, offer a conclusive analysis of the translocal digital storytelling youth engaged in from three viewpoints.

Interweaving modal affordances as transformative learning

In the previous sections, I have discussed how the youth digital storytellers in the local project site, through the four sequencing processes, designed and redesigned their video across different modalities, including speech, text, gesture, music, sound, image and movement, and semiotic resources in the offline space. It shows that every mode involved in these acts of (re)design has its particular affordances. For instance, Sophia's "Action!" speech used to start the videography activity and her pointing gestures (see Figure 4.4 & 4.5) toward the iMovie screen for video editing offered different social functions of meaning making in the different design settings, which were interwoven together in the whole digital story design processes to explicitly express herself and interact with her peers. In another case, for instance, the multilingual representation of the school wall was co-constructed by multiple modes (e.g., language, image, sound, music, subtitle, speech, etc.), each of which has its partial affordances and complements the meaning potentials of the others.

These trans-modal engagements evidenced the youth video designers' *transformative learning*, which involved a series of "semiotic change" (see Bezemer and Kress, 2016, p. 52, 53, following Paolo Freire, 1970), transforming the youth group and their resource integration in multi-layered design spaces. By transformative learning in this chapter, particularly discussing the local digital engagement, I stress not only the meaning making process mediated by the interaction of different modal ensembles chosen by the youth for self-representation and translocal communication, but also the social practices afforded by

interactivity (as discussed in the previous sections) between the learner and the display, the computer keyboard, the mouse, and the Apps (e.g., GarageBand, iMovie). Both the modal interactivity and technological interactivity are cultural, as discussed in the video making, editing and uploading sections, because they are shaped by the youth participants' distinct interests, prior knowledge and technological skills. This speaks to the notion of multi/transmodal design that highlights the interactive features of meaning making in technologically mediated spaces, where the youth video makers actively played their agentive roles as cultural photo/videographers, actors, music producers, video makers, website navigators, and story uploaders. Meanings were not only made and presented by the meaning assemblages, but also were interacted, communicated, negotiated and transformed among the youth as they worked together in the local site as a group.

Translocal digital design as reconstruction of learners' identities

The multiple social roles played by the youth participants in the digital storytelling domains co-constructed their multi-layered designers' and learners' identities as they were engaged in the four-sequence design processes discussed above. This was also reflected in a reflective drawing (see Figure 4.10 below) by Jacob, a Hmong male participant. In Jacob's drawing, he drew himself as a changing human being who "got smarter" through participating in the digital story making program. In an informal chat with him (Fieldnotes, May 17, 2017), Jacob explained to me that the rectangle represented a door and the door was the Global StoryBridges project he was involved in during the academic year. The circles within the big circles at the bottom of the paper represented his new knowledge of the world where he and others live and interact with each other through the "door". Before working in

the project, he thought he "would never do things like making movies and talking to people all over the world"; while "being in the Global Story bridges has changed me from I first began" and he thought his changing-self ended up becoming "smarter." In the drawing, Jacob also put arrows to intuitively show his changing identity and made a bubble quote "I got smarter" to make the meaning more explicit.

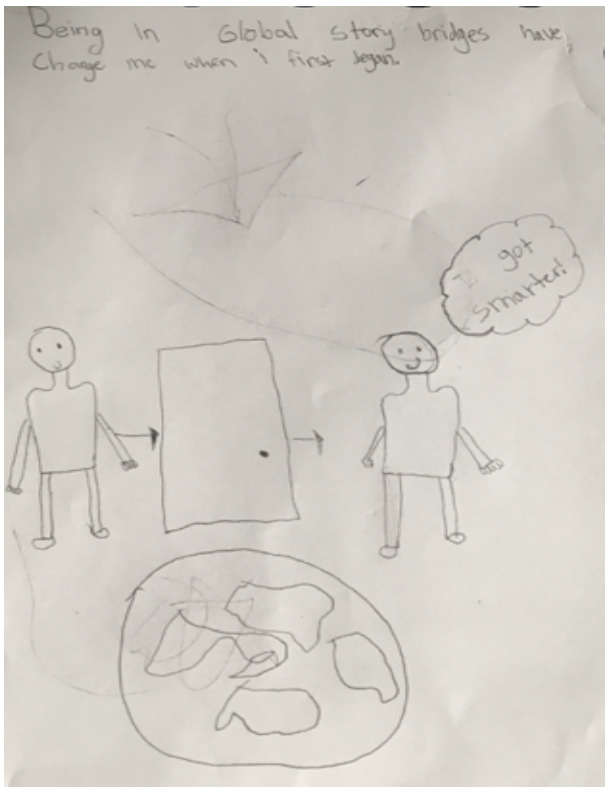


Figure 4.10 Jacob's Drawing

The self-reflective drawing indicates that children can come to see themselves as intelligent and successful learners as they practice their multiple digital storyteller roles, despite the positions they are placed in (for instance, as non-native speakers, as deficient learners) by schools and society. When they are offered the "door", they can be empowered to reconstruct their sense of "changing" selves who expand their knowledge about translocal others, local places and technology skills, and of themselves, as the group stressed in a reflective video of

their Global StoryBridges experience that they created for their new members for the following year:

> Michael: Global StoryBridges makes us meet new friends as some of the people in GSB, is, are mostly, probably from a different grade… They don't really hang out with. You can also learn useful skills of different Apps, like iMovie. Like, maybe on your iPad, it's like an App where you can, like, put video clips together, and you can put songs there. If you know how to use Garage Band, you can combine those.
>
> Mario: We actually like this because it's cool… We have lots of fun and lots of field trips, oh, not as many, we only got two or three but they are really fun.
> (Video Recording Transcript, June 5, 2017)

The transcript above reflects the youth participants' perception of the learning environment, co-constructed by the project designer, project participants, places and spaces, as a "cool" space for experiencing and learning about the "new" world. For them, learning should not be a boring term, but be a "cool" and "really fun" experience in which they are able to use modes other than those typically privileged in schools, for instance English language in meaning making; instead, they are able to use all of the resources at their command to become empowered and valued as active learners.

Fostering "fun" and "safe" design spaces for learning

All of the reflective artifacts and quotes by the youth participants from different project sites have challenged me to rethink the role of multimodal design in youth's learning, and what spaces can be offered to these youth so that they feel safe as they co-construct their life stories and sense of selves with their peers and relevant others.

For example, it was at the beginning of the year when Mario shared his concern of being judged if he could not do a good job in this program, "Is this going in a record? Will our teacher see it and know if we are doing well here?" (Fieldnotes, October 10, 2016). Later, at the end of the academic year, Mario and his local peers articulated their project experience

as “no pain involved” (Fieldnotes, June 5, 2017), and as having a positive impact on their future careers. “Global StoryBridges can also help with our future jobs, like translating words, or moving from country to country.” Furthermore, when asked what they gained from the project, a female Ugandan participate, who I met and interviewed in a Uganda project site where non-project access to technologically and digitally mediated representation and communication is limited, replied to me, “This project makes us feel confident. So, briefly, it lets me not to fear anything. I can ask them questions I like, and they answer!” (Interview, Uganda, June 27, 2017).

These reflective quotes urge me to question: When did they feel that they were not allowed to ask questions and that no one answered them if they asked? What pain had been imposed on them? What made them fear, and took away their feelings of confidence, security and belonging? Then, what kind of space can be offered for these emergent plurilingual youth to safely and confidently form new knowledge, sense of selves, and ways of relating to the world, using multiple modes of their preference?

Norton (2000) argues that there has to be a transitioning space for language learners to practice speaking out and being heard before they do so in school and society. By transitioning space, Norton means a space where students can have a lower affective filter (Krashen, 1981, 1982), which comprises learners’ investment and self-confidence. Considering the increasingly diverse features of youth and rapid development of technology and digital media in the 21st century, I argue that it is urgent for educators, schools and scholars to create *multimodal design spaces* with high level of openness, flexibility and comfort for our learners, in which they are considered as productive designers and native

communicators, and in which they are empowered to use their preferred modalities and access more available resources to design and to learn. This is particularly significant for emergent plurilingual youth, whose modes of communication are viewed as less powerful in school and society. However, we need to create and develop a design system that systematically describes what do and how we do it with and in multimodal design (spaces) for these youth to embrace more interactive social participation and collaboration, particularly when our increasingly diverse learners meet new-age globalization, informationalization, digitalization, and hybridization.

Chapter 5

Multimodal Redesign Through Online Transnational Communication

This chapter investigates how youth's understandings of digitalized stories were ongoingly co-constructed and mobilized through post-filmmaking engagement, including video watching, group discussion and online communication. The first four design procedures discussed in the previous chapter delved into the multimodal design and production process in the local settings, which offers detailed background for the analysis in this chapter at a transnational level.

According to Blommaert and Donckt (2002), while globalization offers opportunities and challenges to research, "mobility should be made a central concern of social-scientific analysis" (p. 147). By analyzing mobility in sociocultural research, they call for analysis from an ethnographic perspective to "decod(e) the lived experiences of people" (p. 147) and:

> to address the fact that people use cultural instruments—language, art, music—primarily to move around, not to stay in one place. Furthermore, it may be that the value and function of cultural instruments derive precisely from their potential to allow their users to move around, to get from one (geographical and/or social) space to another. (p. 147)

Their analysis of a Tanzanian novel seems to confirm that we need to find ways to gain better understanding of how globalization offers spaces for our learners to mobilize or not mobilize their modes of cultural engagement and negotiation in their everyday life, especially for those who are marginalized and whose modes of meaning making have been largely ignored by schools and society. Wachowich and Scobie (2010) conducted cyber-fieldwork investigating Inuit youth's digital storytelling practices on YouTube. Their research indicates that the online platforms offered flexible spaces for Inuit youth to "bypass established rules of

cultural representation and offer more multivalent, dialogical, perplexing, and provocative expressions of Inuit selfhood" compared to "those that have been produced and circulated by more mainstream, dominant institutions in the past" (p. 84). Through uploading and sharing their designed digital selves, the Inuit youth were able to mobilize the public social imagination of who they are in creation of new social worlds, which invite those who don't know much about them to be involved in co-constructing their public images. Thus, as more digital platforms facilitated by globalization are emerging and becoming more available for youth, digitally mediated representation and transnational communication have turned out to be powerful modes of transcultural communication across borders, places, time, and spaces (Adami, 2013; Lam, 2000, 2006; Luke, 2003; Hull, 2003). In digital settings, youth become able to not only read and write but also watch, listen, and touch the multimodal texts embedded in the new spaces, which involves different design practices and elements (see the six design elements articulated by The New London Group, 1996) to mobilize modalities, resources, identities, ideologies, and spaces. Thus, digital spaces build more possibilities for youth to design their engagement and learning as more modes of representation and communication become available for digital generation.

Gutiérrez's (2008) notion of "learning as movement" seems to confirm analysis of movement as a helpful tool to analyze how youth learn across borders, space, resources, and different modalities. Movement not only means geographical changes youth experience with their families in a new country, but also semiotic mobility and transcontextual movement as they become involved in digitally mediated engagement. Following Halliday's (1978) social

semiotic theory of communication, the two types of movement are intertwined to serve as sets of resources for meaning making.

In this project, through transnational communication, youth in the Wintertown project site encountered cultural similarities and differences as they watched and responded to each other's stories. Through participating in sets of project activities, these youth engaged in the movement of knowledge, resources, ideologies, and modalities as they communicated their understandings of cultural signs (modes) designed by their global peers and transcontextualized them across transnational settings. This chapter will discuss what signs or modes were recognized and mobilized and what were not, and by whom, as youth co-designed the spaces where communication and movement occurred. Multimodal scholars like Bezemer and Kress (2016), following Halliday's systematic functional linguistic theories, argue, "Learning is evidenced in every sign produced, not by a pre-defined, selective subset of signs." (p. 3) They analyzed a series of multimodal designs and productions in various social settings, for instance, medical school, classrooms, YouTube instructional videos, and so on, to develop a theory of social semiotic multimodality that shows how modal movement, communication and learning are interlinked. They view "communication as learning, learning as communication." This chapter, from a transnational multimodal perspective, explores how the framework of communication and movement evidenced learning in the digitally mediated space as the Wintertown youth storytellers re/co-designed their stories with the global peers, and reshaped their understandings of others' stories.

Available Designs as Resources for Transnational Engagement

Before discussing how the Wintertown Youth redesigned their cultural understandings through transnational communication, it is worthwhile to look at the resources available to communicate with their global peers. Following the New London Group (1996), the process of design involves three semiotic aspects: available design (as mixture of different semiotic resources for design), designing (as transformative and interactive semiotic activities) and the redesigned (as outcome of designing). The three design activities are not separated but interrelated with each other across different modalities and resources: linguistic design, visual design, audio design, gestural design, spatial design and other multimodal design. The metalanguage of design developed by the New London Group is helpful to analyze the transnational interaction and communication that occurred in this study to investigate: the available designs that were recognized or not recognized by the youth digital storytellers and their global audiences; youth investment in their available designs and participation in designing their transnational engagements, especially as they encountered cultural similarities and differences; how designs contributed to their communication and learning across time and space.

According to the New London Group, available designs are ensembles of different semiotic resources for the design process, such as social media, Internet, film, photography, and the configured space of "orders of discourse" (see Fairclough, 1995). As described in Chapter 3, the GSB project website is designed for youth participants from different sites to upload and share video stories, watch and comment on the posted videos and video chats, and navigate pages for reviewing, editing and responding. It offers different available design

resources for the youth to socially and culturally interact with their imagined audiences. First, let's look at the top section of the web page of one of the Wintertown video and chats posts (see Figure 5.1) as an example, which offers a series of interactive possibilities for web viewers.

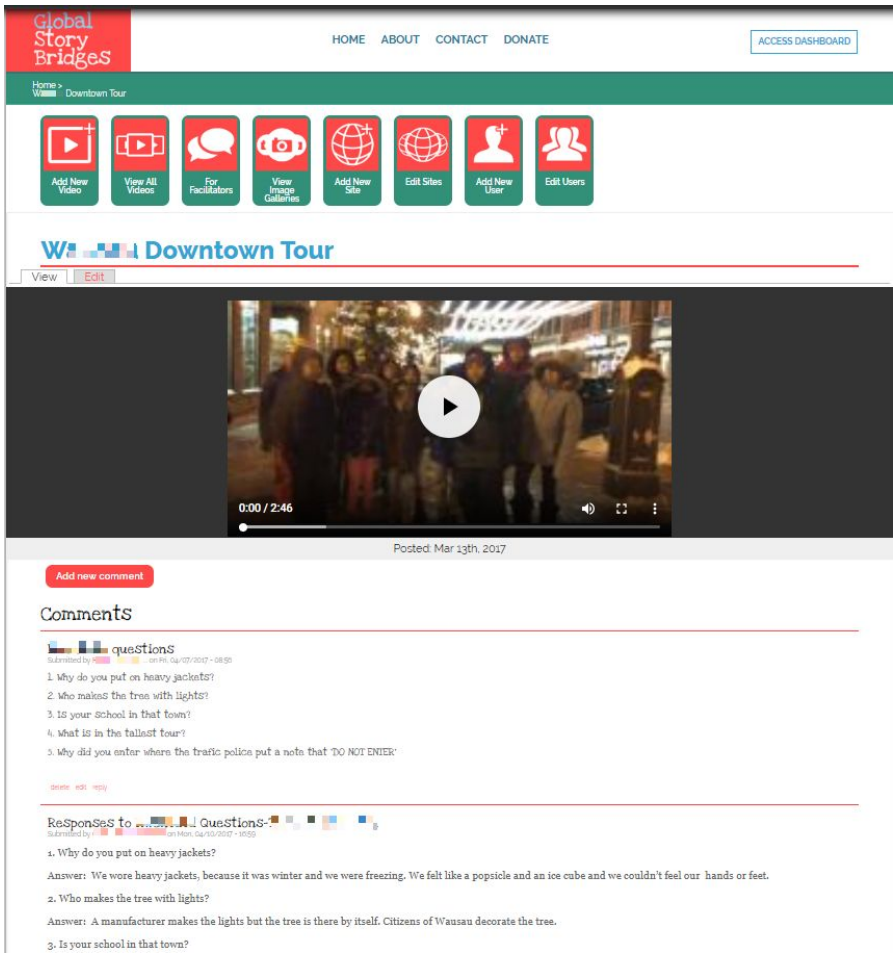


Figure 5.1 Screen Shot of Video and Chat Post Web Page

To watch a video, youth need to click on the play button on the video section. On the video screen, there are buttons for play/pause, volume, whole screen, and fast-forward. There are also different limits of authority for different website operations. For example, only those who posted the video can access the video editing section. Under the video section, there is a comment space for viewers to interact with the filmmakers and linked sites by typing in their

question subject and content. After a comment is posted, there will show options of delete (only for video makers), edit (only for video makers) and reply to the viewer of the posts, where the video makers and viewers can reply to the comments, which create spaces for ongoing conversations among the participants. It will also automatically show the time, date, and authors of the posts. All of these available designs signal the interactive features of the online space offered to the youth participants, requiring social actions across different communicative modalities for different functions. On the top of the page, it also shows various interactive signs for viewing and editing new video content, facilitators' communication, sites' image galleries and so on. These signs are designed in red and green with symbols for clicking, chatting and other actions that lead web users to explicitly understand the operation options on the webpage.

It is notable that all of the interactive signs are assembled to constitute the available design of the project's online space. The interactive signs not only provide opportunities for the web users to interact with the screen, but also to interact with other global beings behind the screen through the media. Adami (2013), following Halliday's metafunctions theories (1978), used a social semiotic approach to develop analysis of interactive sites and signs through analyzing website interactivity. According to Adami, digital platforms afford interactivity between the website users and the display, the keyboard, the mouse, and the social media, which offers users various "actional possibilities" (p. 12) to not only produce the content, but also to agentively design their pathways of how the content is produced and interacted with. As Adami concludes, "Links, buttons, icons and fields in digital texts are not only signs on a page to be interpreted, but also the foremost sites for action." (p. 16).

Meanwhile, the fields, for instance the video and the comments shown in Figure 5.1, reshape the youth participants' social roles and facilitate their relations with their global peers. For example, through clicking on the play button in the video section, the video viewers were not only able to watch the cultural digital stories presented by the video makers, but also were invited to join the global dialogue and mobilize their imagination of the world presented through responding to the video chat posts online.

However, it is also noticeable that the design of the project website offers constraints. For example, there is a limit for the video size (it must be less than 100 MB); thus, it requires each site to compress their videos with lower resolution. Another example is that when adding new comments, some communicative modes, for instance, texts and images, are privileged, while other modes, for instance sounds, are restricted. In addition, the typing mode is limited to letters, which drew my attention when the Wintertown youth wanted to type Emoji faces and flags as part of their responses but realized they were restricted on the project website.

This leads to a complicated concern about modal access and privilege among the global project sites. As was illustrated in the third chapter, it was only in the Wintertown site where youth were provided iPads by the school, with which they were able to input Emojis and connect their iPads with the Padlet App through the smart board, and copy and paste their multiple texts to the comment field. However, when they tried to submit it to the website, the website was not designed to show their smiling faces or other visual signs they hoped to include. Part of the meanings they aimed to represent online was lost, and part of their communicative repertoires was denied. Meanwhile, it seems that "equal access" was

provided to all sites by not allowing Emoji texts; and English as the linguistic mode of online chat posting seems also to privilege one language over the others that youth use in their daily lives (although local languages appear in some of the GSB digital stories). This, in some way, denies access to multilingual and multimodal communications on the project website. This propelled me to rethink the affordances of available designs and unavailable designs in the project from different lenses. By affordances, following Bezemer and Kress (2016), I mean both "the potentials and constraints for meaning making" (p. 23) of a mode or modal complexes for different social functions, with critical consideration of how access and privilege impact affordances of available designs in the particular social settings.

In discussing the affordances of available design in this project, we need to question: what do we mean by creating an equal space for youth to design their stories, to communicate with others, and to learn in digitally mediated spaces? Shall we confine the resources of the "more privileged" to make it seemingly fair, for instance, by not allowing Emoji input on the website in all sites since all will not be familiar with or have access to them? Is there a way to equalize meaning-making resources so that all have access? These questions not only focus on material but also cultural resources for the youth designers. Meanings of emojis are also culturally embedded, albeit are taken up in a number of locations globally. However, they will not be decipherable by all global participants, regardless of whether or not the website can support them.

Another question that arose was: what were other cultural resources that were available and visible for global communication and engagement? As theorized in the previous chapter, the notion of design highlights the interactive features of meaning making

and sign makers' engagement in presentation and interaction. When sign makers are designing something, they draw on their interests in learning, their technical, communicative and representational skills, and their life experiences and background, all of which are taken as their available designs from a diversity-as-resources perspective. In this project, in order to communicate with their audiences, the digital storytellers in Wintertown and other project sites need to draw on their technological, cultural, communicative, representative, and social knowledge and experience to contribute to the global dialogue, which also counts as their available designs. With access to and possession of the available design resources, youth in this project, through the process of designing, were able to immerse themselves "in meaningful practices within a community of learners" (New London Group, 1996, p. 22), carrying diverse knowledge, background and life experiences to critically frame their reflective and transformative practices from one cultural and social context to another, as we will see.

Youth's Reflective Drawings: Movement as Learning and Available Designs

The two reflective drawings (see Figure 5.2 & 5.3) by Mario and Luna well illuminated their participatory experience in local/global connections and transnational flows as they invested in their available designs to mobilize themselves and their global peers. In Mario's drawing, he drew a globe, on the surface of which he drew lines to show the different regions and places of the world. He also placed his figure standing at one side of the longest bridges, through which he was able to travel to the different places "connecting around the world" (quote from the drawing, May 15, 2017). He himself did not physically travel to the places he drew on the globe, however, from the drawing, he showed that the GSB project

offered him bridges for mobility, to connect with unknown worlds. Another reflective drawing by Luna (see Figure 5.3) well explained how the mobilization occurred through making and watching videos and responding to the video representations.

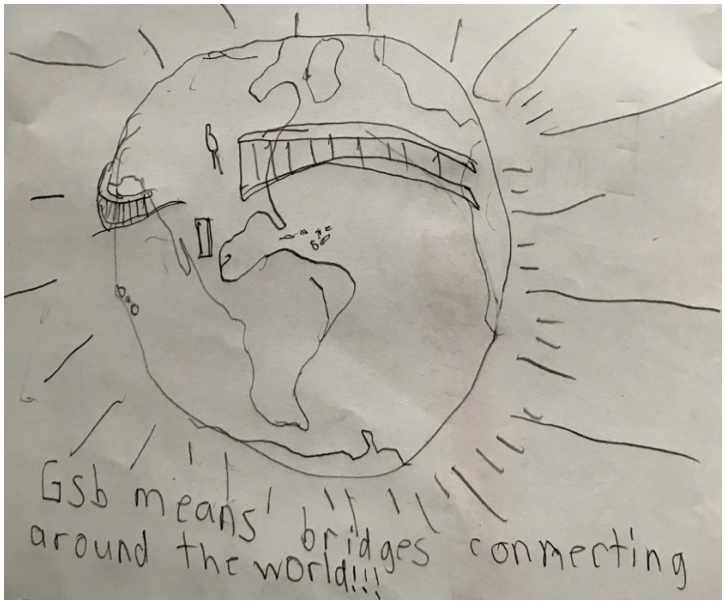


Figure 5.2 Mario's Drawing

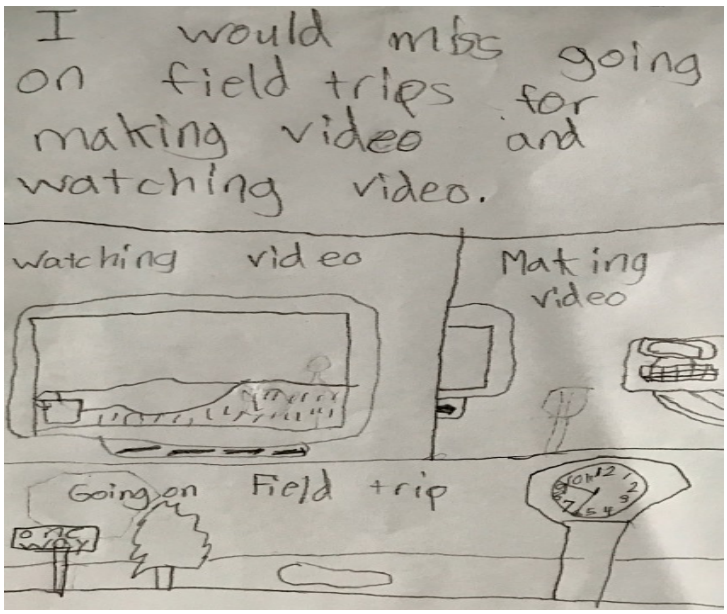


Figure 5.3 Luna's Drawing

In her drawing, Luna used lines to divide her reflection into four portions: her emotional feeling after leaving the group, video making activity, video watching experience, and the local field trips she and her peers visited for film recording. It highlights the multiple designs and communication medias through with they represented their cultural worlds and global connections. Her feeling as stated in her reflection, "I would miss going on field trips for making video and watching video" (May 15, 2017) reflected her emotional connection with the places she visited and the digital story making and sharing process in which she was involved. In the last portion, she drew images of the city clock, tree, road and *one-way* road sign from their *Wintertown Downtown Tour* video to reflect her learning after re-watching their own video in response to comments by the other sites. In Luna's drawing, she did not draw images she watched from other sites but included the signs and symbols (e.g. *one-way* road sign, city clock, holiday trees) that she and her peers included, but had forgotten they did, in their *Downtown* video. Those cultural signs, as I will further discuss in the next section, for instance, the one-way road sign and heavy jackets in winter, became visible and notable when they received responses from the other sites.

Both drawings illustrated that the two Wintertown project youth perceived their digital story making and sharing experience as complicated, ongoing, participatory social processes, which involves sets of social and cultural movements and transformations of social semiotic resources. Inspired by Mario and Luna's artistic reflections, the following sections will provide an ethnographic perspective through detailed analysis of two videos and responses, showing the affordances of the online transnational multimodal engagement between the Wintertown youth and their global peers. The first video, Wintertown

Downtown Tour, was made by the Wintertown youth group and responded to by other project sites. The second video, Our Activities, was made and posted by the Mingtian Project site in China, with which the Wintertown youth were highly engaged throughout the year. The two videos were interrelated, as the transnational communication and transcontextual redesigning occurred among the youth participants across different project sites.

Redesigning: *"Why did you enter where the trafic police put a note that DO NOT ENTER?[7]"*

The *Wintertown Downtown Tour* video made by the U.S. youth presented how city life looks and feels in the month of November in Wisconsin. It included a fast food restaurant and its featured drink, hot chocolate, which they considered as typical in their city life. As Luna explained, "They may not know what hot chocolate is and where people get fast food and drinks here" (Fieldnotes, March 13, 2017). They assumed they would be asked questions about their *Western* fast food restaurant culture by the other sites. However, comments from the other sites posted on the project website did not include topics regarding their "typical"—typical from their Western perspective— cultural model but showed their peers' interest in the one-way road sign, clothing code in winter (while in Uganda there is no winter), city holiday lights, and buildings. Some of these signs and designs, for instance the one-way road sign and the winter season and its dress code, were taken as meaningless designs by the Wintertown video makers because they were not included on purpose, but rather included as unnoticed background in the video. However, by receiving questions that reflected interest in these signs by the other project sites, it became a meaningful component

[7] This and all youth-produced texts are quoted verbatim in this study.

of design. The following excerpt shows the first video chat posts on the *Wintertown Downtown Tour* Video, posted by the Uganda site.

1. Why do you put on heavy jackets?
2. Who makes the tree with lights?
3. Is your school in hat town?
4. What is in the tallest tour?
5. Why did you enter where the trafic police put a note that 'DO NOT ENTER'

(GSB Website Video Chat Posts, *Wintertown Downtown Tour* Video, April 7, 2017)

Question #5, "Why did you enter where the traffic police put a note that 'DO NOT ENTER'" drew the group's attention, which was also shown in the last portion of Luna's drawing, in which she drew a one-way road sign as the most significant cultural artifact she perceived after the transnational online interaction. The following fieldnotes show how the road sign was a meaningless design at first because none of the video makers noticed they included it in their story, and how it became a meaningful design feature after they received the textual response from the Uganda site.

> The youth group look at the comments and don't remember where they put the traffic signs in the video. They decide to replay the video to relocate the traffic sign noticed by the Ugandan youth. While re-watching their *Downtown* video, Ms. Miller asks the group, "Do you see any sign there?" Students shake their heads and say "No." They seem to be very disappointed for not seeing the sign from their *Downtown* video. It is until when it plays the last 10 seconds that it shows a group photo in front of a "DO NOT ENTER" road sign. Emma (sitting on her seat), Jessie and Ms. Miller (standing up) point towards the screen with excitement, "Oh, right there!" (see Figure 5.4 below showing the pointing gesture) Ms. Miller asks the group, "OK, why is that sign there?" Luna responds, "I know. Because it is only one way (weaving hand to show the direction), but the people can enter it but it's the car that way they don't mess up." Ms. Miller says, "Right. Because we have one-way streets in Wintertown. It's various, so, which means cars can only go down in a certain direction, and then" Luna adds onto to Ms. Miller's point, "and people can." Ms. Miller complements, "And, then across traffic, right? Because they made it so that it's a safer area to travel. I don't know what the exact reason is, but good question." (Fieldnotes, March 13, 2017)

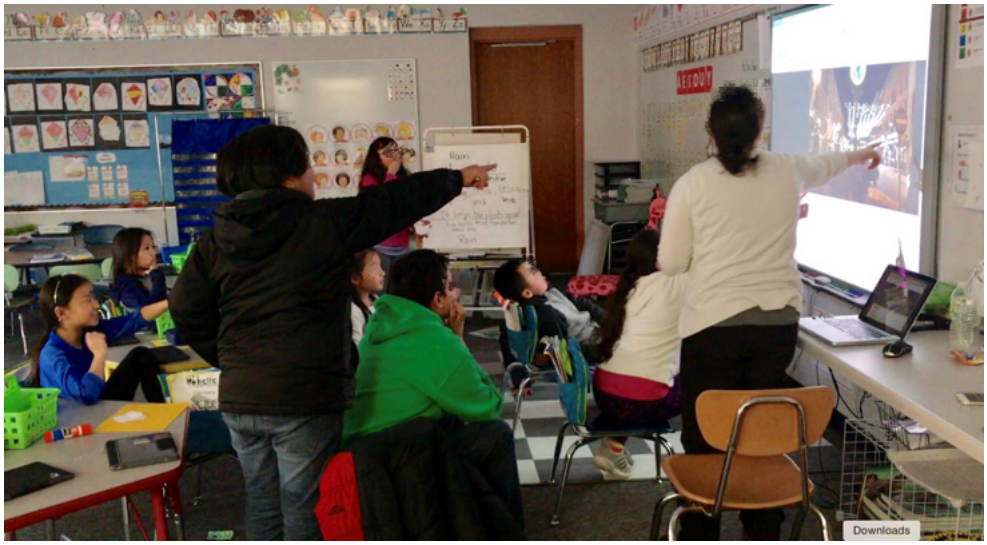


Figure 5.4 Pointing Towards the *DO-NOT-ENTER* Road Sign

From the fieldnotes, it is noticeable that the 'DO NOT ENTER' road sign became an unexpected, emergent cultural meaning carrier because of the interest from the Ugandan youth. Through posting their questions on the website, their interest in the road sign was shared with the U.S. youth who accidently represented, but did not recognize, the traffic signs in their video. This speaks to Agar's argument that "culture becomes visible only when differences appear with reference to a newcomer, an outsider who comes into contact with it" (2006, p. 5).

"The process of shaping emergent meaning" is defined as (re)designing activity, according to the New London Group, which "involves re-presentation and reconceptualization" (1996, p. 14). Miss Miller's quotes at the end of the group discussion expanded ideas and confirmed the youth participants' transcontextual and transcultural engagement,

> So, some of the things that we take for granted around us that we just think sort of like normal, it's something that is very interesting in another place because they might not see signs like that or they may have something different, I wonder. (Fieldnotes, March 13, 2017)

Secondly, through sets of social activities utilizing modes and movements, for instance replaying, watching, sign searching, pointing, discussing, and so on, the Wintertown youth "revisit(ed) the contexts" (Lambert, 2010, p. 22) and "revisit(ed) the already known" (Medina, 2010, p. 42) of the *DO-NOT-ENTER* traffic sign in the local site as an emergent redesigning process. It challenged the Wintertown youth participants to revisit and rethink social semiotic resources, for instance, the road sign and the winter season, which were not 'normal' or 'typical' in other cultural worlds. It was also interesting to notice that when asked to explain why they entered the street where the sign showed '*DO NOT ENTER'*, the group drew on their knowledge of traffic rules and related the '*DO NOT ENTER*' sign with 'one-way' road signs to explain that signs have different regulatory rules for vehicles and people. They replied to the Ugandan comments and received additional response:

> Uganda: Why did you enter where the trafic police put a note that 'DO NOT ENTER'
>
> U.S.: "DO NOT ENTER" is warning for cars to not enter because some roads are one way. Cars can not enter but people go through. Does "do not enter" mean something else where you live?
>
> Uganda: Yes 'do not enter' is tough in trafic here to every one and things unless it is acompanied by limits. e.g. no entry for vehcles etc
>
> (GSB Website Video Chat Post, April 7, 2017 - May 13, 2017)

The chat posts above show the process of how the youth participants from both sites invested in the available designs of their cultural understanding of traffic signs to co-shape the emergent meaning of the cultural sign and transcontextualize it in this transnational setting. I myself as a researcher visited one of the Ugandan sites in the summer of 2017 with my researcher's imagination of what traffic signs look like in Uganda. In my observations in the schools, cities and villages I visited, I did not see road signs along the streets where the elementary school students walked. From my curiosity, I asked multiple taxi drivers with

whom I took rides in Uganda why road signs were not seen; the answers were "… we don't need that. Rules in Uganda are crazy…" (Informal chats, July 2017) just as the project youth described their traffic features as "tough" ones. However, what do "tough traffic" and "crazy traffic" mean to the Ugandan and the Wintertown youth? The conversation between the taxi driver and me, the Ugandan and the Wintertown youth, and the observation I gained from my trip to Uganda regarding traffic signs, tell the complexity of how semiotic resources can or cannot mobilize across people, time and spaces.

The chat posts above also signal the shift from representational design to communicative design. The posting of the video not only invites the other sites' participants to watch their digital representations, but also, given the available design of the website that allows online response posts, it offers a conversational invitation from the video makers towards their audiences, which includes both the presenters and viewers in global dialogue. The reverse question asked by the Wintertown youth as to the different meaning of the *DO-NOT-ENTER* sign and the answers provided by the Ugandan youth shifted the ownership of the cultural sign from the presenter side towards a bidirectional one involving both the presenters and the audience. We can see, through the online communication, that youth from both sites negotiated and redesigned their understandings of traffic signs as complicated, plural cultural carriers were situated in different cultural and social settings. The transnational design space offered both the presenters and viewers opportunities to invite each other to bring in their diverse resources as they encountered differences, negotiated meanings, and transformed mutual understandings, which in turn becomes a new, shared available design resource for future interaction and communication. According to New London Group (1996),

all of the design-relevant processes in turn have transformed and remade the designers who are actively involved in sharing their interests, life experiences, and semiotic resources.

We might question: what is the consequence? Would transnational communication help people understand each other, and each other's lives, across borders? Can cultural modes or models be mobilized through online communication for common understanding without people physically traveling across the borders? The answer might be that having the conversation is better than having no conversation, and is the first step in learning about and with each other. That is the starting point.

Redesigning: *"Now, I want to introduce Chinese Tang Poetry to you."*

The discussion of the road sign shows how the Wintertown youth re-watched and re-reflected on their own understanding of their cultural signs included in their digital stories, and how the sets of redesigning processes supported the youth to gain and negotiate new co-noticings and co-understandings of their cultural environments. This section provides examples of how the Wintertown youth perceived and responded to images of others digitally represented by their global peers.

A video made by the Mingtian youth showed a series of activities that they liked to do during their school recess and free time in their community in northwestern China, including reciting Tang poems, playing Chinese instrument (古箏 Guzheng), jumping rubber bands, and so on. In the "Tang poetry" section, a student began by introducing himself as a ten-year old fifth grade student in an elementary school in China and offering an oral introduction to Tang poetry:

> *(The student Li Ziming stood in front of a lake and started to talk.)* My motherland in China has a long history and rich culture. Now, I want to introduce Chinese Tang

Poetry to you. *(Screen transit to the scene of Ziming standing in front of a group of copper sculptures of Tang Dynasty musicians playing different traditional instruments wearing traditional Tang style dresses that were in the park. At the bottom of the screen is the subtitle, "one of our activities is to read and recite Tang poems")* Tang Poetry has a specialty beauty of sound and artistic concept. *(With the same subtitle at the bottom, screen transitions to Ziming standing in front of a city wall engraved with Tang poetry in traditional Chinese characters. Ziming reaches out his right hand towards the wall and talks.) (see Figure 5.5)* It is very known in China. I and my classmates learned Tang Poetry when we were very young. We all can recite the excellent poetries of Li Bai and Du Fu[8] easily. *(Screen transits to Ziming standing in front of the copper sculptures of two Tang poets.)* Now, let me show you a Tang poem, which is the first poem I learned. *(Screen transits to Ziming standing in front of other sculptures, subtitled "I will show you a piece of Tang poem." He puts his hands back to imitate the poets to recite the poem in cadence in Chinese. While reading the poem loudly, he raises his head up and down to correspond to the words in the poem, to show the feeling of homesickness expressed in the poem.)* (see Figure 5.6) 《静夜思》床前明月光，疑是地上霜。举头望明月，低头思故乡。[9] Do you like it? Can you feel the reason and the beauty of Tang poetry? (Video Transcription of *Our Activities*, January 14, 2017)

Figure 5.5 Ziming Introducing Tang Poem

Figure 5.6 Student Reading a Tang Poem

[8] Li Bai (李白 712-762) and Du Fu (杜甫 712-770) were two of the prominent Chinese poets of Tang Dynasty. Some of their poems have been collected in all of the elementary school textbooks and standardized tests in China. Children in China are taught to recite poems in order to inherit Chinese traditional culture and to meet the curriculum and assessment requirements.

[9] This is a poem by Li Bai in Chinese, titled as *Jing Ye Si*. It has been translated into various languages by different translators. One of the English translation versions by a Chinese translator, Yuanchong Xu, is:
A Tranquil Night (By Li Bai)
Abed, I see a sliver light,
I wonder if it's frost aground.
Looking up, I find the moon bright,
Bowing, in homesickness I'm drowned.

In an interview I conducted with the Wintertown youth group, Emma said, “We learned a lot about other cultures and we see like videos about other schools, too, and communicate with them.” (Group Interview, May 8, 2017) When asked to provide examples, Sophia moved her arms from left to right in the air to show Taiji gestures and added, “I saw the one that they were doing in the morning… like the Chinese jump rope one, like the soccer one, like the Karate, like the martial art…” (Group Interview, May 15, 2017) Emma supplemented, “They also played football but then like here we say that soccer instead of football.” (Group Interview, May 15, 2017) These reflective responses in the interview show how youth perceived their learning from watching others’ videos as discovering the differences from and similarities to their own cultures. They pointed out the different sports and games they saw in the Chinese video, *Our Activities*. One male Latino student in the US site, Oscar, brought a Chinese character evolution book he found from his school library to connect with the Tang Poems and Chinese languages shown in the video. The interview answers and Oscar’s Chinese book connection indicated the Wintertown youth’s strong interests in the *Our Activities* video posted by the Chinese site, motivating them to discuss it and communicate their perceptions with the video makers.

The video transcription and the screenshots above show how the Chinese student introduced Tang poetry as a significant and typical cultural model in his country through showing his audiences various resources of Tang poetry, for instance, its writing characters, cadence, speech, and content. Mandarin Chinese was used as the language resource to recite the poem to show the audience how it sounds when it is recited. The video was also designed to show images of the Tang poets’ sculptures, which offers the audience a visual sense of

how Tang poetry looked when performed (e.g., clothing codes, facial expressions, body gestures, etc.) in the Tang Dynasty (618-907 AD). The student in the video also chose to use personal communicative language expression, for instance, “let me introduce to you”, “Do you like it?” “Can you feel the reason and the beauty of Tang Poetry?” and interactional body gestures (e.g., reaching out his hands towards the wall to signal the action of introducing) to invite the audiences to *feel* the beauty of Tang Poems. All of the representational modal assemblages, including use of languages, images, sounds, transitions, texts and gestures, were interwoven together to construct the new modal potential—the feeling. The invitation to *like* and *feel* their cultural literature form resulted in more communicative modalities and resources being utilized by the global participants as they invested in the digital platform to post their video chats transnationally.

The Ugandan participants first discussed this Chinese video together and uploaded their responses and were, in turn, responded to by the Chinese youth:

> Uganda: What are tang poems
>
> China: Tang poem is birth in Tang dynasty. Tang poem is very short and brief to express poet’s emotions. For example, the love of their county, the miss of their hometown.
>
> Uganda: How do they read tang stories?
> China: According to the feelings of different stories. Sometimes is slow, sometimes is fast. (GSB Website Video Chat Post, February 10, 2017 - March 18, 2017)

The U.S. youth continued the conversation by posting new questions and the Chinese youth responded to them:

> US: Why do they recite Tang poetry? What does “Tang” mean?
>
> China: We like Tang poetry. Tang poetry reflects the Chinese culture. we recite it because it is Chinese precious cultural wealth and young people should remember it. Tang can be understood as a Chinese character, can also be understood as a

> country that is in the Tang Dynasty. (GSB Website Video Chat Post, February 11, 2017 - March 18, 2017)

The video representation and the online response post offered a complex process of meaning designing and redesigning across different modalities and social semiotic resources. The video transcription and chat texts above reflect how the Chinese youth drew on their resourceful knowledge of Tang Poetry to represent it as their "precious cultural wealth". It was recognized as an unfamiliar cultural pattern by the other cultural groups. Therefore, the Ugandan youth asked, "what are tang poems" and the U.S. youth questioned, "Why do you recite Tang poetry? What does 'Tang' mean?" The recognition of the differences speaks to Agar's (2006) argument of cultural visibility, "Culture becomes visible only when differences appear with reference to a newcomer, an outsider who comes into contact with it" (p. 5). According to Agar, "Culture is relational. There is no culture of X, only a culture of X for Y." (p. 6) The Ugandan and U.S. youth were unfamiliar with the Tang Dynasty in China, and its literature forms and its mode of inheritance (through poem recitation), and the emotional sustenance expressed through the poems. It was not until they encountered the differences that they were able to recognize it as a type of culture.

Secondly, the Chinese video makers orchestrated the complex meaning of Tang Poetry in their video and the video communication, from which we see how modal assemblages travel and transform through time and space. It was emphasized in the video chat by the Chinese youth that the Tang Poetry recitation became a mode of their national pride because "because it is Chinese precious cultural wealth and young people should remember it" (see the chat post above). Meanwhile, in their video they assembled multiple representative and communicative modes, for instance, image, movement, speech, sounds

and so on, to introduce how beautiful it "feels" (see the video transcription above) when Tang poems are recited and preserved. We can see that modal assemblage on its own does not account for meaning making; rather, it was transformed, redesigned and produced through the entire arc of communication across time and space. It speaks to the concept of '*transmodalities'* developed by Hawkins (2018) that highlights the "trans" nature of modal complexities and production:

> It highlights the complexity of modes and the entanglements and relationships between them that shape meaning in multimodal artifacts and communications. It also highlights the need to destabilize and move beyond named categories of 'modes', to a view of semiotic resources as embedded and given meaning within the specific assemblage, and within trajectories of time and space, continuously shifting and re-shaping in their contexts and mobility. (p. 64)

According to Hawkins, transnational communication cannot be well understood by simply looking at modal assemblages; it has to be tied to "many complexities and tangles" in the trans- process, which are identified by Hawkins as: 1) Modes intertwined; 2) Modal relations; 3) Production/assemblage, reception, and negotiation; 4) Context and culture; 5) Transnationalism and power relations. From the video transcription, screenshots of videos and video chat posts that have been shown in this chapter, we can see that modal production is not a sum of different modal assemblages. It is not static, but is often unpredictable in transnational and transcultural communication across time and space. We need to situate it in particular cultural and social contexts in order to analyze what has been produced or not produced, and redesigned or not redesigned.

Discussion

Through analyzing the related group meeting video recordings, youth reflective drawings, videos and online chat posts, this chapter has illustrated how youth from the U.S.

and other project sites co-designed and negotiated their digitalized cultural representation with their global audiences through transnational communication. We have seen how the participants were engaged in transforming representational modal assemblages to communicative ones, which highlighted their resourcefulness, agency and ownership of their shared, co-constructed cultural worlds. All of these ongoing (re)designing processes involve mobility and transformation of modalities, people, resources, ideologies, time and spaces (Hawkins, 2018; Hawkins & Cannon, 2007). For instance, the analysis of the cultural road signs and the Chinese poetry confirms Luna and Mario's reflective drawings (see Figures 5.2 & 5.3) of their experience as movement across technologies, digital and physical spaces, people, places and resources. According to Bezemer and Kress (2016), all of these interactive engagements evidenced learning, as they state:

> Each and every sign and sign complex tells us something about how a sign-maker knows and sees the world at the time of the production of the sign. It makes evident what the sign-maker (as learner, or otherwise) has attended to or noticed, and what the effects of such 'noticings' are on the sign-maker's/learner's resources. (Bezemer & Kress, 2016, p. 41)

For example, as discussed in the previous section, the one-way traffic sign literally showed "DO NOT ENTER"; thus, it surprised the Ugandan youth when they saw people entering the street where it warns not to enter. After watching the Chinese youth and elders playing Taiji, reciting Tang poetry, and playing "football" (called 'soccer' in the U.S.), the differences were noticed and negotiated.

Simultaneously, these *noticings* and negotiations seem also to point out the issue of ownership and blurred boundaries of particular semiotic sign complexes. The following excerpt shows the follow-up questions:

> For the martial art do you focus more on the music or the moves? Is this a popular song in China I love the music in China because it's relaxing. Why do you do it (martial arts) in the morning? Is there martial arts tournament? why do they call it rubber bands? Why is martial arts so popular? Why do you wear special uniforms for martial art? What languages do you speak in your town? Why do they recite Tang poetry? Is the Chinese zither popular in China? What does "Tang" mean? What river is that called? What kind of books do you like? Does it snow in your area? What do you play when it is really cold and you have to stay inside? Is there a different way of playing football? Do you play American football? (GSB Website Chat Posts, February 11, 2017)

The questions above, such as “do you play American football?” “what languages do you speak in your town?” “What does Tang mean?” have challenged me to rethink how cultural ownership has been constructed in multi- or trans- modal transnational communication. As the global conversations take place among the youth participants across borders, I see the boundaries between the different cultural worlds being blurred. Although there might be certain rules or norms in a certain culture, for example in cultural sports and traffic signs, as the connection is made and the communication is ongoing, we see that the ownership of cultural sign complexes travels and transform into new semiotic resources, and into shared, co-owned spaces.

Another aspect of the chats presented above that also occurs in other chats on the project website is the Wintertown youth’s mixed use of personal pronouns referring to their global peers, “Why do *they* call it rubber bands?” “Why do *they* recite Tang Poetry?” “Why do *you* wear special uniforms for material art?” It seems apparent that the Wintertown youth used both “they” and “you” to refer to their global communicators. The usage of “you” seems to be a direct global communication term that straightforwardly points to the dialog objects, while the use of the third person pronoun “they” tells us that some of the dialogs occurred at a translocal level and were then transferred verbatim into the site chat space. It might not be hard to explain why the Wintertown youth used the third person pronoun to ask the Chinese youth questions in the online space. They did not face-to-face communicate with them; instead, they discussed and typed their comments with their local peers. It seems to infer that

the first interaction of these comments was made to their local peers to share first, and then the second iteration was to their global peers after all of the comments were composed. The mixed usage of different personal pronouns indicates the ongoing, complicated system of how youth were negotiating their communicator roles across local and distant settings. I argue that the personal pronouns are semiotic resources for us to gain understandings of who we are and who they are, and to or with whom we are connecting and communicating.

The third aspect is that the analysis in this chapter has also shown the constraints of digitally mediated transnational multimodal representation and communication. For example, the *Wintertown Downtown Tour* video reflected a winter look of the city in the U.S.; the Ugandan youth asked, "why do you put on heavy jackets?" (April 7, 2017) because there is no cold winter weather in their region. Due to the design of the project website, the U.S. youth used a textual mode to explain what a "freezing" winter feels like: "Winter is cold. We can start getting snow as early as October and it can last through March or April. In winter you will need a gear for example, a hat, gloves, a winter jacket, snow pants, and winter boots." (Chat post, June 6, 2017) A similar example is that the Chinese video makers used the textual mode in their response to the U.S. audience to explain Tang poetry as a mode of national pride and patriotism. I argue that digitally mediated communication has its constraints on modal mobility and transformation because modes like feeling (both physical and sentiments), taste and smell might not travel across the online space. The Ugandan youth, most of whom have never traveled outside of their village, probably will not be able to perceive a Wintertown winter feeling; and, those who are not growing up in a Tang poetry recitation culture might not feel why it is tied to national pride.

However, the point of this chapter is not to simply point out the possibilities of what cannot be perceived, but to urge more tools and methods that can offer more transmodal affordances and transformative meaning transformations. More cooperation, theoretically and methodologically, to develop a systematic discourse of transmodal (re)designing across people, cultures, languages, media, technologies, semiotics and resources. We need to develop analytical tools to analyze the design of design, perhaps the metadesign, of social interactions, connections and communication. This is particularly crucial in our increasingly digitalized, hybridized, transnationalized and technologized world.

Chapter 6

Multimedia Group Facilitation Across Place, Space and Time

The previous chapters discussed how youth participants navigated their global digital storyteller roles as they were making the videos in the Wintertown site and interacting with their global peers through online communications. These engagements in translocal and transglobal settings offered the youth multi-layered multimodal design spaces to not only connect with peers but also to interact with digital devices and media. From a sociocultural perspective through a multimodal lens, all of these social interactions and human-computer interactivities lead to learning mediated by all of the modalities, resources, spaces and time.

As I considered the affordances of digital storytelling in translocal and transglobal contexts, the role of the adult facilitator stood out, as did the ways in which she facilitated the group meetings in the project. What was the role of the adult? What did the adult do, or what were her strategies, that had impact on youth's production, agency, collaboration and communication? Particularly, in this out-of-school project that occurred in an in-school space facilitated by a teacher, how much adult support can support learning creatively and critically, and how? And how might adult support stunt youth developing their digital and global citizenship? Here I explore what we can learn from this case study for better designing the adult role in learning in the digital and global age?

I selected two interrelated group meetings for analysis, *First Day of GSB Project in Wintertown* and *Watching and Responding to "Making Piñata for Christmas"*, in which the adult facilitator used place and digital spaces as mediational resources in the local site to connect, and potentially disconnect, with other global sites. I also draw from interviews with

the adult facilitator to reflect her understandings of her roles, strategies, and challenges in working in this project, and I revisit the literature on adult facilitation and intervention in learning, particularly in the 4 C's (critical thinking, communication, collaboration and creativity) of 21st century learning in digital contexts. To analyze the facilitator's roles and strategies in the group meetings, I draw from my ethnographic fieldnotes to take a close look at who initiated the group discussion, and who asked what kind of questions to start or direct the project activities. I identify the facilitator's noticing and disregard in her facilitation and its social consequences and implications in youth's digital and global engagement from a critical lens. I apply Hawkins's (2014) notion of place as a mediational device in transnational transmodal engagement, multi/transmodal affordances in digital spaces (Bezemer & Kress, 2016), and concepts of transmodalities (Hawkins, 2018; Li & Hawkins, 2020) in discussing possibilities of facilitating as co-designing learning environments with youth creatively and critically to highlight reflection on practice that considers issues of privilege, access, inequity and power relations.

To Teach, or to Facilitate?

Firstly, considering the circumstance that the project facilitator was a first-grade teacher working in an out-of-school project, which actually took place mainly in a school space[10], it is worthwhile to discuss: 1) how we understand facilitating strategies versus teaching practices; 2) Ms. Miller's philosophy of her role working in this project and her redesign of project activities due to her philosophy, and 3) how her involvement and

[10] A number of sites have teachers as facilitators, but many do not. Likewise, several meet in schools, although others meet in community-based spaces.

intervention reshaped the project design and youth's participation. According to the designer of the project, the adult role in this project is to facilitate, rather than teach, the youth participants to collaboratively produce their own video stories about their local communities and make group decisions on how they respond to each other's videos globally and digitally. Then, how do we understand facilitating and a facilitator role to distinguish from teacher and a teacher role? In an interview with Ms. Miller, she interpreted her role as a "more facilitative role" that motivated her to: 1) "have some structure and to keep it in a direction that we are getting things done" and 2) "take a step back and keep it open and see what the kids, how the kids want to direct the program." (Interview, February 2, 2017) When asked what has challenged her most working with the youth group, Ms. Miller pointed that she needed more specific guidelines to serve as an out-of-school project facilitator though she understood the project was designed to be learner-centered and her role was to facilitate rather than teach. However, it was unclear for her what counted as facilitating versus teaching, and the line between adult facilitation and youth-centered methods. According to Ms. Miller, because of her own background as an elementary school teacher for almost 10 years in grades 1-3, she considered her facilitator role as a combination of activity facilitator (engaging students to lead the direction of the group meetings) and educator (designing "structures" to support the effectiveness of project activities and learning). By structure, Ms. Miller meant creating different activities to guide the youth:

> One of the activities we did was for students to sort of make a web of things that are important to them and what are meaningful elements of their life and share them with their peers. And also, certainly just in term of structure, just, um, keeping us, you know, focusing on what the project goals are as well, so making sure that we are checking in on those videos and having conversations that are meaningful about those, and also, because we have a limited time every week that we need… the time is

> very important to get our work done while still keeping it an opportunity to have fun and flexible. So, you know, staying on track even with trying to hone in what the kids think important to record and do videos on. And, my job is to make it possible to bring those videos to life, so making opportunities where we can actually go and record and do things together, um… require some logistics in the background by weather requires buses or finding the place where are going to go and bringing all of the students. So, certainly there are planning things on mind to make sure that things run smoothly. While still keeping it student directed. (Interview, January 2, 2017)

Ms. Miller's perception of her roles speaks to Schwarz's (2002) definition of group facilitator as one who "has no substantive decision-making authority diagnoses and intervenes to help a group improve how it identifies and solves problems and make decisions" (p. 21). Following Schwarz, the goal of a facilitator is to increase the group's effectiveness and autonomy by "improving its process and structure" (p. 22). According to Schwarz, with effective facilitation, the group will become gradually less dependent on the facilitator. In order to make the facilitation acceptable to all group members, Schwarz developed the Skilled Facilitator Approach that indicates the importance of creating explicit core values and ground rules for effective group behavior and cooperation. It uses six steps to identify when and how to intervene: observe behavior; infer meaning; decide whether, how and why to intervene; describe behavior, and test for different views; share your inference, and test for different views; help the group decide whether to change its behavior, and test for different views (p. 28). In their recent study on teacher interventions in students' collaboration, Kajamaa, Kumpulainer and Olkinuora (2019) identified three intervention strategies that teachers used in an educational makerspace in a Finnish school: authoritative, orchestrating and unleashing. Their research shows five main contextual categories during teacher interventions: conceptual, procedural, technology, behavioral, and motivational (p. 5). Through analyzing teacher-student interactions, they realized the tension between learner-centered pedagogies

and the teacher-directed tradition in school settings. The latter might "prevent students from taking responsibility for their work and learning" (p. 12), while the former can lead to "creation of something surprising" (p. 9). They think that the change from the latter to the former is challenging and suggest teachers acquire new competencies to facilitate learner agency and productivity with more flexibility, particularly in this technology-driven age, in order to make the change. My research echoes Kajamaa and colleagues' research, revealing Ms. Miller's ongoing awareness and negotiation of learner-centered methods and teacher-directed practices, as she addressed, in multiple interviews, her challenges working in this project:

> I think the two things that were mostly challenging to me were definitely taking the role as a facilitator and not stepping too much into the teacher role, and guiding students to initiate the project to be self-directed… I think sometimes it was a little challenging to include everyone at the same time and to make sure that everyone had a role and was doing something. (Interview, June 7, 2017)

> I guess the one more thing would be that you know because teachers have so many resources in hand about how to lead things and how to do things. Within this program, it is very open and it really isn't a set of guidelines about how to do it or how to facilitate. So, sometimes that can be, well, it is an amazing thing when things come together and students collaborate and decide what they want to work on. From an educator standpoint, sometimes that can be challenging because it, you, you are necessarily sure of ways how to lead or direct the class and make sure that we are moving forward. So, that can be a little bit tricky when you are kind of just trying to go off what the kids want to do and making it a learning experience at the same time. (Interview, February 2, 2017)

Ms. Miller's reflections of her ongoing negotiations mirror a pervasively asked question about how to position students at the center but also provide effective guidance considering youth's productivity following a preset timeline. The quotes above reveal her awareness of the potential conflict between her teacher role and an out-of-school project facilitator, which challenged her to manage two conflicting types of strategies: 1) structuring strategies in order

to provide guidance to ensure the project productivity in the designated time; and 2) "unleashing strategies" (Kajamaa, et al., 2019, p. 12) to embrace students' interests, agency, autonomy and creativity. On one hand, according to Ms. Miller, it was essential to provide some structural guidance for the youth participants to accomplish the project activities, for instance, producing digital stories and responding to the online comments within a certain time period. For example, Ms. Miller designed a word document on Google Docs, in which she put the weekly schedules of the project activities for the group to follow. She used this document as a reminder throughout the academic year to track their project accomplishments and guide the group to follow the planned tasks. However, it was notable that she, the adult, had more authority of decision making on designing the document while youth had less opportunity to design their use of project time by making changes on the document planning, designing, writing, or editing. On the other hand, Ms. Miller also applied unleashing strategies to invite students to self-direct their video design and editing. For example, when they were making the *Our School* video, Mario and Jacob suggested to make their own music as part of the video story using GarageBand. The following fieldnotes shows an example of Ms. Miller's unleashing strategy:

> Emma: I think we should add music.
>
> Mario: Can we do a Garage song?
>
> Researcher: What is a Garage song?
>
> Mario: Garage Band is where it is made.
>
> Ms. Miller: Would you make one up?
>
> Mario: Yes. (Mario walks to another side of the classroom and started to make songs on GarageBand on his iPad. Then, he brings his iPad and shows everyone how to make music on iPad and shows a music sample he made on GarageBand) (Fieldnotes, April 17, 2017)

Both Ms. Miller and I were unfamiliar with this app, therefore, students themselves brought their knowledge of this music producing tool and designed their songs on it. The less adult intervention due to the adults' limited knowledge on this digital music producing tool resulted in more responsibilities on the students themselves and more opportunity for student creativity. In Ms. Miller's words:

> Another element that really kind of came about at the end of the year was their abilities to put music together and to include that in the videos. That was something that I am not really experienced with… I've got it on my iPad, but I am a little bit intimidated by it still. They just took away with it and were able to get together the music for a video and even were able to edit it to the video without my assistance really. (Interview, June 6, 2017)

The structural facilitation strategy seemed to lead to more teacher-centered practices, while the unleashing strategy manifested more student-centered social actions and interactions. Youth became creative designers when they were positioned as experts to show their knowledge and skills and contribute them to the group work. Particularly, in this rapidly growing digital age, youth's knowledge and skills of using technologies and digital media can be superior to adults, as Herring (2008) indicates in his work on the "generational digital divide" (p. 72). This increasing gap require teachers to acquire new skills to embrace technology as a new way to engage in dialogue and interactions with their learners (Apple & Jungck, 1990; Zhao & Frank, 2003) Here, I advocate that teachers learn what technologies most interest their learners, for instance, the Garage Band music producing tool initiated by the project youth, and create spaces for learners to use these to lead and mediate the discourse. Particularly given that in the GSB project one of the goals is to support youth's digital engagement, it's important to consider the crucial role of adults to engage youth's multimodal and multimedia production and competence (Halverson, 2010, 2012; Halverson

& Gibbons, 2010; Toohey & Dagenais, 2015). Bezemer and Kress's (2016) state, "In the contemporary world, learners are rarely restricted to only one environment. Instead, they move between—and learn across—many different environments, each uniquely configured, socially and semiotically." (p. 81). In education the conversation has been shifting from if-or-not-to towards how-to use technology to foster new learning opportunities, which becomes "an urgent knowledge process" (Akoumianakis, 2011, p. 56) for educators and researchers.

Multimedia Approaches

Then, how do we use technology to foster new opportunities for youth to learn, collaborate, and communicate, and what can be the pros and cons, and how do we understand youth productivity using technology? Li, Sun and Jee (2019) in their recent study examined the impacts of technology use on teacher-student and student-student interaction in EFL classes in a rural school district in China. Their study reveals that teachers' use of technology played negative roles in facilitating classroom discussion and interactions. Li and her colleagues raised the question, "The more technology the better?" Through conducting conversation analysis in multiple ESL classrooms and comparing the high and low technology use in these classes, they found that high technology use in EFL classrooms lead to fewer learner-centered interactions and choices, but more decisive teacher talk, which constricted learners' opportunities to engage in a "productive foreign language environment" (p. 32) and multimodal practices. They argue that teachers need to reflect on their strategies of using technologies in their instruction with more professional support on technology-enhanced facilitation, instead of taking "technology as old wine in a new bottle" (p. 32) with "blind optimism that simply adopting the most recent technologies will improve students'

learning outcomes" (p. 34). In their study, Li and colleagues linked students' "oral production" (p.32) and opportunities to interact and communicate with teachers and peers with concepts of productivity.

However, I pose the following question responding to Li and colleagues' findings: How do we understand youth's productivity in digital contexts and digital productions in global settings? Nowadays, due to the mobilities of people and expanding physical distance between people domestically and interactionally, oral communication may occur across distances via email, social media, and smartphones. Even in one room or one building, young people like to send voice messages to an individual or a group, for instance on WeChat and WhatsApp, which can be asynchronous; the receiver(s) do(es) not have to respond immediately and can later reply by voice message. With the different time zones in transnational communications, this kind of oral communication provides people more flexibility across different times and spaces. For such circumstances, "oral communication" is no longer how we understand it in a physical classroom where teacher and students orally talk together in one place and time, but is expanding to more complex settings, mediated by digital spaces, places and time. Therefore, the way that we consider digital production and productivity needs to be redefined in digital contexts if we tie them to oral communication or social interaction. In Jewitt's (2008) review of multimodality and literacy in and out of school, she synthesized other scholars' research (e.g., Nespor, 2013; Sefton-Green, 2006; Lam, 2005) in learning and knowledge across physical and digital settings and claim that modern technology and social media "create the movement of images and ideas across geographical and social spaces in ways that affect how young people learn and interact" (p.

242). Davidsen and Vanderlinde (2014) conducted video-based multimodal analysis to investigate the role of touch screens in the Move and Learn project as a tool for facilitating learners' collaboration and teachers' reflections on the gains and loss as they were using technology in classrooms. According to Davidsen and Vanderlinde, technology offered more possibilities for teachers to facilitate learners' collaboration, and for researchers to work together with practitioners to reflect on teaching practices through video-based multimodal analysis. As Ellison and colleagues (2007) report, social media like Facebook use "can help students acculturate and maintain bridging social capital, or social "ties" (p. 1162) with less cost, which holds true particularly for shy students:

> Facebook serves to lower the barriers to participation so that students who might otherwise shy away from initiating communication with or responding to others are encouraged to do so through Facebook's affordances. (Ellison et al., 2007, p. 1162)

Ellison and colleagues' research seem to support Ms. Miller's rationale of using Padlet boards for her students, like Oscar, to have a space and opportunity to express themselves with lower affective filters. Particularly, in this study, for some GSB project students who are very shy like Oscar, digital platforms, according to Ms. Miller, offered them a comfortable and safe zone to digitally talk to their peers.

Hawkins's (2014) study in transnational communications in out-of-school settings draws from sociocultural views of learning and points to issues of place in digitally mediated meaning-making. According to Hawkins, sociocultural views of learning have two strands: one is from Vogotskian theories of the Zone of Proximal Development (Vygotsky, 1978) and the second emphasizes what students bring to the learning contexts and their peers. The two strands are mediated by "ontologies of place" (p. 97), physically and ideologically. That is to

say that what learners perceived, noticed and responded to the world is mediated by place of being and knowing because of their own situatedness in their own place. These researchers seem to agree that engaging learners in multiple spaces mediated by digital technologies enables social interactions and collaborations, which indicate social semiotic movement and productivity.

When asked when they felt they learned a lot in this project, two students said they learned using iMovie and Padlet boards, and a Hmong student, Emma, said, "We learned a lot about other cultures and we see like videos about other schools, too, and communicate with them." (Group Interview, May 8th, 2017) According the children, their productivity means the dynamic process of learning technology skills, watching their peers' video lives and communicating transnationally. This confirms that productivity occurs when learners are interacting with their global peers in digitally mediated activities. Therefore, productivity is defined in this study as the process of transmedia transmodal transnational engagement, through which children interwove their available modal resources across physical and digital spaces for meaning transformation, negotiation and remaking. Multimedia have played a significant role in creating digital spaces for youth's social interactions and human-screen interactivities (Adami, 2015; Nelson, Hull, & Roche-Smith, 2008). Specifically, in the Wintertown site, digital resources, for example, the GSB website, iMovie, and digital cameras, are provided by the project aiming to create such spaces for global learners. In Chapter 4 and 5, I have discussed the affordances of the designated project website, iMovie work space, and use of digital cameras. In the previous section of this chapter, I also discussed the use of Google Docs and the incidental discovery of GarageBand. Besides these

digital resources, Padlets[11] were frequently employed as a technological tool during the group meetings, initiated by Ms. Miller. The Wintertown site was the only one using this tool among all other sites. According to Ms. Miller, Padlet boards enabled her to "include everyone" (Interview, June 7, 2017) in touching the screen and being engaged in the digital spaces at the same time, as she explained:

> I guess it is encouraged by the school district that kids all have their iPads and can all interact and type at the same time. Otherwise, the feeling is that if we only use one device, then you got twelve kids just sitting there. They are still typing now, you know, they are still doing the skill of typing and thinking about the questions. It's just everybody is able to participate. If you think about they are sitting from, basically they got here at 3:30, it is a long time to kind of be sitting… I want them all to be able to, you know, part of asking questions. We can certainly have every one person to come up and write a question at a time. But right now, they can even type two questions if they want to, or three questions right now… I talked to her (Researcher Note: 'her' refers to GSB designer/professor) and let her know that we are using Padlet and she sounds like fine with it. (Fieldnotes, February 27, 2017)

The quotes above shows Ms. Miller's philosophy of inclusion by enabling all participants to touch the digital devices at the same time to not only practice their technology skills, for instance typing skills, but also to have an equal opportunity to digitally ask their questions and to make them to be seen by the whole group. The following sections offer detailed illustrations and analyses on the use of Padlet boards during multiple group meetings over time and its impact on youth's interaction, collaboration, and global and digital engagement.

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[11] Padlet is designed by the website and application developers as a shared virtual space, which enables users to type and upload texts or images. Different users can access, write and share on one Padlet board by scanning an automatically produced QR (Quick Response) code, using digital devices like iPhones or iPads. After accessing the Padlet board, all of the users can upload their comments. All of the connected screens will share each other's posts at the same time. It also enables users to customize the background image, and drag and drop the comment boxes to places where they would like them to be. In the local site, Ms. Miller used Padlet board to collect the youth's comments, and then connected them using a smart board during the group meetings.

In order to do so, I showcase youth-produced artifacts with adult facilitation and ongoing adult-youth interactions in different project activities mediated by Padlet. I also apply Hawkins' (2014) notion of place as a mediational device to look at how youth's engagement was co-shaped by ontologies of place and digital spaces.

First Day of GSB Project in Wintertown

Padlet was first used by Ms. Miller as an introductory space for youth to post their questions about the Global StoryBridges project in the first group meeting. Youth were excited, because "it is a new thing" (Fieldnotes, October 10, 2016) to use their iPads to scan the QR code on the Padlet board to become digitally connected with their local peers' screens. Table 6.1 shows a sample of my fieldnotes on that day (October 10, 2019) as Ms. Miller was organizing the youth group to ask questions about the project, create project rules and make decisions on their video themes. I took the fieldnotes by writing them and then transposed them for representation in the table including youth-produced project rules, group discussions, and photocopies of youth-produced rules and questions. The first column of Table 6.1 below shows all youth-produced questions about the project, which demonstrates Ms. Miller's strategy of inviting the youth participants to be the questioners, rather than lecturing herself, to learn about the project's design, activities, meeting styles, linked participants and so on by typing (after/during small group discussion) their questions on iPad screens, and sharing on a smart board with whole group. The posts on the Padlet board show youth's interests in this project and their desire to connect with their global peers to learn about different cultures and languages.

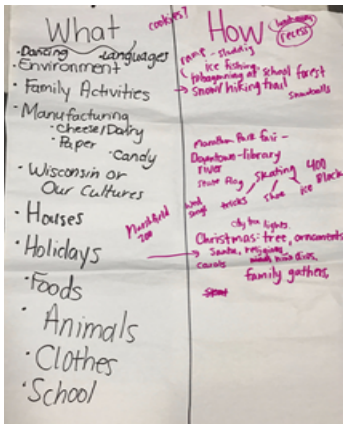
<table>
<tr><th>First Day of GSB Questions</th><th>Creating Group Rules</th><th>What-How Planning</th></tr>
<tr><td>Ms. Miller: “I’d like you to type a question that you might have about the program right now or something that are wondering, so that we can answer those today…. Have you heard about Padlet?” Luna: “No. It’s a new thing.”</td><td rowspan="6">Ms. Miller: “We need to be a group and a team and we support each other, right? So, we need to think about how that’s going to work… (Write down the three core values— Be Safe, Be Respectful, and Be Responsible— on a white board) …. What are we going to write on here? We are going to say that I feel like I can have a voice and I can talk here and feel that this is the space for me. So, go ahead, and write down what you think, and make this your space. What would make you feel most comfortable working here together?” The whole group discussed and produced their project rules as follow:</td><td rowspan="3">Ms. Miller: “We are going to make a video and everyone is going to see it. Just think about where we are and where we live. What do you think? This doesn’t have to be yourself, necessarily. Just think about where we are and where we live.” Students: “Wausau.” Ms. Miller: “Wausau! So, in what state?” Students: “America. Wisconsin.” Ms. Miller: “Yes, in America. So, thinking about that, what might be something that might be important to share with our global pees? What videos you might think are interesting to share? Actually, do you guys want to talk in small groups to share?” Students: “Yes.”</td></tr>
<tr><td>Youth-Produced Questions on Padlet:
 
</td></tr>
<tr><td>#1 Who was the first person to create Global Stories Bridges? #2 Why is it called global StoryBridges? # 3 Who will we talk to first? #4 How are we going to meet? #5 How long are we going to do Global Studies? #6 How long is global stories going to last? #7 This Mexico going to be involved in this? #8 Do you know if Mexico is going to be involved in this? #9 Are we going to see the other students? #10 Are we going to learn other languages? #11 Is Russia involved in this? #12 Is Japan involved? #13 Is this going in a record? Will our teacher see it? #14 How are we going to communicate with the other? #15 Are we staring today? #16 What are we going to learn today?</td></tr>
<tr><td>Be Safe</td></tr>
<tr><td>Not going to improper website, not going on the website that we are not supposed to, saying nice words, listening to each other, not running in the classroom, no violence; don't fight in the room, being good; not to bully or hurt</td><td>Students talk in small group discussions and then share in whole group producing the post below:
 
</td></tr>
<tr><td>Be Respectful</td></tr>
<tr><td>Don't brag, make smart choices, friends, included, have fun, treating people nice, respect for people, saying nice words, listening to each other,</td></tr>
<tr><td>Be Responsible</td></tr>
<tr><td>Work hard, stay focus, listen to other's words, listen to speakers, not talking bad</td></tr>
</table>

Table 6.1 Fieldnotes of the First GSB Day in Wintertown

Because some of them speak Spanish or Japanese as their first languages, they asked if there was a Mexican or Japanese site involved in the project (see Question #7 & #12). Some of the informational questions were directly answered by Ms. Miller:

> Question #1: Who was the first person to create Global Stories Bridges?
>
> Ms. Miller: She is a professor, my advisor and Li Rui's (researcher) advisor.
> Question #9: Are we going to see other students?
>
> Ms. Miller: Yes, yes, yes, we are going to see students from Africa, China, Mexico and other countries.
> (Fieldnotes, October 10, 2016)

After reading Question #13 "Is this going in a record? Will our teacher see it?" Ms. Miller explained that this project "will not be shared with teachers, so it is not graded here and it's not a pass or fail" because this is a "children-centered project" and the goal is to "have fun" and "learn from each other" by empowering the youth to "lead the discussion" (Fieldnotes, October 10, 2016). In her words:

> We hope you come out of this being broader-minded people that you learn something, you grow, and become a person and a citizen of our country and our world with more knowledge you did today. (Fieldnotes, October 10, 2016)

Ms. Miller's explanation shows her earlier perception of her role as being to engage the youth to lead the project activities. The following excerpt further shows Ms. Miller's approach to engage the youth as explorers of their project journey:

> Question #2: Why is it called global StoryBridges?
>
> Ms. Miller: How do you think about it? Can you think about a bridge? Think about what a Bridge does. What does a bridge do?
>
> Mario: It is for across something, like the globe. Like, across the bridge to communicate.
>
> Ms. Miller: You explained perfectly. We're bridging our connections with people here and all over the globe. It is sort of like our way to build the bridge.
> (Fieldnotes, October 10, 2016)

From the excerpt above, we can see that Ms. Miller did not intend to give "correct" answers to all questions. Instead, she was scaffolding the discussion so that youth were able to have a voice and an opportunity to explore the space they were offered as project members. Here, Padlet boards were used by Ms. Miller as a mediational tool to afford such a digital space

across the classroom, where the project took place. Ms. Miller's facilitation strategy speaks to Warschauer and colleagues' (1996) study on computer learning networks as mediational tools for empowering second-language learners, focusing on three aspects to evaluate the effectiveness of digital tools in classrooms: autonomy, equality and learning skills. Following Warschauer and colleagues, "Teacher involvement, however, doesn't necessarily mean teacher dominance" (p. 10), instead successful teachers position themselves as facilitators "by acting as a coordinator for group planning, by encouraging student responsibility for learning, and by creating a space when egalitarian computer conferencing can take place" (p. 10).

After the conversation on learning about the project, Ms. Miller asked the whole group to discuss and create their project rules and make commitments to follow the rules while participating in the project. The rules produced by the group (see second column of Table 6.1) are under the three core values from Ms. Miller's first-grade class: safety, respect, and responsibility. Under the first value, youth put rules for the place-- the classroom (e.g., not running in the classroom, no violence, don't fight in the room, etc.) --where they had the activities, but also for the digital space (e.g., not going to improper websites; not going on websites that we are not supposed to), in which they use technologies to connect with their peers locally and globally. These rules reveal children's perception of the project as assemblages of the physical and virtual spaces where they committed to "work hard" together to "make smart choices", "have fun", "listen to each other", "stay focused" and "respect for people." The following fieldnotes shows an example of how Ms. Miller used the rules as a reminder and guideline in a later meeting. It took place during a group discussion on a Ugandan video capturing local traditional dances performed by different local tribes.

> Mario: I put "Why did they have to scream in the video?" (The actual words put by Mario on the screen were "What was the reason for yelling?")
>
> Ms. Miller: I didn't see it. Was that there?
>
> Mario: (Prolonging the sound to imitate what he heard from the video) It was like 'aaaaaaayaya!'"
>
> Ms. Miller: So, how could we word that in sort of culturally responsive way to ask questions, like, what could we say so that we respect their culture. So, what could we say?
>
> Michael: What was the reason for the sounds?
>
> Ms. Miller: What was the reason for the sounds?
>
> Michael: Yes.
>
> Ms. Miller: So, Mario, would you like to type it?
>
> Mario: Yes.
>
> (Fieldnotes, December 5, 2016)

The fieldnotes above show how Ms. Miller directed the group to take a culturally respectful attitude to ask questions when engaging with differences in the cross-cultural video stories. Mario's question was shared by the whole group and Michael supported a revised version in accordance with the group rule they set in Table 6.1, "saying nice words" and "respect for people".

The third column of Table 6.1 shows youth's planning of their video topics. We can see that Ms. Miller was telling the group that the video making process was not focusing on "yourself" but "we" in a collaborative way that shows local community life instead of an individual one. Through guiding the students to think about their living place, Ms. Miller aimed to help youth to recognize their community knowledge shaped by "ontologies of place" (Hawkins, 2014, p. 97). The What-and-How poster produced by the youth (see third column of Table 6.1) shows the cultural artifacts (for instance, Wisconsin cheese culture and snow-covered winter) that youth wanted to include in their later digital stories. All of these

artifacts, or what lives youth perceived and intended to represent to others, according to Hawkins, are mediated by the nature of place. In Hawkins' words:

> place is more than a geographically bounded entity, it has directive force in shaping the thoughts and interactions of those who inhabit it, while also being shaped and defined by them. (Hawkins, 2014, p. 94)

In this study, I claim that the use of place as a mediational device in group facilitation is crucial. Particularly, in this global digital storytelling project, in order to provide scaffolding and facilitation in youth's global conversations, it is significant for adults to first engage youth to recognize their knowledge of the local, then contribute their local constructs to the global dialogue to stimulate the transnational flow of resources, modalities and ideologies embedded in global places. However, this is not to divide the local from global. Rather, it is to highlight youth's living in and knowing of place in a local domain in order to later connect it with their global peers' representation of place in a global context.

The following section further discusses how place and Padlet space were interwoven together, mediating the group discussion in a later group meeting as Ms. Miller organized youth to watch and respond to a Mexican video entitled "Making Piñata for Christmas".

"Making Piñata for Christmas"

Here, I present a brief description of this one minute and thirty second video representing a group of Mexican students making a Pokéball-shaped piñata together for a Christmas holiday celebration. The video was taken in a school environment where youth were able to use the supplies and materials, for example, glue, color papers, balloons, and cupcake papers, to make a Pokéball-shaped piñata. The video starts and is backgrounded by the "Jingle Bells" song to create a Christmas atmosphere for their global audiences. English

was used as the main language in the video to introduce the craft-making materials and procedures. They inserted subtitles (also in English) (e.g., "When it was totally dry, we pricked the balloon and removed it."), image animation effects and explanation speech to make the procedures more accessible to audiences. After showing a finished Pokéball-shaped Piñata, the scene switched to a school wall with an English/Spanish bilingual quote: "Everyone smiles in the same language!"

In the following sections, I first discuss how Padlet boards were used again by Ms. Miller as a response resource, through which I aim to rethink adult facilitation of youth's collaboration. I then identify the Pokéball as an emergent artifact mediated by place to further study what was figured in Ms. Miller's facilitation and what was not through a critical lens.

Response on Padlet: To collaborate or not to collaborate?

Before watching the video, Jacob asked, "What is a piñata?" Ms. Miller said, "Let's watch the video and find it out." Then, Ms. Miller opened a Padlet board and asked the youth participants to select a background image for the board and the one with holiday illuminations was chosen. This board was later used to collect everyone's response to this video. Then, they worked together to reorganize, transfer and upload their response to the project website, as the following fieldnotes capture:

> Ms. Miller opens the Padlet board again and asked all youth to scan the bar code on the board to connect all iPad screens together and type their comments on it. Ms. Miller talks to the youth while they are typing on screen, "Guys and girls, think through a little, I mean, obviously, you guys got to see how they made a Piñata, and you kind of learned how to, but what is, maybe think about questions, like, why they created a Piñata, and what is the Piñata for. You know, things that are a little bit deeper, than just, you know, I like, you can say 'I liked the color of your Piñata' and 'I liked what you did', but think about some deeper questions, too." Some of the youth turn to each other to see what their peers are typing. Ms. Miller walks to different individuals when anyone needs assistance or technological support. Ms. Miller talks again, "Maybe think about what is tradition, right? Does anybody know

what traditions mean?" Sophia says, "It is something that you celebrate every year." Ms. Miller replies, "Yes, it's something that repeats, right? Something that you celebrate with whom?" Jimmy adds, "Family, cousins, and friends." Mary says, "Birthday." Ms. Miller encourages students to think about the tradition part while writing their comments on the board and asked, "I know they mentioned this was for a festival. Do we know anything about that festival? Did they tell us anything about that?" Jacob asked where they mentioned the festival and Ms. Miller reminded it was at the beginning of the video. Ms. Miller walks to Jimmy's table and helps him to frame his questions about the festival traditions and dates, when Oscar is sitting by the same table checking other's comments on the board. Oscar drags his comments to the middle and reads aloud to me, "Is Pokémon famous in Mexico" with input of emoji icons representing Mexican flags. Ms. Miller walks to me and tells me that she would like to play the game in the future. Besides the table, where Jacob, Sophia, Mary, Emma and Rachel are seated, youth are sharing their screens with each other with

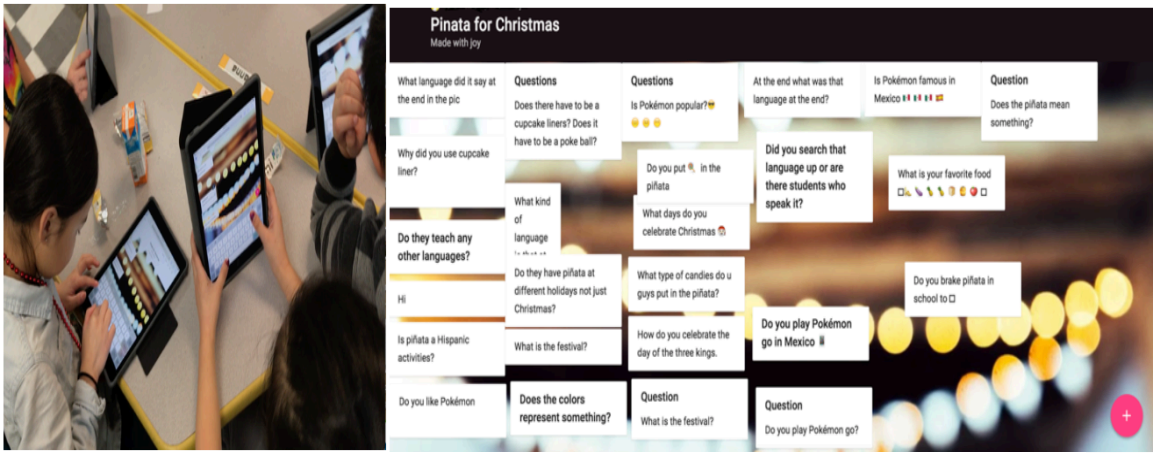
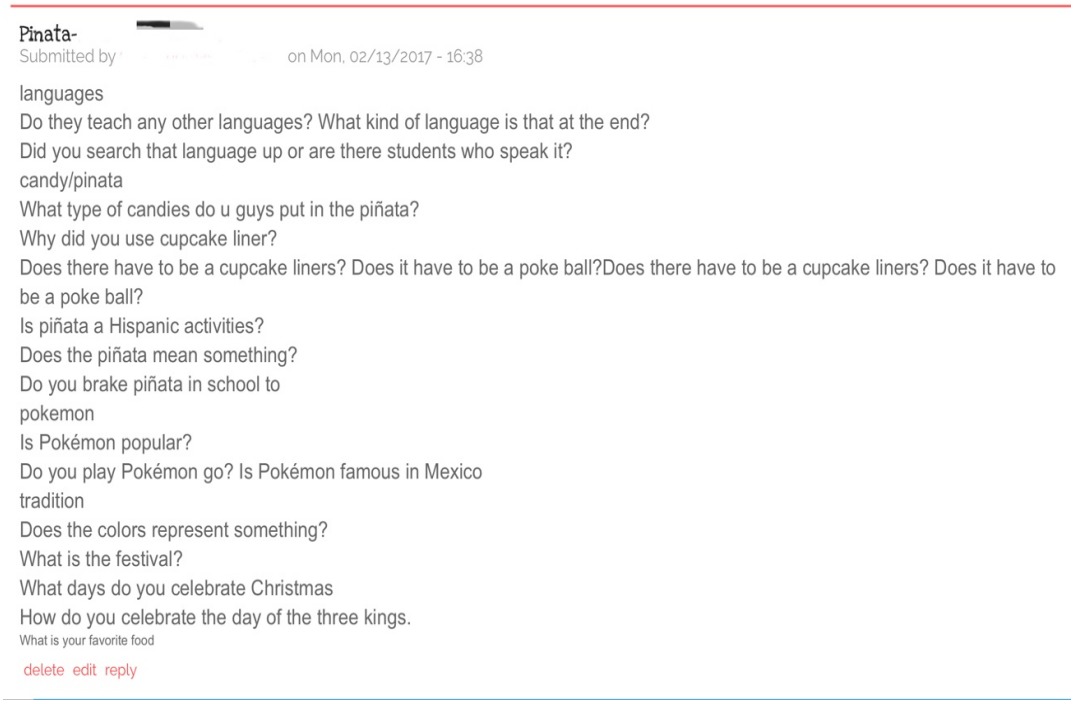


Figure 6.1 Youth Typing on iPads and the Final Padlet Board Posts

fingers scrolling the screen from up to down, and from left to right to check other's comments. After all youth posted their comments on the board (see Figure 6.1 for the youth's typing on iPads and final posts on the board), Ms. Miller asks everyone to face towards the smart board and read the comments together.

Sophia walks to the computer and adds one question regarding the meaning of the color of the ball. Jimmy points, "For the Pokémon, that's actually spelled as (finger writing in the air) with the 'é'." Rachel says that she was unaware of it. Jacob, Jimmy and Mary add that the computer has the automatic error correction function when putting the word "Pokémon" because it was a popular vocabulary at that time. Ms. Miller then opens the project website and asks the youth to upload their comments on it. She asks how they wants to organize the comments from the Padlet board. Jacob replies, "Language, candy, and something else." Oscar adds, "and Pokémon." Ms. Miller asked the group what to put as the subject of the comments and asked Jacob to put his three categories. Then she asked each of the youth to take turns to copy their individual comments from Padlet board and paste them on the project website on her MacBook. Youth take turns to transfer their comments one by one and put them under the specific category, which they think belong to. (see Figure 6.2 for the final version of the youth comment posts on the project website). (Fieldnotes, February 13, 2017)


Pinata-
Submitted by [redacted] on Mon, 02/13/2017 - 16:38

languages
Do they teach any other languages? What kind of language is that at the end?
Did you search that language up or are there students who speak it?
candy/pinata
What type of candies do u guys put in the piñata?
Why did you use cupcake liner?
Does there have to be a cupcake liners? Does it have to be a poke ball?Does there have to be a cupcake liners? Does it have to be a poke ball?
Is piñata a Hispanic activities?
Does the piñata mean something?
Do you brake piñata in school to
pokemon
Is Pokémon popular?
Do you play Pokémon go? Is Pokémon famous in Mexico
tradition
Does the colors represent something?
What is the festival?
What days do you celebrate Christmas
How do you celebrate the day of the three kings.
What is your favorite food

delete edit reply

Figure 6.2 Wintertown Comment Posts on the Project Website

The fieldnotes above show that the Padlet board was used as a temporarily transitional space, on which each youth typed her/his comments and shared with the whole group, and later from which they collected all comments for reorganization and transformation to the project website. It has been discussed in previous sections that the philosophy of including everyone at the same time in using technology was important to Ms. Miller, as she addressed:

> we had a large group, and so, I think sometimes, it was a little challenging to include everyone at the same time and to make sure that everyone had a role and was doing something. (Interview, June 7, 2017)

The Padlet board, here as a response resource, enabled each student to touch the digital screen and input their response at the same time. Through a series of technology-mediated actions, for example QR code scanning and adding, editing and submitting new comments on their iPads, each participant, according to Ms. Miller, at least had a role and was doing something during the meeting. They were also asked to select the background for the Padlet board, subject of the website posting and reorganize the textual posts, through which youth

were engaged in different *response modalities* (Medina, 2010), for instance the layout, font, color and image. Comparing the posts on the Padlet board and project website, the order of the comments was re-organized into four categories on the webpage (see Figure 6.2): (1) language; (2) candy/piñata; (3) Pokémon; (4) Tradition. The four categories reflect youth's noticings from the Mexican video. By moving the comments from one medium to another, the layout was also changed, thus resulting in the comment reading path shifting from a random to a top-to-bottom direction. Due to the specific design of the project website, the emoji icons, for instance the Mexican flag, and the meanings they carried were lost. The reordering of the comments shows an order that well suits youths' intentions of response modality. From a social semiotic perspective, as learners re-order or remake the sign complex, they are engaged in the process of modal changes-- redesigning, which indicates signs of learning and signer makers' roles as designers.

Meanwhile, for youth, touching screens and keyboards, following Bezemer and Kress (2016), "serves as a resource for activating resources that are available with the iPad—available for 'inward' meaning-making, as a means of acting and being in this world" (p. 124). According to Bezemer and Kress, touch is not a mode or a new literacy; instead, it is a means of activating the available resources afforded by the digital platforms, thus it is "part of resources for production" (p. 125). Particularly in the 21st century, when we think about the ways of communication given the supermobility of people in global contexts, touching screens or keyboards seemed to become an essential communicative resource as we do emails, social media, writing assignments, publish in the academic world, and so on.

Facilitators or teachers must embrace touch as a resource in preparing our learners for society.

On the other hand, the fieldnotes above also challenged me to rethink what we mean by youth collaboration and what needs to be done by the adult facilitator for supporting youth to work collaboratively and in which ways. First, it seemed to me that little peer discussion took place among the youth, for each of them was holding an iPad and focusing on typing their comments individually. However, as each participant posted their comments on the Padlet board, all of them were contributing to the conversation and later they shared the questions and had discussions together on how to organize the comments.

Here, I question: in this digitally mediated global storytelling project, what do we mean by collaboration and communication, and how do we understand if the adult facilitator's strategy of using digital tools for supporting or constraining learner collaboration translocally and transglobally helps or hinders? Does collaboration mean the traditional way that all learners orally talk to and listen to each other's opinions either in a small group or whole group in a shared place, like a classroom? Then, in a digital platform, when one is typing their opinions and all the others see each other's posts in a shared digital space, like Padlet board, do we view this as another way of communication or collaboration? Considering this not in this local site, but in the global setting, each site posts their comments to others' video stories on the project website, then later they receive response, as I discussed in Chapter 5. I defined this process occurring online as transnational communication and collaboration mediated by the project website space. In the local space, can this be translocal communication and collaboration mediated by the Padlet space? How can we understand

learning from a sociocultural perspective as it occurs when learners interact and communicate, but situated in a digital context? I think the way we understand individual and group work needs to be redefined in the 21st century when it is mediated by digital platforms and spaces.

Pokéball as an emergent artifact: To connect, or to disconnect?

From the discussion above, it is notable that youth showed high interest in the shape of the piñata—Pokéball — because it connected with their everyday life experience playing the Pokémon Go game in their community. A conversation about the Pokéball was initiated by Ms. Miller before the Padlet posts. It was at the end of the video watching activity when the screen shows a finished Pokéball-shaped piñata (see Figure 6.3), Ms. Miller paused the video following the group discussion as below:

> Ms. Miller asks, "Do you guys know about those?" Students replies: "Yes." Ms. Miller, "What is a Pokéball?" Jacob is excited about Pokéball and says, "A Pokéball like a ball that you can use to catch Pokémon (hand waves in the air to imitate the catching gesture)." Ms. Miller asks, "So, it's just a ball, a real ball?" Jesse responds with his fingers tapping in the air, "You press the middle because there is a button that you press (on the game screen of your phone), when you see a Pokémon, you press…" I ask if Ms. Miller plays Pokémon game and she says she like to play in the future and has heard about this game from her neighbor. Ms. Miller asks if Pokéball can be bought from a store. Jacob tells that it can be purchased from the game and adds that he saw a TV show on Netflix about playing Pokémon game. Jesse points his finger to the direction of outside and states, "If you go to the state park, there is whole bunch of Pokéball stuff there.". Ms. Miller reminds people to be aware of the potential danger playing the game while driving. Jesse explains, "My brother drives me so I can catch them." Sophia shares a story that one of her friends got injured playing the game while walking. Jesse keeps explaining, "In the beginning, when you type on the app, the first thing you say is 'watch where you are going', something like that, so, you don't go into other people's property." Ms. Miller suggested to ask the Mexican students questions about it. (Fieldnotes, February 13, 2017)

Figure 6.3 Screen Shot of *Making Piñata for Christmas* Video

The conversation above shows that the Pokéball shape of the piñata became an emergent artifact mediated by the youth's knowledge of the mobile game that was popular among young and adults in some of the countries, like the U.S. and Mexico. In this game, players use mobile devices to locate, train, capture, and battle virtual creatures, called Pokémon, which appear in various areas with different features and names. Due to Ms. Miller's unfamiliarity of the Pokémon game (a very popular digital game during that time), she showed her curiosity in Pokéball, which was designed as part of the game as a virtual ball to catch creatures. In order to catch Pokémon, users purchase Pokéball in online game stores. Ms. Miller's lack of the game knowledge yet offered the opportunity for the youth to contribute their real-life experience of playing the game in their local place and connecting it with the Mexican video, which mirrors the Mexican youth's interest in this game at the same time. Youth became experts, teaching the adult what the Pokéball represented in the video was, how the spelling of the letter "é" could be correctly input into computer, and what it meant in their community, or family, life. The role of the adult and youth were gradually shifted towards youth-as-teachers and adult-as-learner.

In these transmedia transmodal moments, youth were empowered to draw from their prior digital, social, cultural and linguistic knowledge and experience across spaces and time to contribute to the discussion on the worlds shown by the Mexican children. This, again, speaks to Hawkins's (2014) study in the mediational nature of place that what youth see and notice and respond to in cultural videos stories is mediated by place, by what they know and experience because of their own situatedness in their own place. This lifeworld knowledge, or funds of knowledge, is often not included or embraced by school curriculum and instruction, however, it is part of youth's repertoires that must be recognized and valued by adults because it shows their interests and perceptions of their communities. Teachers, as they aim to facilitate youth from diverse backgrounds, must learn to acquire skills and strategies to re-stimulate youth's recognition that they themselves have resources that can be shared with their local and global peers to generate positive interactions and response. We might question why these knowledges, like Pokémon or other cultural artifacts shown in youth's videos are important or if they are useful. In my study, I argue that this out-of-school lifeworld knowledge, or unofficial knowledge, should be highlighted, particularly for those who live in under-resourced communities, because it offers a space for youth to recognize themselves as questioners and responders, who can become connected with a broader world. Some of the Ugandan students addressed this in a group interview:

> We watch the videos and we ask questions about the videos we have seen… After asking questions, we ask them… we make our videos and we send it… This project makes us feel confident… So, briefly, it lets me not to fear anything. I can ask them questions I like, and they answer. (Interview with Ugandan students, June 27, 2019)

However, a critical consideration is that youth participants in China did not have access to the game at that time because of the Chinese government's decision to ban Pokémon Go due to public and national security concerns. This has been a controversial issue in China since 2016. Therefore, the Chinese youth were not familiar with Pokéball, thus were excluded in some way from the related conversation. In Uganda, none of the youth played Pokémon Go games due to limited access to smartphones and internet, therefore, they were not part of the conversation about Pokéball either. In this way the representation and response to Pokéball became a privileged topic, which was only discussed by children who could afford a smartphone and had access to the game. This seems to lead to unequal participation among the global youth. The Pokéball image represented in the video was an emergent artifact of place, which was inclusive for the U.S. and Mexican youth as they could communicate their shared knowledge, but it excluded the Chinese and Ugandan youth from this conversation. Mobile games are important activities for the U.S. youth, therefore they showed their interests in the Pokéball-shaped piñata. However, in places like Uganda, this topic could not be understood in the same way.

Yet, all of these issues were invisible and unnoticed across the places. No critical discussion was facilitated by any adults in the U.S. or other sites responding to this issue. For instance, no discussion was initiated on the sociopolitical intervention of the game that lead to the exclusion of the Chinese youth from the discourse, or on the unequally distributed socioeconomic resources that left the Ugandan children out of the conversation on this emergent artifact. In Apple and Jungck's (1990) words, "This is bad enough, of course, but in the process even the knowledge that is taught is made safer, less controversial, less critical."

(p. 234). Apple suggests that researchers "join with teachers to challenge the redefinitions of skills and power that are currently going on" (p. 251). In this study, I agree with Apple that researcher and teacher—the adult facilitator—are responsible to pose the controversial and critical issues with youth, engage them to become aware of the critical perspectives behind the sociocultural digital stories they have watched, and provide space for further group discussions. In Hawkins' (2014) words:

> It is the transformation from inquiry to critical inquiry that is called for, if this work is to respond to the ethical mandate of fostering just and equitable transglobal relations. This is not a claim about what is happening in the project, but rather about what isn't. (p. 109)

This holds importance in research but also in practice. The Pokéball-related topic was just one of the examples where sociopolitical contexts influenced the design and content of videos and discussions. For example, while the U.S. site posted a video showing a nice Mexican restaurant where project youth were seated and ordering food, the Ugandan youth told me in an interview that a big challenge for them was that they wanted to videotape how to prepare their local food but they did not have the money to buy the ingredients. How do we address these issues in facilitation for fostering just relations? As we care about transmodal transnational engagement in this project, it is also important to consider what were "immobilized or untransformed due to specific social, cultural and political restrictions" (Li & Hawkins, 2020). In this study, I analyze what was figured into adult facilitation, but what was not noticed or included in facilitation that might have led to neglecting issues of inequity, and limited youth's opportunity to become critical learners. In order to leverage such conversation in facilitation, we might design open spaces for researcher-practitioner co-reflections critically and collaboratively. Though within the GSB project there is a facilitator

chat space, it is not fully utilized, thus facilitators had very little communication with each other across sites to collaboratively discuss their challenges and seek solutions. The geographical distance between researcher and practitioner in this transnational project also challenged such conversations taking place in a global context.

Discussion

Through analyzing facilitator strategies in different group meetings over time, I highlight the use of place and multimedia space as creative and critical resources in facilitating group discussions in the digitally-mediated translocal and transglobal contexts afforded by the GSB project. Findings in this chapter shows that youth can take more responsibility to lead project activities (for instance, producing music in Garage Band; the Pokéball discussion) when the facilitator possessed less knowledge about the topic and youth were therefore able to contribute their real-life experience and funds of knowledge (Moll, Amanti, Neff & Gonzalez, 1992). The goal of facilitation is to provide support for our young learners to discover what resources and knowledge they have from their social and cultural communities and use them to design their own learning path and ways to connect and communicate with global others. Successful facilitation leverages students' interests to decide in which ways they would like to contribute their lifeworld knowledge in a broader context, through which their own cultural worlds can be expanded. Through analyzing the multimedia interactions facilitated by place, I aimed to determine if use of digital space can support more social interactions and collaborations and in which ways. The space in which interactions and collaboration occurs is changing from the physical towards the digital, and the mixture of both. Here, I do not think I can make a conclusion that digital interaction and collaboration is

better for youth learning and global relations than engagement without technologies. Instead, I claim that it is crucial to be aware of changing learning environments mediated by technologies and to rethink how educators and scholars can better collaborate to offer equal participation in those spaces.

Thus far, I have showcased evidence of Ms. Miller's different types of strategies: structural (adult-directed), unleashing (youth-centered), and multimedia methods. Considering the diverse features of the teachers and students in a global context, how we understand student-centered methods can be varied. Either teacher-centered or student-centered approaches seem to, at some level, centralize one subject and marginalize another, which can be problematic when we are to make a binary, either-or, choice on if teachers or students need to be the center. Findings from this study suggest a critical co-designer model, which positions teachers and students as equal partners in co-designing their practices, interactions, and learning environment. Both youth and adults share the responsibilities to become critical learners and social designers. Further, researchers and facilitators (or teachers) should work, present, and publish together so that we can learn from each other.

In the analyses of the noticing and not-noticing of the Pokéball-related discussion, the shift from multi- towards trans- modal facilitation with global youth becomes central, involving transformative practices that engage young learners to not only use multiple modalities and resources in transnational representation and communication but also in thinking about the stories behind stories through a critical lens. In the meantime, as I have discussed in the analyses above, when the nature of place was used by the adult facilitator to mediate the group discussions and activities, it highlighted youth's interests in their living

and knowing, and provides youth opportunities to take more responsibility in the translocal and transglobal communication. Last but not least, as all of the mediational tools and devices were embedded in facilitating and learning, for instance, in responding to the Mexican video, I argue that critical conversation must be scaffolded to involve youth to become not only aware of but also engaged in critically reflecting on unequal issues and cultural, social and political stories behind the video stories that might have led to unequal participation and relations among the global peers.

Conclusion

To end this chapter, I recall that Ms. Miller frequently asked me during my presence in the field to tell her if I thought that what she had done with the youth participants in this site was in the right direction. She considered me as an expert, who had worked for longer time in the project and who could provide her some kind of guidance for successful. However, I respond to this question by asking myself and all other scholars in learning and education: Can we provide guidelines to teachers to become a critical multi/transmodal facilitator? I suspect not. Rather, we can provide a space for the researchers to learn from teachers' critical reflections, listen to their challenges, let them guide us as to how and what to change so that we can build a healthy researcher-practitioner relationship to together better serve our global plurilingual youth in the digital age. At the end of each of my interviews with teachers and youth in Uganda, China and the U.S., I often asked them the same question: "What do you think can be changed in this project?" I did so to offer myself as a participant researcher an opportunity to learn from my research participants and position them as "agents of change"

(Ball 2009, p. 65), rather than objects of change, to help rethink the design of the project and my study from their perspectives.

In order to engage teachers to become agents of change, Ball suggests that we "expose teachers to complex theoretical ideas that challenge them intellectually and require them to use critical thinking, reasoning, and problem solving" (Ball, 2009, p. 70) to learn from their students, and then, make changes with students. I agree with Ball that our work needs to lift up teachers' voices, which are often not fully expressed or represented, and co-design theoretical frameworks with teachers for social justice. Hawkins and Norton (2009) proposed the urgency of critical language teacher education to "address educational inequity" (p. 32), "with the goal of promoting teachers' recognition and ownership of their roles as social activists" (p. 33). In order to do so, they provide three key focuses of critical teacher educators: critical awareness, critical self-reflection, critical social relations with learners. Through analyzing data from the GSB project, it's clear that more well-designed researcher-practitioner/teacher partnerships in the future across places and spaces can afford more creative and critical ways of facilitating youth groups in and out of classrooms. Teachers and educational scholars are playing a significant role in preparing young learners to become critical, digital and global citizen, which first requires critical educators and scholars, particularly, as Hawkins and Norton addressed, critical language teacher educators, who serve students who are often marginalized and underrepresented. We must learn to become agents of change for educational and social equity.

In order to leverage such space between teachers and researchers, first, we need to involve teachers as researchers, and researchers as participants. We need to design the

metalanguage of the communication between researcher and practitioner with transdisciplinary cooperation to better serve underrepresented youth in broader contexts. Particularly, in the field of multi/transmodal transnational communication with emergent plurilingual youth who are living in communities or/and families of poverty, we also need more research collaboration with scholars in language, communication, education, technology, critical theories, economics, and all other related fields to uncover what is unnoticed and underexplored from different but interrelated perspectives in broader social contexts.

Chapter 7

Conclusion

Thus far, this study has discussed the social processes of youth's digital storytelling and transnational communication and the role of adult facilitator in such engagement and encounters. The discussion of data has shown the power of using digitally mediated modalities, tools, resources, and platforms to foster inclusive and transformative spaces for youth to mobilize their senses of selves and global peers. I argue that such spaces can offer new interactive and communicative possibilities for youth to become creative and critical learners. These digitally mediated transnational trans/multimodal design spaces enabled youth to recognize and use their preferred modes and resources to express themselves, and also to co-construct global communities with peers from diverse backgrounds, and for educators to critically reflect on their interactions with youth to better supporting learning.

The discussion of data in this study has also shown that when the youth participants were provided access to digital and global communication, it became possible for their knowledge, resources and repertoires to be mobilized with effective adult facilitation. I claim that these ongoing digitally-mediated movements have the potential to open doors for youth to not only contribute their own knowledge into the global dialogue, but also to become an agentive part of the process of globalization and digitalization.

In this conclusion chapter, I revisit and summarize how I answered my research questions, and discuss the implications of the study and future directions into digitally mediated multimodal transnational learning and communication as inclusive spaces for youth.

Research Questions and Answers

Question 1: *How do emergent plurilingual youth make meanings multimodally and transnationally through digital communication with global others? What counts as children's repertoires and evidence of learning in the 21st century?*

This study moves beyond a traditional monomodal approach that privileges language as the predominating power in emergent plurilingual youth's meaning making. Through analyzing the Wintertown youth's global digital storytelling activities and their transnational communications with their GSB global peers, this study considers youth's repertoires and knowledge as embracing all modes of meaning making and negotiation as they were collaboratively designing their sense of selves, global others, and learning environment across place, people, resources, space and time.

Learning as a multimodal design process

In this study, I address learning as a multimodal design process that highlights learners' agency and interests in decision making, and multimodal (re)designing as learning in digitally mediated transnational contexts, underscoring the sociocultural perspectives that learning takes place in social interaction and collaboration. Following Kress (2010), *multimodal design*:

> refers to the use of different modes – image, writing, color, layout – to present, to realize, at times to (re)contextualize social positions and relations, as well as knowledge in specific arrangements for a specific audience. At all points, design realizes and projects social organization and is affected by social and technological change (p. 139).

As I have discussed in Chapter 4, when youth were producing their digital stories in the Wintertown site, they made a series of multimodal design decisions, for instance, topic

selection, video locations, camera angles, editing, and video making timelines, all of which involved modal recognition, selections, re-arrangement, interactions, negotiation, and transformation. These designs evidenced youth's multimodal learning process in situated cultural, social and digital settings.

In Chapters 4 and 5, I have discussed the interrelated multimodal design sequences in the focal site: framing selves, videoing selves, editing selves, uploading selves, mobilizing selves, and reshaping selves and global others. When youth were producing their digital stories, they were aware of their global audiences and had assumptions of what others might be interested in in their cultural representations. Therefore, they videoed McDonalds and its hot chocolate drink as a typical cultural artifact in their *Wintertown Downtown Tour* video to show that they are part of the citizenship of the U.S. As youth edited their *Downtown* and *Our School* video clips, they were re-arranging their modal assemblages, which indicates a transformative learning process. Chapter 5 further discusses youth's co-construction of their global images and understandings in transnational contexts as youth from different cultural backgrounds watched and commented on each other's "typical cultural artifacts". As youth communicate with youth from other global sites and they encounter similarities and differences, these typical artifacts become visible and shared meanings. According to Agar:

> Culture becomes visible only when differences appear with reference to a newcomer, an outsider who comes into contact with it. What it is that becomes visible in any particular case depends on the LC1 that the newcomer brought with them, a newcomer who might be an ethnographer, or perhaps an immigrant, or a new employee, or a tourist. Different LC1/LC2 combinations, different rich points, different translations, different cultures. (Agar, 2006, p. 5; LC references languaculture, the intersection of language and culture.)

Such communicative designs evidenced youth mobilities from self-representation to global communication, from the local to global, from one culture to multicultural, from one modal assemblages to multimodal ensembles. I consider these semiotic mobilities and transformations as "transmodal moments" (Newfield, 2014) involving "youth's transformative learning and identity negotiation and (re)construction" (Li & Hawkins, 2020), which has potential for social movement.

Learning takes place through interactions and interactivities

In the analyses of youth's digitally mediated engagement I focused on the *interactive features* (Bezemer & Kress, 2016) of their meaning making and negotiation, shaped by both the *translocal/national interactions* among and between the global youth participants, but also the *interactivity* between youth and digital devices, places, objects, and media. The former design component—social interactions— "projects the aspects of the social which may not be visible by other means and hence be beyond common-sense awareness" (Kress, 2010, p. 139); the latter – interactivity— points to technological change with the rise of touch screens which is "driven by and producing social change" and "opens up new possibilities for multimodal design" (Kress, 2010, p. 139).

The social aspects of multimodal design have been discussed in Chapter 4 (from a translocal perspective) and Chapter 5 (from a transnational perspective). They show the GSB youth's meaning making and negotiation through videoing and watching footage of what one site thinks of as "typical" to show to their imagined audiences, and then, noticing, encountering, and communicating the "untypical" to construct new understandings of people, places and cultures. It was the "arc of communication" (Hawkins, 2018, p. 61) that activated

the meaning negotiation and re-construction from invisible to visible, from one site to global ones, from multi- towards trans- modalities. In Chapter 6, through analyzing youth's video response posting using Padlet boards as transitional tools, I argue that technological change in learning and educational environments has facilitated more resources, such as touch screens, to activate new modal affordances in learning, which need to be considered as part of learning and repertoires in the new age.

Question 2: *How can we understand youth's language, literacy and identity development through a lens of multimodality in a global and digital context? What kinds of understandings of self and other can be (re)built and (re)constructed through transmodal transnational communications and representations?*

Through analyzing youth's digitally mediated translocal and transglobal engagement and communication in the GSB project, this study illustrates that the ways in which we understand youth's language, literacy and identity need to be considered in interwoven contexts across print and screens, physical and digital spaces, and local and global places. For example, in this study, youth were languaging not only socioculturally through interacting with their global peers from different cultural worlds, or figured worlds, (Li & Hawkins, 2020), but also digitally, technologically and transglobally interacting with digital screens, devices and platforms. Concepts of language, literacies and identity needs to be expanded as the ways in which youth construct their languaging practices, literacies and identities become multimodal and multimedia.

As I have discussed in the previous chapters, Hawkins (2018) points to a "trans- turn" in applied linguistics facilitating translanguaging, transliteracies, and transidentities, as we

are now communicating with each other in and across hybrid sociocultural and technological contexts. For instance, this study has shown that the GSB youth were engaged in GSB group identities, translocal/global identities, digital identities and multi/transmodal identities, all of which worked together to co-construct their sense of selves and global peers. These trans-engagements have indicated, as Jacob's and Mario's drawings (see Figure 4.10 & 5.2) show, expanded social and digital mobilities through communicating their cultural worlds with one another. Leander and colleagues (2010) define the movement mediated by technologies as virtual mobilities, which has expanded contemporary learning contexts to:

> consider how children are using new technologies and digital media to build social connections across space- time, produce virtual "places" in online spaces, and otherwise interrupt the spatiotemporal contours of their lives. These two forms of mobility - akin to Appadurai's (1996) "ethnoscapes" and "mediascapes" - shape our binocular vision concerning the contemporary trans- formation of types of learning, situations for learning, and opportunities to learn. (p. 330)

Miller (2010), drawing from Lankshear and Knobel's (2003) notion of *performance knowledge* and *knowing as an ability to perform*, emphasizes that learning in the informational age is to know how to design new ways of information seeking and communication by assembling and orchestrating knowledge and resources. According to Miller, more students come to school with profound digital languages, literacies and identities. Schools and educators should recognize the "digital turn" (Mills, 2010, p. 247) in education and understand that our learners are not non-native speakers in a certain mode required by institutions; rather, they might have already been "digital natives" (Prensky, 2001) in their "digital networks" (Lam & Rosario-Ramos, 2009, p. 173). According to Mills, multimodal literacy has been "a reality of our fast-changing, globalized textual environment"

(Mills, 2010, p. 251), which provides more interactive possibilities compared to written forms (Bezemer & Kress, 2016).

From a social semiotic framework, Adami (2015) distinguishes social interaction from website interactivity afforded by digital texts, which offers new sites of (inter)action, such as screen click and touch. In Chapter 6, through analyzing Ms. Miller's use of Padlet boards to facilitate the focal site group meetings, I have shown that the affordances of touch screens and the *interactive sites/signs,* such as "links, buttons, and fields" (Adami, 2015, p. 136) have provided the youth an alternative space to collaborate and communicate digitally and transnationally.

Question 3: *What kinds of adult facilitation can be provided to support youth's creative and critical roles in these engagements for socially and culturally just relations in the digital and global age? What spaces can be created for researchers and practitioners to co-create such multimodal design spaces for youth?*

In Chapter 6, I have showcased Ms. Miller's multimedia approaches using place as useful tools and strategies (structuring and unleashing strategies) in facilitating the Wintertown group meetings. By using place as a facilitative tool, Ms. Miller created multimedia spaces for youth to bring in their knowledge of local places and link it with the global digital stories they watched. I also analyzed the multimedia platforms, such as Padlet boards, that were used in these project activities, and showed that screen touch can be a crucial resource in facilitating the group discussion in the GSB project.

I also found that when Ms. Miller applied an unleashing strategy due to her lack of knowledge of GarageBand, youth were able to take more responsibilities in using this music

production tool to design their music pieces as their video background sound. The discussion of the data shows that youth can become creative and active video producers when they are empowered to bring in their digital skills, interests and experience into the collaborative digital storytelling process. This was also reflected when youth contributed their knowledge of *Pokéball* to connect with the Mexican video posted on the GSB project website, because Ms. Miller was unfamiliar with this digital game. These unleashing moments, to some extent, manifest the possibility that youth can take the leading role in their digital and global engagement if their knowledge and repertoires are recognized and embraced. I argue that the role of educators is to create such moments to facilitate and scaffold these young learners to become leaders in the dialogue, interaction and communication, locally and globally, digitally and technologically.

Chapter 6 also discussed the possibility of supporting teachers to become social justice facilitators to address controversial and critical issues in group conversations to prepare critical learners and future leaders. In addition to the analysis of what was noticed in Ms. Miller's facilitation, I also considered what was not noticed in all GSB project site facilitation and group discussions. I found that little attention was given to critical perspectives of digital stories and online communications. It evidences the need for facilitators to have more sensitivity, awareness and knowledge of the issues of inequities, power, relations and access and embed them into the group discussions. In this way, youth can be enabled to learn the stories behind the stories and become engaged in critical participation as agents of change in global contexts. In order to gain this goal, we must shift from multimodal towards transmodal, social justice learning and facilitation that:

> not only highlights the mobilities and dynamic relations of meaning making and people, but also queries what modes are privileged or neglected, and what meanings, or figured worlds, are immobilized or untransformed due to specific social, cultural and political restrictions. (Li & Hawkins, 2020)

I argue that it is crucial to not only bridge global communication and provide "adult support" in making the discussion fluid, but also to foster open and inclusive spaces for critical conversations that facilitate those invisible sociocultural issues to become visible, recognized and addressed. The goal is not only to raise up youth's awareness of but also their engagement in the critical and controversial stories and events so that possible social change can be made by them locally and transnationally. In order to achieve this goal, open spaces must be provided to support collaboration between researchers and practitioners, domestically and internationally, to co-reflect on their practices, experience, interests, and challenges.

Implications

Repertoires not only involve linguistic modes, but also non-linguistic modalities and social semiotic resources. Specifically, learners today are living in digital worlds, and their digital repertoires need to be recognized and explicitly highlighted in learning and facilitating. This study offers a heuristic approach for multimodal learning and facilitating with increasingly diverse learner populations and complex learning contexts:

> to capture the dynamics of mobility and travel across media, modalities, information nodes, communities, link pathways, and networks that demand and generate new kinds of learning, (meta) cognitive routing, multi-semiotic literacy, identity construction and performance, community ethics, and sociality. (Luke, 2003, p. 402)

This study reflected social activities taking place in the GSB project, focusing on "sites of learning as alternative education spaces" (Hawkins, 2014, p. 98), involving global youth

participants, teacher facilitators and researchers, all of whom participated in and co-shaped human interactions and human-computer interactivities in the project. We need transdisciplinary tools, methods, concepts and approaches to collaborate in co-fostering multimodal design spaces for preparing social futures. Findings suggest the need for a multimodal multimedia design space for youth in order to maximize the visibility of youth's multimodal and multimedia resources and the possibilities to mobilize these resources for social change.

In this study, I argue that a multimodal learning and facilitation approach highlights the semiotic resources and modalities youth possess from their profound digital, social and cultural worlds. Transnational digital storytelling and communication can be an alternative way of providing inclusive space for such approaches for emergent plurilingual youth. I believe that when emergent plurilingual youth are empowered to have the multimodal freedom and right to use their preferred resources and modalities to express and represent themselves, to design and produce and to communicate with the world, they can become social contributors with confidence, comfort and creativity. A multimodal facilitator can co-create such space with youth to ensure that youth's knowledge and repertoires, particularly their out-of-school lifeworld knowledge, becomes recognized, valued and mobilized.

Lastly, in order to counter injustices and inequalities in the world, this study suggests that we need to explicitly pose controversial and critical issues to youth so that they can learn in a real-life space to become aware of the complexities of the world, particularly the complexities of relations between geographically, culturally and linguistically diverse peers.

Future Directions

By bringing in a lens of multimodalities and transmodalities in learning in this qualitative case study, I acknowledge that we need more close collaborations between and among educators, practitioners and researchers to work together to develop "new hybrid methodologies and theories" (Luke, 2003, p. 402) to better understand how digital technologies can be more effectively integrated into youth's everyday learning. However, we now know comparatively little about how to use emerging new technologies for educational and social equities. How can education provide critical digitally-mediated learning for all youth addressing the unequally distributed materiality, access and power? Multimodal research can be problematic if we have "monomodal researchers" conducting educational research. The future of multimodal research needs researchers to work multimodally and transnationally to pursue more questions of equity in learning and education, and to work together to cultivate inclusive and equitable learning environments for under-represented students in the digital age.

Appendix A
Observation Protocol

Researcher Name: _____
Date of observation: _____
Time of observation: _____
Location: _____
Researcher Participants: _____

Summary:

_____
_____

Contextual Description (Activities observed)	Other notes about the group or individual

Multimodal Representation (youth-produced artifacts: images, photos, video clips, drawings)

Multimodal Communications and Interactions

Time	Interactions (youth-youth)	Interactions (youth-adult)	Multi/Transmodal Moments	Emergent/Critical Incidents

Researcher Reflective Dairy (e.g., positionality, theories, methods, concepts, questions)

Appendix B
Group Interview Protocols/Students

1st Group Interview

1. Tell me about Global StoryBridges Project.
2. What do you look forward to most about this project?
3. What do you think is the most interesting part of the project to you?
4. What do you think would be the most challenging thing working in the project?
5. What do you hope to learn from the project?
6. What do you know about other GSB sites?
7. What do you want to know about children from other GSB sites?
8. It there anything that anyone wants to add that I didn't ask?

2nd Group Interview

1. Tell me about what you have done in the GSB project.
2. What have you learned from the out-of-school project?
3. What do you know about other GSB sites?
4. Imagine that I am a brand-new kid in your class and Ms. Goldberg asked you to be me guide participating in the project. What advice would you give me to learn more? What would you tell me to help me be a good learner? How did you communicate with children from other places in the world?
5. Tell me about a time that you felt that you really learned a lot.
6. Tell me about a time that you felt that you were challenged.
7. It there anything that anyone wants to add that I didn't ask?

Appendix C
Interview Protocols/ Facilitator

1st Interview

1. Tell me about the GSB project and why and how you become involved in it.
2. What is your role in the project?
3. What is it like being a GSB facilitator supporting the children to learn?
4. Tell me about what a successful facilitator looks like to you?
5. What do you think you would gain from the project?
6. What do you think might be a challenge?
7. What do you think the children will gain from the project?
8. If you could design, from scratch, an out-of-school learning environment that would support children to be successful learners, what would it look like?
9. Is there anything else you would like to add that I didn't ask?

2nd Interview

1. Tell me about your experience working in the GSB project.
2. Tell me about the children in the project.
3. What is it like being a GSB project facilitator?
4. Tell me about a time that you felt really successful with the children.
5. Tell me about a time that you felt really challenged working in the project.
6. What have you gained from the project?
7. What do you think the children have gained from the project?
9. Is there anything else you would like to add that I didn't ask?

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