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**English Language Learners Learning Strategies' in the Classroom:
A Multiple Case Study of Adolescent Newcomers in a Middle School**

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**English Language Learners Learning Strategies' in the Classroom:
A Multiple Case Study of Adolescent Newcomers in a Middle School**

by

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Dedication

This work is dedicated to my grandfather, my mother and my father. My grandfather taught me from an early age to be curious about this world, and to never turn down an opportunity for education. My mother, a middle-school English teacher, taught me to find a career that brings joy, challenges, and opportunities for growth. My father who supported me through this process and encouraged me to keep going.

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**English Language Learners Learning Strategies' in the Classroom:
A Multiple Case Study of Adolescent Newcomers in a Middle School**

Elizabeth Marie Steinbach, Ph.D.

The University of Texas at Austin, 2019

Supervisors: Jo Worthy and Deborah Palmer

This study was designed as a qualitative case study focusing on four Hispanic, newcomer, adolescent students enrolled in a Title 1 middle-school (grades 6-8) in a metropolitan area of Texas. The data collected for this study include a) pre- and post-study semi-structured interviews, b) student artifacts, c) classroom observations, and d) participant-observer designed lessons. The data were coded by employing constant comparative method (Glaser & Strauss, 1967) and analyzed using inductive analysis. Findings revealed when ELL students are able to use technology and collaborate, they employ a variety of dynamic learning strategies. Additionally, learning is enhanced when teachers encourage L1 to support English learning, have integrated content and language classes, and support collaborative learning. Implications for pedagogy and policy will be discussed.

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Chapter 1: Introduction

ENGLISH LANGUAGE LEARNERS LEARNING STRATEGIES' IN THE CLASSROOM: A MULTIPLE CASE STUDY OF ADOLESCENT NEWCOMERS IN A MIDDLE SCHOOL

In my own teaching practice as an ESL instructor for the past sixteen years, I have seen significant changes in the impact and use of technology in the classroom. Before iPads and smartphones, technology use in the classroom was limited to computers. If students were working on a computer project, it was controlled. I could see what students were doing easily. With the introduction of iPads and smartphones into the classroom it became harder to monitor students' use of technology. Were they using their technology for learning, or were they focused on other activities that were not related to the given classroom tasks? When smartphones first entered the classroom, I had strict policies on how they could be used. Students were asked to turn their phones off and put them away. Inevitably, the phones never stayed packed away for very long. I became curious about what was so urgent that a student needed their phone during classes. As a result, I started asking students what they were using their phones for. The vast majority of students were using their phones in productive ways that were related to class. This led me to reconsider what role smartphones and iPads would have in the classroom. Students were using technology to help them learn in ways that I could not as their teacher. For example, I could not translate key vocabulary from English into multiple different languages, but their smartphones could. It also contributed to me wanting to investigate further what students were doing with technology to learn English. In this dissertation I investigated

how newcomer emergent bilingual (EB) students in middle school used technology to learn English. Like the students in my adult ESL classes, I found that they used technology in productive and creative ways to learn.

Immigration patterns in the US have changed significantly in recent years. In 2005, immigrants made up 12.4% of the U.S. population and by 2040 it is projected that one in three students will grow up in immigrant homes (Suarez-Orozco, 2008). Since the 1990s, there has been a large increase in adolescent newcomers (CAL, 2003), and the U.S. now has one of the most diverse secondary school-age populations in the world (Zhou, 1997).

By 2030, the kindergarten-through-grade-twelve school population in the United States is projected to be approximately one third (Suarez-Orozco and Suarez-Orozco, 2008) to 40% English Language Learner (ELL) ¹ (CAL, 2003; Thomas & Collier, 2001); In 2011-2012, the population of ELLs in the United States school system was already 4.4 million or 9.1 percent of the school age population, an increase from 4.1 million in 2002-2003 (NCES, 2015). It is important to note that these numbers represent the overall enrollment in the U.S., but the number of ELL students in Texas is higher than the national average. In Texas, ELL students, representing 120 languages, reached 17.5% of the school-aged population in 2013-2014, up from 15.3% in 2003-2004 (Texas Education

¹ The term E.L.L is the official label the U.S. government uses to describe students who are learning English as second language. However, this term has been criticized because it emphasizes what students do not know, English, instead of emphasizing the asset that they have as becoming bilingual. The more inclusive term is Emergent Bilingual (EB) created by Garcia (2009) in order to highlight the assets of a person becoming bilingual. In discussing government records and publications that use the term ELL I will use that label. However, when I am referring to my participants, I will use the label EB to honor their journey in becoming bilingual people.

Agency, 2015). Importantly, 89% of these students are classified as “economically disadvantaged.” 90% of ELL students are Hispanic in Texas (TEA, 2015). In Texas, 51.1% of the total student population is Hispanic ²

Adolescent, newcomer students are challenged with the arduous task of learning English and content-area knowledge simultaneously. Students who enter United States schools during the middle and high school years, especially those who have had interrupted schooling, have a lower probability of graduating from high school for many reasons, but especially the fact that they have not had enough time to develop the academic literacy in English required for a high school diploma (CAL, 2003) is an important difficulty. Schools that support, encourage, and promote immigrant students’ learning especially in the area of academic English have had higher success rates (Suárez-Orozco & Suárez-Orozco, 2009; Bartlett, 1997). Social relationships appear to be significant contributors to student success. Whether a student feels competent to engage with teachers, other students, and administration staff, and if they receive positive feedback and “have a sense of belonging,” all contribute to the level of a student’s engagement in schoolwork (Suárez-Orozco & Suárez-Orozco, 2009).

Although the ELL population has grown substantially in the United States in recent years, the number of language support programs to assist ELLs gain the language skills necessary to access core curriculum has actually decreased. While 72% of the ELL

² This number represents the number of students who report being ethnically Hispanic, but not necessarily Spanish speakers.

population is Spanish-speaking, there have been cuts to bilingual programs and an overall increase in ESL programs, and 11.7% of ELL students receive no language support services at all (August, 2006). The most common programs in the United States for language-minority students are ESL pullout programs and sheltered instruction programs. These types of English-only support for ELLs represent 52% of programs (August, 2006).

ESL pullout programs, in which students are pulled out of their classrooms by an ESL teacher for separate English lessons, have come under scrutiny in recent years with several studies showing that students in these programs actually fall further behind in their academic studies (Callahan, 2005; Valdes, 2001; Zhou, 1997). This is likely because while they are being pulled out from their mainstream classrooms to receive their English lessons, they miss important content-area instruction. Importantly, these students' test scores are significantly lower than students who did not receive ESL pullout services, and Callahan (2005) maintains that they are less likely than other ELLs to be prepared for college by high school graduation.

In an attempt to keep ELLs in the classroom, there has been an increase in sheltered English programs in recent years. In order to grant students better access to core curriculum concepts, these programs are designed to scaffold language instruction while offering content-area curriculum. Sheltered English programs require teachers to identify and provide the kinds of language necessary to understand and build content knowledge. In this model, teachers provide modified instruction, such as increasing use of visuals,

building background knowledge related to a topic, and using shorter, simplified language to help ELL students better understand the concepts being taught (Diaz-Rico & Weed, 2005). One problem with sheltered English programs is that teachers often view these approaches as “just good teaching practices” and do not recognize important differences in first and second language learning (Harper, 2013). For example, when ELL students come to the U.S. at age 13, they will likely have already had a number of years of education in their home country resulting in some knowledge of academic registers in Spanish. Because Spanish and English share a large number of cognate words in academic language (Bravo, MA., Heibert, EH., & Pearson, PD. 2007), students would be better served by studying cognates between the two languages than simply studying English vocabulary.

In addition to pull-out and sheltered-immersion ESL programs, Texas public schools often offer bilingual schooling for students from Spanish and English backgrounds. The main focus of many of these programs is not to help students maintain Spanish, but instead to transition them to English instruction by grade 4 or 5. However, if students arrive in the Texas after grade 5, bilingual options are not commonly available to them (Texas Education Agency TEA, 2018). Even though Texas has bilingual programs, direct language classes are the most common (National Center for Educational Statistics NCES, 2018).

THE STATUS OF ELLs IN TEXAS

Unfortunately, only 18.7% of ELLs are reported to achieve minimum standards in reading comprehension in Texas (August, 2006). In addition, secondary ELLs in Texas are three times less likely to receive a high school diploma or equivalency than their English-speaking peers (August, 2006). In terms of the population addressed in this dissertation—secondary school newcomers—the percentage of students failing to complete high school successfully is much higher: 51% of students with limited knowledge of English do not complete high school in Texas (August, 2006). In more recent measures, ELL students taking the “end of course” exam to complete high school, 29% of ELL students pass the English I portion, whereas 64% of students not classified as ELL pass this portion of the exam (Migration Policy Institute, 2018). In considering these statistics it should be noted that these numbers do not take into account students who have achieved minimum standards on a standardized reading test and were therefore reclassified as non-ELL students.

In recent times, second language researchers have been stepping away from looking at deficits and focusing on what assets EB students bring with them to the classroom already (Moje, 2002, Gutierrez, 2000, Street, 2003, & Gee, 2004, Garcia & Sylvan, 2011). The focus on assets takes into account the skills and knowledge that students use to learn in order to build better pedagogies for diverse student populations. A new area of inquiry for researchers interested in asset orientations toward second language learners has been observing how EB students use technology to acquire

English. Li, Snow, Jian, and Edwards (2014) noted that there have not been enough studies conducted in order to gain a better understanding of how technology may help EB students acquire language skills in the classroom, especially EB students who have arrived as adolescents to U.S. schools.

By researching how adolescents use technology in the classroom, we can design better ESL programs. In a meta-analysis of research on using tech to learn English, Golanka, Bowles, Frank, Richardson, and Freynik (2014) found that students who engage in collaborative chat online produced more complex language. Li et. al. (2014) found that students from lower socio-economic status had access to technology, and that more needed to be understood of how EB students are using technology. Both of these studies offer promising conclusions about using technology in the language classroom; that students have the propensity to engage in more complex language learning and students with less means do have access to technology. Using a qualitative multiple case study design, this study addresses the following research questions:

- 1) How did EB students use technology to support learning in a U.S. middle school context?
- 2) What language strategies did the EB students in this context use in the classroom to learn?

Chapter Two: Literature Review

OVERVIEW OF L2 LANGUAGE ACQUISITION: THE BASICS

Newcomers with L1 academic literacy tend to develop academic literacy in a second language within a span of five to seven years (Collier, 1989; Cummins, 2000). Scholars have developed a range of definitions for academic literacy, referring to it as de-contextualized, grammatically complex, and/or containing specific vocabulary, genres, and grammatical structures based on subject area (Collier, 1989; Cummins, 2000; Gee, 1996). Gee (2008), for example, refers to academic literacy as

This school based literacy is associated with the values and aspirations of what Bernstein has called the “new middle class,” that is, elites who do not actually own the sources of production, as the elites of the older capitalism did, but control knowledge, ideas, “culture”, and values. (p.62)

Edelsky (year?) asserted that making a distinction between academic language and conversational language ignores the inherent “social practices” and “power relations” embedded in literacy practices (Cummins, 2000). Both Gee and Edelsky argued that academic literacy is not neutral, but rather is fraught with ways of being and knowing in situated contexts. Cumming posited a more general definition of academic literacy, stating “There are multifaceted conceptualizations of literacy abilities (spanning microlevels of cognitive skills as well as socio-cultural practices in relation to macro-societal structures) are necessary for research to be able to act effectively on them to

facilitate student learning” (Cumming, 2013). While the concept of academic literacy is disputed, a definition of academic literacy is needed in order to be able to conduct research and help students reach their academic goals.

In a synthesis of research, Collier (1989) concluded that there are several factors that contribute to L2 academic literacy development: age of arrival, continued development of the L1, years of schooling in L1, and the availability of bilingual education. Researchers disagree on the impact of “age of arrival/acquisition” (AoA) on the development of L2 language skills. AoA seems to have the most impact on pronunciation (individuals who arrive after puberty are most likely to retain an accent), but it seems to matter less to the ability to obtain communicative competence (Collier, 1989; Birdsong, 2005; Cummins, 2000). AoA also seems to have a more significant impact on latecomers (i.e., those who arrive as adolescents), even though in some studies on the topic they acquire academic language at a faster pace than their younger counterparts (Birdsong, 2005; Green, 2005). Required to continue education in their L2, adolescent newcomers have a much shorter time to master content-area knowledge before graduating from high school. Since ELL students have to master both content and language simultaneously, this leaves them at a higher risk for failure (Collier, 1989).

Another factor that contributes to the success of L2 acquisition is the continued development of the L1. Students who do not continue to develop their L1 as they learn their L2 tend to score lower on standardized achievement tests (Collier, 1989). Collier pointed out that it takes a monolingual learner at least 12 years to fully master their language in an academic context; it should therefore not be surprising that students

learning ESL in school benefit from continuing to develop academic skills in their L1. As ELL students (like everyone else) progress through the grades in school, they become more cognitively developed, and encounter increasingly complex schoolwork, while continuing to develop their L1 (Collier, 1989). If the two languages develop simultaneously, gradually skills and strategies will transfer from one language to the other and vice versa (Cummins, 2000). Cummins called this the “interdependence hypothesis.” Furthermore, although students may have two language systems, they do not store the knowledge from these two languages separately (Cummins, 2000). If a student learns about a math concept in one language, he/she will know the concept in the second language, but just may not have the language skills yet to express the idea; this is Cummins’ hypothesis of a “common underlying proficiency.”

In more recent research, scholars are debating whether there are in fact two separate language systems. Many researchers argue that cognitively there is only “one language system.” As a result, when people are learning or acquiring an additional language they are using the same cognitive systems in the mind that are utilized for learning first language/s. This idea serves as the basis for explaining how the first language supports second language learning and why languages are interdependent (Garcia & Sylvan, 2011, Garcia & Wei, Dworin 2003, Martin-Beltran 2014, & Menken, 2013).

As Collier noted that two factors that aid in L2 academic literacy are years of schooling in the L1 and the availability of bilingual education, students in this study have limited background knowledge in content subjects that are based on knowing about the

U.S, like social studies and English language arts, as they enter mainstream U.S. middle school classrooms. Bilingual education is rarely available at the middle school level in Texas. According to Cummins, when students have limited content knowledge, they may not have learned adequate levels of information in their L1, nor have reached the required threshold of L1 academic literacy that Cummins implies is necessary to reap cognitive benefits from bilingualism.

In addition to the lack of availability of bilingual education for middle school students in Texas, teachers responsible for preparing students for academic work in English often have different views of student needs. ESL teachers prepare their students for the mainstream classes, whereas English language arts teachers often find ESL students to be ill-prepared for the mainstream class (Valdes, 2004). Students caught between these two different views of learning English find that the two classes have very different learning expectations.

These different learning expectations often are reflected in conflicting definitions among researchers of what constitutes academic literacy. High-stakes tests are examples of what Cummins refers to as “decontextualized” academic reading and writing (Cummins, 2000). These tests strictly define literacy as reading and writing in English. Thus, high-stakes testing dictates the ways students are expected to make meaning of L2 texts. Cummins’ conception of “decontextualized” text is disputed by Edelsky (2006) who argued that in order to be able to read and write, students must have sufficient command of a “value-laden” curriculum that dictates the ways in which one can make sense out of an L2 text. The concept of a “value-laden” curriculum draws on the idea that

there is not such thing as a “decontextualized” academic text, because all texts are imbued by society with values, traditions, culture, and specific language. For instance, schools mandate certain reading lists, and dictate the ways in which text should be understood and organized (Edelsky, 2006). All texts are socially embedded and require more than just a system of decoding to understand.

To help understand the process children go through in acquiring academic literacies at school, Cummins (2000) drew a distinction between BICS (Basic Interpersonal Communication Strategies) and CALP (Cognitive Academic Language Proficiency). BICS constitutes our social language, the language we use in everyday conversations to communicate with people, while CALP is the academic language that constitutes the decontextualized content students must learn in school. It should be noted that Cummins has moved beyond thinking of BICS/CALPS as dichotomous to theorizing that language development also includes, in addition to BICS/CALPS, contextualized and decontextualized text (Dworin, 2003). In an effort to respond to his critics, Cummins (2000) refined his BICS/CALPS model to include four different quadrants. In this later model, quadrants 1 and 2 represent BICS, quadrant 1 being more contextualized language. Quadrants 3 and 4 represent CALPS, with quadrant 3 representing more contextualized language. All of the quadrants are interdependent (Cummins, 2000). Cummins’ critics were not persuaded that this model can account for L2 academic language learning (Dworin 2003 and MacSwan, 2007). However, Cummins’ work is still referenced in many educational policy documents. In addition to Cummins’ ideas about L2 reading development, he also asserted that if an L2 reader does not have L1 literacy,

then the best approach is to go back and teach literacy in the L1 (Cummins, 2000). In general, this theory does not fully explain the experiences of many adolescent immigrants who enter the schools with limited L2 academic literacy skills. Specific to the participants in this study, the model assumes a one-way language transfer, implying that it is only possible for a student to move forward if they have full literacy in their L1. Instead, it may be possible that L2 instruction could have a positive effect on L1 literacy (Dworin, 2003).

Others have asserted that this idea of a one-way language transfer does not reflect the nuances of students learning in an L2. In Hornberger's (1989, 2003) model called "continua of biliteracy," the languages being acquired are irrevocably connected; the languages have a constant influence on each other (Hornberger, 1989). Hornberger updated her initial theory in 2003 to account for the power relations that are present on every point of the continua. She advocates for teachers and students to examine language use through a critical lens. This means teachers and students need to be critically aware of when and how language is used in order to give students voice (Hornberger, 2003).

Aligning with Hornberger's continua of biliteracy, I would assert that if students are working with limited L1 literacy, they are likely to be drawing on other assets, perhaps assets less valued in the traditional classroom but nevertheless supportive of their learning, in order to make sense of an L2 text. The research reported here explored other strategies, skills, and knowledge that students with limited L2 literacy may be drawing on.

Most recently, scholars have developed a new theoretical framework to see biliteracy as a dynamic process where all language knowledge is connected and interdependent: translanguaging. Languages, according to translanguaging theory, are not separate silos in our brains, but interdependent. In fact, the bilingual individual does not him/herself need to distinguish between “named” languages when doing cognitive work, only when speaking to individuals who are not similarly bilingual or in contexts where both “named” languages are not equally acceptable. For emerging bilingual students, both new and native languages inform each other, creating a form of linguistic symbiosis where each language supports and bolsters the knowledge and understanding of the other, and where language practices associated with each of the “named” languages serve to support the student’s learning. Students will often engage in translanguaging, a process of drawing on both new and native languages at the same time, to master the task that is in front of them (Garcia & Sylvan 2011, Creese and Blackledge 2010, Garcia and Wei 2014, Duarte 2019, and Martin-Beltran 2014).

Researchers Creese and Blackledge (2010) described translanguaging classrooms in two distinct settings in the United Kingdom. Both classrooms were “community language schools,” one taught Chinese and the second school taught Gujarati. From their observations in both schools, the researchers concluded that using both languages for community announcements and classroom teaching was necessary in order for students to make sense out of the information. In addition, when bilingual students are given the space to use their languages freely, they use both languages as resources for learning as well as adding positively to student confidence and identity (Creese & Blackledge, 2010).

This study adds to the argument that segregating languages is more of a hindrance than a help in student learning.

Menken (2013) conducted a review of research on emergent bilinguals in order to emphasize the complexity of students' literacy and language practices and how monolingual teaching practices do not serve this student population. She found in her review of literature that if bilingual students are treated like "partial monolinguals" current learning and teaching practices will not meet the needs of these students. She further argued that translanguaging is a better lens in which to understand the complexity of emergent bilinguals learning practices (Menken, 2013). Menken's review of literature adds to the growing body of research contributing to an asset view of learning versus a deficit view.

Researcher Martin-Beltran (2014) conducted a study on a multilingual language program in Washington D.C. that focused on bringing together language minority and language majority students studying English and Spanish. This program was meant to address the segregation that many English learners experience during schooling. Many ESL students are put in separate ESL classes that limit their access to their English speaking peers and thus limit their language learning opportunities. She found that if students are given the opportunity to work together to solve language problems they will engage in co-constructing meaning together which results in language learning in their output of written work and later conversations. She concluded by stating that translanguaging spaces are transformative learning spaces that allow students to access all their cultural and linguistic tools to learn (Martin-Beltran, 2014). This study highlights

the importance of not having an “English only” environment for learning. If students are given the space to draw on all their resources, learning outcomes may be better.

Duarte (2019) described translanguaging as bilingual/multilingual people drawing on multiple languages to construct meaning. Duarte conducted a study to examine the translanguaging practices among language minority students in four different 10th grade classrooms in Germany. What she found is that if students were given the space to use translanguaging, they engaged in learning activities at the same level of interaction as monolingual groups. In addition, translanguaging allows students to free themselves from socio-cultural norms on participating in only one language and allows them to focus more on the learning task (Duarte, 2019). This research further highlights other translanguaging research findings of not confining a student to use only one language for learning. Students who have the space to draw on their languages will use all their cultural and linguistic resources for learning.

The theory of how languages are learned has transformed in recent years. Although historically Cummins (2000) made a case for a process of language learning in which languages were considered separated cognitively, this is no longer the dominant view. Many researchers today theorize that there are no cognitive differences between languages (Garcia & Sylvan 2011, Creese and Blackledge 2010, Garcia and Wei 2014, Duarte 2019, and Martin-Beltran 2014). Languages are social and political conventions. If there are no cognitive differences in languages than the way languages are learned should draw on all cognitive resources and not be restricted to policies like “English only” in a school setting.

COLLABORATIVE LEARNING AND TECHNOLOGY IN THE ESL CONTEXT

In this section I review the literature available on collaboration, technology, and vocabulary learning in the field of L2. In order to find literature based on these two topics, I used the EBSCOhosts database that incorporated the databases “academic complete”, “ERIC”, and “PsycINFO”. In the initial search I used the terms “ELL or ESL or English as a Second Language or English Language Learners”, “Technology”, and “Middle school or Junior High School or sixth grade or seventh grade or eighth grade”. The initial yield of articles was 251. I then scanned the abstracts to look for articles that included “collaboration”, “pair-work”, “group-work”, “vocabulary, and peer-reviewed articles published after 2010. I found 45 articles that met this criteria. Because my project is focused on students, I then excluded articles that focused on teaching and teachers, which left me with thirty-two articles. I then input these articles into a google spreadsheet using the categories “title, author, journal, publication date”, “research question/s”, “findings”, “theoretical contribution”, and “study design”. I then coded the spreadsheet into two different categories, studies that focused on collaboration that did not include technology, and studies that included technology and collaboration. In addition to this literature, I carried out another search for articles in the same databases using “meta-analysis”, “technology”, and “ELL or ESL or English as a Second Language or English Language Learners”. Through this search I found one meta-analysis on the literature on technology and ESL. Additional searches were conducted using the search terms “socio-cultural”, “ELL or ESL or English as a Second Language or English

Language Learners”, and “k-12 or elementary school or middle school or high school or secondary school”.

Collaborative learning has been noted to play a significant role in education and learning. Normally when peers collaborate together there is cross-linguistic talk. This cross-linguistic negotiating was coined as “linguaging” by Swain (2006), and more recently “translanguaging” by Garcia and Wei (2014) (see above brief review of this work). In the field of bilingual studies there have been many prominent scholars, such as Gutierrez, Baquedano-Lopez, and Tejeda (1999) and Orellana (2015) that clearly inform this study as I am similarly engaging emerging bilingual students in interactional spaces in the interests of understanding how they make sense of text in their new language. However, in this review I have chosen to focus on research that integrates the use of technology and collaboration in group work within the ESL classroom.

The purpose of this study was to investigate what strategies EB middle school students used to learn English when given the opportunity to use technology and work collaboratively in their ESL classroom. The research in this area of inquiry is limited (Li, Snow, & White, 2015; Golonka, Bowles, Richardson, & Frank 2014). In studies previously conducted, the use of technology in the classroom has had variable results, some positive and some neutral. What Li et. al (2015) noted was that there needed to be more studies conducted on what ELL students are using technology in the classroom for. Other researchers have observed collaborative work gives language learners more opportunities to draw on the target language and have access to other peers’ language resources (Mayo & Zeitler, 2016; Lin, Lau, & Ho, 2014; Gagne & Parks, 2013;

Menniam, 2012; and Swain & Lapkin, 2000). Many of these studies used collaboration in conjunction with technology resources for language learning. I will review these studies in the following categories: collaboration in the classroom; collaboration with the use of technology; and collaboration, technology, and vocabulary learning.

Collaboration in the classroom

Swain and Lapkin (1998) was a pivotal study in the field of language learning. The study was conducted in Toronto, Canada at a middle school language immersion program. The target language was French and the common first language was English. Before this study, the common thought in the field of ESL was to have students only use the target language in class in order to give students ample opportunity to practice the L2. The teachers who participated in this study recognized that they did not give collaborative work because students tended to use English to complete tasks. The researchers wanted to investigate what role the L1 was playing in students' ability to complete language tasks in the L2. The researchers themselves expected to see the L1 as an "interference" in L2 learning, meaning that they expected that the students' use of L1 was impeding their acquisition of new language. What they found instead was that, particularly with beginning language learners, being able to negotiate the given tasks in the L1 had favorable outcomes in completing the assignments. Swain and Lapkin coined this kind of interaction, using L1 to learn the L2, as "language-related episodes" (LRE) (Swain & Lapkin, 1998). LRE's are defined as any discussion students may have with each other about L2 use, questions to other peers about the L2, or any peer or self-

corrections (Swain & Lapkin, 1995). Studies that have been conducted since have shown the L1 as a help, not a hindrance, to assisting students in learning their L2 (Gagne and Parks, 2013, Dobao, 2014, Mayo & Zeitler, 2016, Kim, 2008, Li, 2018, Baleghizadeh, 2010, Park and McDonough, 2011, Park, 2010, Cole, 2014 & Martin-Beltran, Daniel, Peercy, & Silverman, 2017).

One such study was conducted by Gagne and Parks (2013) in which they examined how grade six students scaffolded each other in a cooperative L2 learning task. They concluded that the most common strategies used for scaffolding language learning among peers was correcting each other and requests for assistance from another peer or the classroom teacher (Gagne & Park, 2013). In the study I conducted, it was also common for peers to scaffold each other in their various learning tasks. The Gagne and Park study contributes to the growing body of work into how the L1 can support L2 learning.

Dobao (2014) investigated the differences between LRE's in pair and group learning of L2 vocabulary. She found that pair-work offers more opportunities for individuals to contribute, while small groups offer participants more knowledge and lexical resources in addition to being able to see how others solve lexical challenges in learning the L2. This study hints at the importance of having both pair and small group work in the language classroom.

Another study conducted by Mayo and Zeitler (2016) investigated whether pair or small group collaboration was more effective in learning L2 vocabulary. In their quantitative analysis they showed no significant difference between the outcomes of pair

or small group on vocabulary learning. However, on a closer inspection of the data, students in small groups had more LRE's and more accurate vocabulary learning. The authors attribute this difference to the variable that small groups offer group members more lexical resources to solve L2 learning tasks (Mayo & Zeitler, 2016). While in my study I did not investigate the difference between pair or small group work, participants always had the space to ask a peer for assistance which often led to group discussion even while doing individual work.

LRE research tends to focus on the learning of vocabulary in a collaborative learning environment. In another LRE study conducted by Kim (2008) she investigated whether individual or collaborative vocabulary learning was more effective. In her analysis she found collaborative work produced a higher number of LREs which correlated with better success on vocabulary tests. She concluded by asserting a positive correlation between LREs, collaborative work, and vocabulary acquisition (Kim, 2008). This study contributes to the growing body of work on how L1 supports L2 learning, especially with L2 vocabulary acquisition among students with lower language proficiency levels.

In a study led by Li (2018) to examine the strategies that L2 students used to learn language, she noted that one major obstacle was unknown academic vocabulary. In her study, she examined two questions; one - what is the perception of learning methods used to acquire academic vocabulary, and two - what strategies did students employ to learn vocabulary? Her study consisted of twenty, grade 9 and 10 ESL students in a Canadian public school setting. All of the participants in the study were classified by the researcher

as Chinese. Li found that the participants used their previously learned cognitive strategies such as “bilingual resources” and “translation” to learn L2 English vocabulary. These were strategies that were commonly taught and used in China with these participants. What Li concluded was that students felt comfortable using skills that they already had to learn. In their current ESL classroom, these were not strategies that were taught. Also, when students were reading in English, they most commonly used bilingual dictionaries and asking the teacher or peer for word meanings to understand unknown vocabulary. The author noted that when participants were at the lower level of language proficiency that they relied more on strategies for vocabulary learning that allowed them to use their L1 resources (Li, 2018). Participants in my study also relied on these vocabulary learning strategies, often asking a peer first for translation of an unknown word, and if a peer did not have the answer, then consulting google translate. As Li also noted, I think these strategies are pragmatic because they allow students to not lose time and keep pace with class. For many students, collaboration is key to learning new vocabulary.

Another study conducted in 2010 by Baleghizadeh of forty Iranian English learners examining whether pair-work or individual work was more effective found that pair-work resulted in more accurate work. The participants in this student were divided into two different groups, one group worked individually and one group worked in pairs. Their task was to fill in the missing words in a text from a word bank. The group that worked in dyads first had to complete the task on their own, then compare with a partner and then submit their final answers after consulting each other. The researcher concluded

that pair-work was more accurate because participants were able to discuss their ideas about affixes in order to give final answers (Baleghizadeh, 2010). Another important aspect of this study that the researcher does not discuss is that the students were all from the same language background. Often teachers do not want students who speak the same language to work in groups out of fear that they will only use their first language and not learn English. While students do use translanguaging skills to solve language related episodes, this is not a hinderance, but a resource.

Another element of collaboration in language tasks is pre-task modeling. Pre-task modeling meaning what kind of instructions and parameters were students given in order to complete a given task. In a study conducted by Park and McDonough (2011) they investigated what kind of impact pre-task modeling has on students working collaboratively. Forty-four middle school EFL students were divided into two different groups. One group received pre-task modeling while the control group did not. Pre-task modeling consisted of detailed instructions plus videos that modeled collaborative behavior within group work. The groups were videotaped and then data was coded for LRE's that focused on grammar and vocabulary challenges and whether they were resolved or not resolved. Results showed that the treatment group produced more LRE's that were correctly solved than the control group. The researchers concluded that pre-task modeling is an important aspect of having productive pair/group work in a language classroom (Park and McDonough, 2011).

In another study conducted by Park (2010) to investigate whether pre-task modeling had an impact on LRE's, she found that it did not have an effect. In this study,

one-hundred and ten Koren EFL students were divided into two groups. Each group was given a narrative task, to create a story from six pictures. One student produced the story while the other student wrote the story down. She found that in the task she gave her participants, they spent more time discussing what vocabulary to use in order to produce a story out of the given pictures. She concluded that pre-task modeling did not have an effect because finding the vocabulary needed to tell the story was what produced the most LREs in this study (Park, 2010). Both of these studies are significant to my study because while participants were given some pre-task modeling, they also had space to interact with each other for language that they needed to complete their tasks. Pre-task modeling can be beneficial to students learning a language, but it cannot always predict what language needs students may have.

A meta-analysis of peer-mediated learning conducted by Cole (2014) found that collaborative, cooperative, and peer-mediated learning had greater success among ELL students in K-12 educational setting than did teacher-fronted modes of teaching and learning. This meta-analysis specifically looked at experimental and quasi-experimental studies related to literacy learning for the ELL population. Each study examined had to meet the criteria of having a control group within the study and pre-tests measures. Studies were not confined to U.S. contexts only; all K-12 studies were considered as long as English was the target language. In total, the researcher examined 28 studies. One of the major findings was that middle-school students showed the lowest success rates for English literacy learning. The researcher concludes that this is due to several factors; ELLs have a larger enrollment in middle school than high school or elementary school.

There are differences in socio-economic status, years in the U.S., native language reading proficiency. Also, middle school students often have more dense texts, and students have fewer years to master content (Cole, 2014). The Cole study showcases the importance of having a collaborative learning environment in ESL classrooms.

Within the context of ESL research, collaboration is often viewed through the lens of LRE's. One of the challenges of viewing language learning through the lens of LRE's is that it misses the social context of the learning environment that students are engaged in. Martin-Beltran, Daniel, Percy, and Silverman (2017) designed a cross-longitudinal study to examine elementary students support each other's language learning. The researchers developed supplemental learning sessions between kindergarten and 4th grade students. The fourth grade students were given the role of peer tutors and shared similar linguistic and cultural backgrounds with their tutees. Each tutoring session was related to content they had learned from their teacher-led classes. One of the major findings of this study was that students had more time to talk through problems in order to make meaning out of a text than was present in their teacher-led classes. The researchers argued that students were not just solving language problems but creating relevance and connections from the text to enhance their literacy practices. They further argued that these kinds of peer-to-peer interactions help students develop a "zone of relevance", that is how students make text relevant to their experiences in minute-to-minute interactions (Martin-Beltran, Daniel, Percy, & Silverman, 2017). This study shows not only the importance of collaboration among peers, but also the importance of students having time to talk through language challenges.

Collaboration with the use of technology

Research on the effectiveness of using technology as a tool for language instruction does not have the same impressive results as collaborative learning. The results are much more varied. In a meta-analysis of literature on the types of tech used for foreign language teaching and their effectiveness, Golonka, Bowles, Frank, Richardson, and Freynik (2014) reviewed 350 articles. They ranked these studies as “strong”, “moderate”, or “weak” in strength of findings based on the kind of design each study had. Studies that had a quantitative design and consisted of 3 focus groups were considered the “strongest” while groups with 2 focus groups and/or mixed methods were considered “moderate” and studies with qualitative methods and just one treatment group were considered “weak”. They did not include studies that looked at desktops with internet connections. Their reason for excluding the use of this technology in language learning and teaching was because they are pervasive in most educational contexts which the authors concluded means they are effective. Although overall their analysis did not find technology as a tool to contribute more to language learning effectiveness, technology did show a significant impact in two areas: pronunciation and complexity of language production. Across the studies examined, students who engaged in chat produced more language that was more complex (Golanka, Bowles, Frank, Richardson, & Freynik, 2014). Since chat is another form of collaboration, this finding is not surprising.

Li et. al. (2015) surveyed 531 ELL middle school students in urban districts to determine what kind of access students with lower socio-economic status had to technology. They found that the majority of students had access to desktops and

cellphones. Also, ELLs were more motivated to use technology and social media platforms for learning English (Li, et. al., 2015). This survey is significant because prior to Li, et al., many assumed that students from lower socio-economic status and linguistically diverse backgrounds did not have as much access to technology.

Another study conducted by Padron, Waxman, Lee, Lin, and Michiko (2012) examined how technology was used in a mathematics classroom with ELL students. They found the use of computers in classroom teaching to be low mainly because the participation structure that dominated that space was teacher-fronted instruction. They concluded that technology is better suited for classrooms that employed constructivist modes of teaching and learning (Padron et. al., 2012). This was also true for the research site where I conducted my study; most of the classroom teaching was didactic in nature even though computers were in the classroom. It is more difficult to incorporate the use of technology in teacher-fronted instruction than in collaborative learning environments.

One way to incorporate technology into a teacher-fronted classroom is through the use of “clickers”. “Clickers” are small-hand held devices where students can answer questions by pushing a button on the device. This kind of device allows for all students to participate in a traditional classroom setting. Langman and Fies (2010) investigated the use of “clickers” and an ESL sheltered English science classroom. What they found was that “clickers” over all increased participation in classroom discourse and students also produced more language about the science topic. The authors conclude that the reason “clickers” increased participation was because students were working in pairs to answer questions posed by the teacher. During this pair work was when important conversations

related to knowledge construction about science happened (Langman & Fies, 2010). This study highlights the importance of collaborative work in ESL classrooms more than the use of technology. In this particular case, technology was not an integral part of the work being done by students. This also emphasizes an important quandary related to the use of technology and collaboration in the language classroom: how much does technology contribute to language learning or is it that collaboration is the effective piece?

In a study conducted by Crawford (2013) she examines if an online supplementary math program can help 396 Spanish speaking sixth graders improve their math scores through English. She noted that often math curriculum for ELL's is narrow and limiting which could be a reason for higher failure rates among this student population. However, technology could provide ELL students with more substantial and challenging curriculum. Crawford researched the effectiveness of a specific math program called HELP (Help with English Language Proficiency). This program was designed using sheltered English principles and also provided explanations in Spanish for complicated equations. Students using this math program could do math equations in English, but then also had the resources available to check their understanding of concepts in Spanish. In this study students were ranked by language ability into three separate groups, beginning, intermediate, and advanced. Then those groups were segregated into treatment and control groups. She found that students with higher level language proficiency did better in the math curriculum in general and not in the HELP program. While students with lower level language proficiency did better with the HELP program than the control group. However these findings were not statistically significant

(Crawford, 2013). This study highlights why incorporating technology in the language classroom may have varied results of success due to the types of technology used (was the technology designed for ELL) and the level of English proficiency students had. The higher a student's language ability is, the less they depend on technology for assistance. This is a significant finding for my own study where participants did not use specialized software and as they became more proficient in English they relied less on tools like "google translate".

Casady, Smith, and Thomas (2018) researched whether the software Imagine Learning (IL) improved traditional reading skills (phonological awareness, phonics, vocabulary, and text comprehension) among 1,490 kindergarten and first grade ELL students across five school districts. They divided the participants into fourteen treatment groups and fourteen control groups. This study was carried out over an academic year and participants were tested using a standardized reading test at three different times to determine if students using this software made bigger reading gains. This software was not specifically designed for ELL's but for "struggling readers". What they found was that among the kindergarten participants, there was no difference between the control and treatment groups in regards to increased reading skills. However the first grade students showed significantly larger reading skills gain than the control group. They also found that kindergarten students with lower levels of English proficiency made significant vocabulary gains using the IL software. The researchers concluded that Computer Assisted Instruction (CAI) has potential benefits. They thought one of the main limitations of this study was that primary language support was not available for students

using the software. In addition, teachers were restricted to an English-only policy and this “restricted literacy gains” in this study (Cassady, Smith, & Thomas, 2018). I think this study highlights an important issue with the use of CAI and that is support software should be designed for EB students, and students with lower levels of language proficiency may see more benefits from using software programs.

Hun and Shu (2012) looked at the integration of several different kinds of technology into the English language classroom, mainly interactive whiteboards, podcasts, and digital storytelling software. Interactive whiteboards (where students also utilized “clickers”) had the most positive effects on vocabulary learning. The teacher in this classroom used the interactive whiteboard for presenting visuals for vocabulary, showing videos and animation that highlighted science processes, and interactive games and activities. The use of the whiteboard in this way increased students’ vocabulary scores. The authors concluded that this was because students were more motivated by the use of technology and therefore paid closer attention to classroom instruction (Hun & Shu, 2012). This study accentuates a common thread throughout the literature on technology and collaboration in the language classroom: that the use of technology seems to enhance motivation for ELL students.

Researchers Liu and Lan (2016) also examined students’ motivation and vocabulary learning gains while using the web-based tool “Google Docs” for mandatory EFL classes at a Taiwanese university. They engaged with two intact English classes to carry out this study. The total number of participants was sixty-five. One class was the “collaborative class” that used Google Docs for reading text-book passages and

answering questions collaboratively online. The control worked online and individually. They conducted pre and post-tests on vocabulary knowledge and found no statistically significant gains in vocabulary knowledge. They then conducted surveys to determine levels of motivation for learning and found that the group using online collaboration with Google Docs reported higher levels of motivation. The collaborative group also had more attempts to answer questions and self-reported less “test anxiety”(Liu and Lan, 2016). While technology alone may not improve learning outcomes, it does provide more motivation towards learning for students.

Technology can help teachers by providing more resources for students to learn English. Technology is helpful in providing visuals for learning vocabulary, offering more varied instruction to meet different language proficiency levels, and an endless source of information for any topic that a student may be studying. Technology can also help in giving teachers the ability to help students with instructions in their L1. In 2012, Rodriguez, Filler, and Higgins looked at the impact of providing L1 instructions via a reading software program for primary school students learning to read in English. What they found was that providing L1 instructions resulted in higher reading comprehension scores on the software that was utilized than the group that received instructions in English (Rodriguez, Filler, and Higgins, 2012). This finding highlights the significance of L1 support in learning the L2, but it also shows how technology can help teachers who do not share a common language with their students.

Collaboration, technology, and vocabulary learning

Vocabulary learning is a major struggle for any new language learner. Because the participants in my study were new language learners of English, learning vocabulary was of the utmost importance for understanding directions given and for having enough vocabulary to participate in their mainstream classes. As they were middle school students, they had less time than students who started in elementary school to master the vocabulary needed to be successful in school. Most often when they were working together on projects, the majority of their collaborative talk or LREs was discussing and learning vocabulary. This is an area of language learning in which technology and collaboration appear to have incredible benefits to students. With the advent of the internet, students now can quickly look up any word they may need to translate. Technology, in this case, provides a rich resource where students can increase the strategies they have for learning vocabulary as well as customize what vocabulary they may need to learn.

Access to internet tools for learning opens a variety of new opportunities for students to collaborate and learn vocabulary. Lan (2012) investigated whether an online tool called “mywordtools” would help sixth grade learners of English develop more vocabulary and benefit from sharing their vocabulary learning strategies with other students. She divided the sixty participants into three different groups; group 1 would just use “mywordtools”, group 2 would use “mywordtools” plus share their vocabulary learning strategies collaboratively, and group 3 would use a physical notebook. Each group was tasked with learning 350 English words that were part of the English

curriculum in Taiwan. She found overall that students who had access to “mywordtools” developed more vocabulary learning strategies such as grouping and notetaking. In post-test measures, the group that scored the highest was the second group, which had access to “mywordtools” but did not collaborate to share their strategies. The author concluded that students were able to draw on zones of proximal development with their peers by seeing how they used certain vocabulary words. The author describes the Zone of Proximal Development as an area where students can develop more “rich” learning experiences by working with a more capable peer than they would be able to do on their own. This collaboration allowed students to shorten their “knowledge gaps” (Lan, 2012). This study shows the importance of collaboration in vocabulary learning and that technology tools can be used as a different form of collaboration.

Li (2010) investigated whether access to online dictionaries supported vocabulary development in ESL students in secondary school with the urgent need to get up to grade level reading within a smaller time frame than other students. She divided her participants into two different groups, one group had access to an online dictionary and the other group had access to a paper dictionary. Overall, the group with access to online dictionaries did better because the online tools were more effective at providing comprehensible input for the students. In addition, online tools can provide text-rich environments that may not be available at home. The researcher also makes a case for carefully scaffolded instruction using technology to aid students in getting up to grade level in English more quickly (Li, 2010). This study emphasizes the importance of having online access to dictionaries that can enhance student vocabulary improvement. The

participants in my study were under similar pressures to learn the grade level vocabulary they needed to be successful in school and access the materials they needed to learn.

Conclusion

In summary, the benefits of collaboration are clear for L2 students. Students do better academically when given the opportunity to work in pairs or small groups. In addition to doing better academically, they also benefit from using their L1 to create meaning in the L2.

In several areas, including vocabulary learning, these studies highlight how some forms of engagement with technology, in some classrooms, can be helpful to students. Overall, students who have access to technology, are allowed to draw on their L1, and are encouraged to work collaboratively, seem to do better. However, more studies are needed to confirm those findings. One major gap in the research that this study attempts to address is in what ways do students collaborate and use technology to enhance their learning of English. The findings of previous studies, regarding whether technology is productive in learning, is variable. However, this small study will show how students engage with technology in productive and creative ways to learn English.

Chapter Three: Methods

The world, or reality, is not the fixed, single, agreed upon, or measurable phenomenon that is assumed in positivist, quantitative research, instead, there are multiple constructions and interpretations of reality that are in flux and that change over time. (Merriam, 2002, pg. 3-4)

Quantitative research plays an important role in providing a broad picture of a phenomenon, which can be brought to light through statistical data. However, quantitative research does not focus on individuals, their story, or how individuals interact and construct meaning in a moment of time. Although the nature of qualitative studies does not allow for generalizations about a population, it does allow for a deeper understanding of individuals in particular contexts, and therefore, it is the appropriate approach to understand how adolescent newcomers in a certain context learn English. The focus of this study was to understand how newcomers, with limited English, used technology in learning language and how the educators working with them facilitated that process. Because learning processes are varied from one student to another, it would have been difficult to pre-determine and define variables for this research project. My study offered a “snapshot” of how adolescents worked with English within a moment in time in a situated context (Gee, 2004). The open-ended and exploratory nature of my research questions were best suited for analyzing what processes EB students used to learn English.

Because this was an exploratory and descriptive study, the best-suited analytic framework was inductive analysis. Inductive analysis allows for the researcher to examine and describe a phenomenon in a given period of time, without limiting the scope of the research through a pre-determined theory (Thomas, 2006). Inductive analysis also views the researcher as an integral part of the research process. Because I was not only a researcher, but also a participant in this study, inductive analysis acknowledges that as part of the process of collecting and analyzing data.

In addition, the theories that evolve by using this method of inquiry are determined by the major categories that arise from data analysis (Thomas, 2006). In short, inductive analysis relies on categories generated from raw data to form an understanding of the phenomenon being studied (Thomas, 2006).

Researcher positionality

During the course of this research project, my roles included researcher, participant, and practitioner. Because the researcher is the main tool of data collection for any qualitative study, it is imperative to know my background as a language learner, teacher, and researcher (Merriam, 2002).

Although I did not initially design the study to include myself as a participant, it became apparent after a few visits to the school that in order to study the students' use of technology for learning English, I would need to create learning spaces that allowed this. The ESL teacher supported me in creating classes with her students that involved more technology integrated lessons. Having had the experience of being a TESOL (Teaching

English to Speakers of Other Languages) teacher for the previous fifteen years, I felt confident in my ability to create and deliver meaningful lessons that would engage my participants. However, taking on the role of researcher-participant did not come without drawbacks; one of these was that while I was teaching, of course, I could not collect data as if I were an observer.

My position as a researcher is as a white, middle class, woman from a third generation immigrant family. My family has a working-class background with my parents being the first generation to finish high school and attend college. My grandparents spoke German as their home language but insisted their children only speak English. As a result, my parents and I grew up as native speakers of English.

When I was younger, I lived with my parents in Israel and Zambia. Both of those countries represented my first experiences of being a minority, in which I shifted from having the ability to be unnoticed in a society to becoming a focal point of being different because of my race once I left my home. However, language was not a barrier for me in either country; English was widely used as a means of communication. I learned very early that English was a language of power, although I was unaware at the time how being a speaker of English afforded me a number of privileges.

As a teenager, I spent a year as an exchange student in Japan. I lived with a Japanese host family that spoke limited English and attended an all Japanese girls' school where I was the only foreign student. I only had a crash course in Japanese before I went. While at school, I had pull-out Japanese classes anytime there was a subject that was deemed too complicated for my language abilities. These classes were history,

mathematics, Japanese language arts, English grammar, and science. The classes I was allowed to attend with other students were cooking, sewing, tea ceremony, and yoga. During my Japanese pull-out classes I was tutored in Japanese using children's books. My Japanese communication skills became proficient, but I never learned academic Japanese. This was my first experience in a total language and immersion program where I was not only a visible minority, but also a linguistic minority.

At the beginning of my teaching career, I was a Peace Corps volunteer in Armenia. This represents my second experience in a total language immersion program. During the first three months of training, I attended intensive Armenian classes for twenty-four hours of instruction per week and lived with an Armenian host family. After the training period was over, I worked as an EFL (English as a Foreign Language) teacher in a small town for two years. At the end of the two-year period, my Armenian was evaluated as high-intermediate. This again was for social language, as I never had to learn academic Armenian. After two years of being completely immersed in Armenian language and society and countless tutoring sessions, my reading level was still basic and I struggled to understand simple texts.

Even though I was a foreign teacher in Armenia, I was able to be successful with little change to my teaching practice or views about learning. It was not until I became an instructor at a Historically Black University in South Africa that my teaching paradigm completely shifted. I taught for three years in South Africa. I struggled my first year as a teacher, which resulted in my investigating alternate teaching methods and practices to facilitate student learning. Most of my students in South Africa represented

first generation high school graduates who were multilingual and had very different home literacy practices than the ones expected at school. It was through learning about these home literacy practices and collaborating with students, local schools and community members that I was able to create a more engaging learning experience for my university students.

Most of my formal teaching career has been in TESOL and higher education. Half of my teaching experience has been overseas in Armenia, South Africa, Democratic Republic of Congo, Angola and South Korea, while the other half has been situated in the U.S. My teaching in Southern African countries and in the United States has been in multilingual classrooms where it is rare that I share a language with my students. In addition, my teaching has involved either me adjusting to life abroad or my students adjusting to life in the United States, with assumptions about culture and society different from one another. As a result, I am constantly challenged to explore new methods and strategies for teaching, to reflect on my own teaching practice, and to learn about students' home languages and practices. This research project represents the same drive to understand EB students better in order to facilitate more successful learning.

Site Description

I conducted this study during the fall semester of the 2012 school year in a newcomer ESL classroom at a “rural-fringe” middle school that I named Forest Hill located outside of an urban area in the Southwest United States (National Center for Education Statistics (NCES), 2013). During the spring semester of 2012, I volunteered in

this classroom before I started my study. Thus, I was familiar to some of the students, teachers, and staff already, and they were familiar to me.

In 1994, the school district had a total of 1,700 students spread over 12 schools. By 2012 it had a student body population of 7,200, of which 2,172 were designated ELL students. The school district served 60% Hispanic students, and 84% percent designated as “economically disadvantaged”. Because of this, all the schools in the district have a federal Title I designation³. Nine of the schools were ranked as “academically acceptable”, two were “recognized” and one “academically unacceptable”. The school where I conducted this research was recognized by the NCES as a “higher performing school” based on improvements in science standardized test scores in 2011 (nces.ed.gov).

At the time the study was conducted, the area where the school district was situated represented a fast-growing area that had large working class Hispanic and African American populations with new immigrants coming from Central and South America. It was situated not far from a major urban city and had affordable housing. However, there was no major industry in the immediate area and employed people were commuting to surrounding areas for work.

The student body population of Forest Hill middle school was 634 students that represented a predominantly Hispanic and African American population. Of the student population, 399 were Hispanic, 173 were African American, 43 were Caucasian and the rest were categorized as “other.” Within this student population, 488 students qualified

³ A Title 1 designation allows school districts to access federal education funds in order to improve school learning programs for low-income students (NCES, 2019).

for free lunch and 48 for reduced lunch at the school. ELLs made up 28% of the school population. The school building was situated in a large field with apartment complexes not far away. All the students were bussed to school and home. The school was a 3-story modern building equipped with solar panels and high ceilings in the cafeteria area. The school hosted grades 6-8 and the floors of the school were divided accordingly. Sixth grade was on the basement floor, seventh grade on the ground floor, and eighth grade on the top floor.

Forest Hill middle school had had high discipline referral rates four years prior to the study that included gang activity. In order to create a better learning environment, a new principal was hired to enact a strict discipline policy. At the time of this study, if one walked into the school at lunchtime, one would not hear a single student talking in the cafeteria. Students were divided by gender and by grade during the lunch period and not allowed to talk until they finished their meal and went outside to the play field. During passing time, students were not allowed to talk and were required to line up outside of their classes before they were allowed to enter. Students who had “acted up” during class time and not finished their work were made to sit on the stage in the cafeteria during the lunch period and do their schoolwork. In addition, certain color clothes were not permitted/tolerated, as they were seen to be associated with certain gang colors.

Forest Hill implemented a strict system of academic awards and interventions. If a student was not performing well they were referred to a program called “Forest Nest” where they had a period to work with a teacher to make up any homework they had not finished. Students who performed well academically during that same period had the

choice to do art and other fun elective courses. Teachers monitored students' grades weekly and if students improved academically, they could move out of "Forest Nest" and into elective classes.

The school ran several different kinds of academic intervention programs. ELLs who did not perform well on the state English Language Proficiency test were sent to an ESL period where they worked on Rosetta Stone. Rosetta Stone is language learning software that focuses on the use of social language. Most of the students appeared to have little problem communicating daily needs in and outside the classroom, which were the basic English skills taught by Rosetta Stone, but struggled with the more linguistically and cognitively complex tasks required in the content area classes. This intervention program did not address the improvement of reading and writing skills necessary for content area classes. This program was used district-wide as the ESL "intervention", which meant that in the newcomers program students, Rosetta Stone was used as part of the curriculum.

In addition to intervention and awards programs, the school also had a mentoring program. This program occurred once a week for 45 minutes, and every adult in the school, including the principal, had a group of about 15 students they mentored. Teachers chose the students they wanted to mentor. During this period teachers worked on a variety of different activities such as school success, goal planning, art projects and other activities that were deemed "mentoring" for the students. There was no set curriculum and teachers were free to work on any kind of project with students that they wanted to.

In 2012, Forest Hill became a “New Tech” school. Three schools in the district were chosen to be “New Tech” schools: one primary, one middle school and one high school. New Tech is a nation-wide initiative to provide Title One schools with technology resources and the foundations for project-based learning (U.S. Department of Education, 2012). To prepare for becoming a New Tech school, each sixth grade teacher attended a six-week Project Based Learning seminar over the summer of 2012. All newcomer students with the ELL label, regardless of grade level, were given iPads to be used during class. The school implemented this program one grade level at a time. The program also allowed for each sixth grade child to have an iPad for school use. The sixth-grade teachers were then expected to implement project-based learning environments in their classes. In addition, the sixth grade teachers were expected to mentor the seventh grade teachers, as they received iPads the following year for their students. All of the teachers at the school received new Apple MacBook laptop computers and iPads for use in the classroom as part of this initiative. The new tech initiative coincided with the goals of this study.

As with any new program, the New Tech Initiative had a series of challenges and successes. One of the main challenges involved sharing internet bandwidth with two other schools; unfortunately the bandwidth was not enough to support the use of iPads by all students. As a result, many teachers had to have back-up teaching plans, as they were never sure there would be enough bandwidth to conduct their lessons as planned.

Aside from the new tech initiative, resources at the school were limited. The school had a modest library with a computer lab. Each content-area classroom received

only one set of textbooks, so all textbooks were kept in the classrooms; there were not enough for each student to take one home. If a student did want to take a textbook home, their parent needed to come to the school to sign the book out for them. Students also did not take the iPads home; they were checked out in the morning and returned after the last period of the day. Teachers could order general materials for their classrooms such as markers, poster paper, color paper, glue, and other items they needed for teaching. However, the capacity to make copies was very limited. Teachers needed to put in a request to make copies of items two weeks in advance; they were not allowed to make their own copies. Each teacher had a laptop, projector, printer, and a document camera in their classroom. The science classrooms were equipped with lab stations and the necessary equipment to conduct experiments.

Teachers decorated their walls with various artifacts: some were student-made, and some were brought in by the teacher. In general, the artifacts pertained to general learning and cooperation in the classrooms, and also the different subject areas. For example, the seventh-grade social studies teacher, who taught Texas state history, had brought in artifacts that represented different periods of history. The seventh grade English language arts teacher had collected a bookcase full of trade literature books for students to read, and also displayed student work on the walls. The halls were full of student-made posters; subjects included classwork and on-going projects, as well as school slogans and policies. Teachers were not restricted in the kinds of artifacts they put up, and most took that opportunity to "publish" and showcase ongoing student work. If you walked down the hall on any given day, you would find galleries of student work

displayed outside of the classrooms. This work was changed often, to represent new work created by students in classes. Despite the institutional atmosphere of the school, this display of artifacts gave not only a splash of color and life to the halls, but was also a reminder of the ongoing learning that was taking place.

The ESL classroom, where I conducted the majority of my study, had eight computers, and bookcases with general and reference books. Next to the bookcases was a table of resources for students, such as paper, markers, and glue. The teacher's desk was situated in the corner, next to filing cabinets, printer, and a telephone. In the front of the classroom was a whiteboard and screen for the projector. Teacher- and student-created artifacts adorned the walls. One of the teacher-created artifacts was a word-wall, which displayed the week's vocabulary. The ESL teacher published student work on the walls, and also outside the classroom; inside the classroom there was a large piece of poster paper where students wrote the concepts that they had learned that day, or the topic of the lesson. The desks---chairs with tiny desks attached---were situated in the middle of the room. Under the chairs was a bin where each student's textbook was kept. The desks were normally in the traditional configuration: in rows, facing the whiteboard.

Portrait of Participants

Out of ten adolescent ESL students in the class, there were five who chose to – and secured parental permission to - participate in this study. In order to obtain consent from the participants and their parents, I organized an information session for the class

conducted in Spanish about the research project. Students who were interested in participating were then given consent forms in Spanish for their parents to sign. In addition, parents were called and the research project was explained in Spanish and to see if they had any further questions. All of the five students who did not get parental permission still participated in the digital projects, although of course no data was collected related to them. The five participants whose parents agreed to have them participate in the study were newcomers to the United States. All of them had less than one year of study in English when the study began. Newcomer participants included two boys and three girls. Initially there were five participants, but one left the school before the study was concluded to move back to Mexico with his mother.

My first participant, Yardia (all names are pseudonyms) was ten years old and in the sixth-grade when she started the study. I asked Yardia why she was only ten and in the sixth grade (most students entering sixth grade are already eleven years old). She replied that her parents wanted her to start in the sixth grade. She had arrived about two weeks before school started with her mother and father from Monterrey, Mexico, seeking a better education and safer living environment, and she knew very little English. At home, Yardia spoke only Spanish, and enjoyed playing with her baby nephew. She told me she wanted to be either a veterinarian or a nanny when she got older, because she liked animals and babies. She enjoyed learning English and wanted to do it quickly so that she could make more friends at school.

Alexia was my second participant; she was 13 years old and in the eighth grade. She arrived from Guanajuato, Mexico with her family towards the end of her seventh-

grade year. She had a strong academic background and enjoyed science. At the end of her seventh-grade year, she received an award as science student of the year, as will be elaborated in Chapter four. However, she was still very much a beginner in English, and additionally had hearing loss; her hearing loss was significant enough that she wore hearing aids in both ears. She had a difficult time understanding oral English; this frustrated her, because she did not yet understand English well enough to be the good student that she had been in Mexico. In her pre-study interview, Alexia said that she received a 94.2 points for her grades in Mexico (Pre-study interview, 2012). At the beginning of her eighth -grade year she experienced some setbacks. Her new science teacher did not know for the first two months of school that Alexia did not yet speak English; she failed her science tests because they were not modified for her. Once the ESL inclusion teacher intervened on her behalf, she was given the science test in Spanish and received a 100%. Her difficulties with school were due both to her level of English and to her hearing loss. Alexia wished to be a scientist when she grew up. In her interview when I asked her what kind of career she would want, she said “*laboratorista de microscopio*” (lab technician with microscopes). I asked her why and she responded “*pues porque a mi me gustaria identificar qué microbios van de aquí, o descubrir algo.*” (Well because I would like to identify what microbes come from here, or discover.)

Alexia’s brother Roberto also participated in the study. He was a year younger and in the seventh grade. Both parents moved to the United States with their children. Their mother worked as a janitor at a local high school and did not speak English; their father did construction work. Their mother was very active in her children’s lives and

made sure that she was home when they returned from school. She also made sure that her children did their homework every night and kept a close eye on the kinds of friends and activities they got involved with. She wanted her children to succeed and go on to college. She herself left school before finishing high school, and she did not want her children to have limited options due to lack of education. In my interview with her when asked the question what does she hope her children will achieve she said “*Pues, yo quisiera que terminaran de estudiar. Tomen Carrera, algo que les sirva para que no tengan que trabajar en lo que nosotros trabajabamos.*” (Well, I would like them to finish studying. That they take a career, something that will help them so that they won’t have to work in the jobs we have worked.) Roberto was a quick learner, liked to help other students, and was thoughtful in his interactions with his teachers and peers. He wanted to work with computers when he was older and showed a high interest in technology.

Juanita was 12 years old and in the seventh grade. She came to the United States from Mexico when she was 11, and lived with her aunt. Juanita’s mother gave birth to her in the United States, so she held a U.S. passport. However, her mother did not. In order for Juanita to get a better education, her mother sent her to the U.S. to live with her aunt and attend school. Juanita frequently traveled back to her border town in Mexico to see her mother, who was an elementary school teacher there. Juanita received high grades and learned English very quickly. She was transitioned out of the newcomers program in less than a year and then only attended mainstream classes by the end of data collection. She wanted to be a teacher when she got older, in order to help students like herself

adjust to school in America. She wanted to maintain her Spanish and continue to learn more English, so that she could be a successful user of both languages.

Finally, Julio, was 12 years old and in the 7th grade. He came to the U.S. with his mother. He was frequently absent from school because his mother moved often and did not have stable housing. When he was in school, he participated in everything and was often called on by the ESL teacher to help translate for other students in the class. His favorite class was art and you could find him frequently sketching in his notebook. He was not able to complete the study as he stopped attending school, although his mother did not formally withdraw him. The school administration could not locate him or his mother. The ESL teacher thought that he had probably returned to Mexico as his mother had a business there. Because Julio left the study early, very little data were collected related to him and he only appears in a few aspects of analysis.

ESL teacher profile

Mrs. Smith, the ESL teacher, was Hungarian. Her first language was Hungarian, and she also spoke French fluently. She came to the United States after she met and married her husband while teaching English in France. Upon arriving to the United States, Mrs. Smith completed her teacher certification, and then earned a master's degree in curriculum and instruction. During this time, she was working in another state that had a large population of Spanish speakers. She never learned to speak Spanish (the home language of the majority of her students) and had an "English only" policy for her classroom. Before moving to Texas, Mrs. Smith held a position of curriculum advisor for

ESL and bilingual programs at the district level in a Southwestern state. Due to the downturn in the economy, she and her family decided to move to Texas for better opportunities. Because there was not a comparable position available at the district level, she took a teaching job at Forest Hill Middle School. At that time, her husband was unable to secure full-time employment, thus Mrs. Smith was the main breadwinner for her family of four. At the time of this study, Mrs. Smith was in her mid-fifties.

When I met Mrs. Smith, she had been teaching at Forest Hill Middle School for four years. She was in charge of the newcomers program, and was the school's main ESL teacher. The newcomers' program consisted of two periods a day for students who were new to the United States and spoke little to no English. I spent the majority of my time in this class, observing and participating. Mrs. Smith welcomed me into her classroom and willingly permitted me to work with the newcomer students; she clearly enjoyed working with this class and program.

The focus of the newcomers' classroom was to develop the social language skills necessary for the students to participate in school. The first part of the semester focused on everyday language and situations. For example, the students made a map of the school, showing where to find key personnel that they might need to interact with, and also showed the location of and how to ask to use the bathrooms. The central part of the curriculum was a textbook series called *Inside Language, Literacy, and Content*, which was designed for newcomer classes. In addition to the textbook, Mrs. Smith also had students work with Rosetta Stone. The ultimate goal of this class was to allow students to move into mainstream classes as soon as possible. Mrs. Smith was very proud of her

record of moving students into the mainstream; she believed students were better served by being immersed in their grade-level content classes as soon as possible.

Mrs. Smith's other four periods were spent supervising ESL students who did not meet the minimum requirement on the state mandated English proficiency exam, the TELPAS (Texas English Language Proficiency Assessment System) and therefore still carried the ELL label but did not fit the "newcomer" category. These students received the Rosetta Stone intervention program. During these four periods, Mrs. Smith supervised the students while they worked on Rosetta Stone in the computer lab. Because the district mandated that Rosetta Stone was the intervention software to be used for students who, though no longer newcomers/beginners, were still designated as ELLs according to their scores on the TELPAS (Texas English Language Proficiency Assessment System), Mrs. Smith implemented the program even though she did not think it a good academic program to help students achieve academic success. She thought students would be better served by implementing programs focused on improving reading skills. Even though she advocated at the district level for a better intervention program, Rosetta stone was not changed during the time I spent at Forest Hill school.

METHODS

This qualitative multiple case study explored the learning strategies of four newcomer EB students. Their engagement with technology as they strove to learn English and learn through English within one middle school ESL classroom was the

primary focus. Within inductive analysis practices, multiple sources of data were collected. Data collected included field notes from observations, audio recordings of student collaborative work in the classroom, samples of student work, informal interviews with teachers, a parent's interview, and pre- and post-study semi-structured interviews of participants. Data collection took place over the course of the Fall semester, 2012.

In spring semester of 2012, prior to the study, I volunteered in the same ESL class. The purpose of my volunteering was for site entry and to observe the practices in the ESL class. During this time, I noticed that Mrs. Smith did not use the technology available in the classroom for instruction. When I asked her about this, she said she did not feel comfortable using technology. She also volunteered to allow me to teach the ESL students using computers. As a result, during that spring semester I designed and taught several classes, having students create power point presentations about their lives. The plans and processes that I used for creating these classes later informed my design of the classes I taught during data collection. Because this volunteer period was not included in my IRB proposal, I did not collect data during this time, instead I used this time to become acquainted with the school, the teachers, the administration, and the students.

Data Collection and Sources

The data for this study were collected during the fall semester of 2012 from September to December. The data collection consisted of four phases. Phase one (which technically began with my volunteering during Spring 2012) consisted of site entry, observation, and pre-interviews with participants. In phase two I carried out a digital-story narrative project with the students. For phase three I supported the participants to develop a digital-project for social studies; and in phase four I conducted post-study interviews with the participants. Throughout the data-collection period, thick descriptive classroom field notes (Emerson, Fritz, & Shaw, 2011) and student artifact collections were continuous. Artifacts were collected by taking digital pictures and then downloaded to my computer to the corresponding participant file. Each photo was saved in a digital file under the participants pseudonym.

Data Sources

Time	Data Collected
Pre-Study: Spring 2012	Classroom observations 48 hours Volunteer teaching 12 hours
Phase one: September-October	Site entry, observations in ESL and pre-study? interview w/participants Pre-interviews Yardia: 20:53 minutes and seconds

	Roberto: 14:47 minutes and seconds Alexia: 31 minutes Juanita: 27 minutes Principal: 27:18 minutes and seconds Site entry hours: Spring semester 2012- February-April 3 hours per week = 36 hours Observation hours: Fall semester 2012-September- December 4 hours per week = 108 hours
Phase two: October- November	Digital narrative stories Researcher taught 4 forty-five-minute classes Each student created a digital story with researcher guidance Class video 29:30 minutes and seconds Class video 43:05 minutes and seconds
Phase three: November	Digital project-social studies Researcher taught 4 forty-five-minute classes Each student created a digital project related to their current social studies topics and themes Presentation video Interview with principal: 46:01 minutes and seconds
Phase four: December	Post-study interviews and parent interview with Parent of Roberto and Alexia: 46:01 minutes and seconds

Continuous: September-December	continuous observations, field notes and collection of student artifact samples.

Pre-study Phase

Permission was granted by the administration at the district level to study newcomers in the ESL program and Forest Hill Middle School. The school district was open to having a researcher in this program, to better understand how EB students were learning English in order to be able to do their academic work expected at school. Next, permission was granted by the classroom teacher for me to be an observer and practitioner in her classroom. The ESL teacher did not feel competent to create lessons on making digital stories for the students, but was willing to give me class space and time to teach the participants digital story-making. During this time, I conducted structured, pre-study interviews with each participant to gather background information, feelings about learning English, and their school and family history. A Spanish/English translator was used for Alexia, Roberto, and Yardia as they did not yet have enough English complete the interview in English, and I do not speak Spanish.

Digital projects overview

As is common in many ESL programs, there was a gap between the language taught in the ESL classroom (BICS) and the vocabulary needed for content area classes

(CALP) (Cummins, 2000, Valdés, 2001). To attempt to address this gap and to better explore how the students drew on technology and other tools to support their learning of academic registers of English for content classes, I designed two digital projects: one that supported their development of general academic language and formal English presentation skills and another that focused on auto-biographical narrative story- to be completed in their ESL class. Both projects were meant to intentionally bridge this identified social/academic language gap, so that as a researcher, I could observe how the students took up the challenge. My original research plan was to observe the students in their ESL class and their content classes, but because I was given the opportunity to work with students and technology directly, I designed an intervention to bridge the gap between the ESL and content area classes.

Phase One: Digital story narrative

During this phase of data-collection I was a participant-researcher. I gave the participants in the study digital cameras to take photos, to create a Power Point presentation centered around three major events in their lives. They did not have to use the cameras if they chose not to: instead, they could draw pictures, use language, music, graphic images, or any other modes of representation that they felt would best describe themselves. Because the participants and I did not share a common language, we used many visual aids, and also Juanita and Julio helped to translate the project goals, as they both had more advanced English skills than their classmates. The newcomer's class had about eight to ten students; half of the students were not in the study. Even though they

were not in the study, they still wanted to participate in the digital projects, and of course they did participate in creating stories. I simply marked any interactions they had with participants as “CM” in my field notes, meaning classmate.

In the first step, the students and I viewed digital stories created by students their age, to gather ideas and talk about the different modes of representation that the authors chose, such as drawings or pictures. We then practiced some of those modes with our cameras. For example, one story had animation, so we took a picture of a pencil, moved it a bit, took another picture and so on, then looked at the results when the pictures were put together. This gave the students some idea of the range of tools and resources available to them for constructing their stories.

In the second step, we brainstormed to come up with three different life events that the participants wanted to highlight. I gave examples of different life events, such as my favorite day, a scary day, a time I was upset, what I would see if I was a mouse in your house at night, etc. Students then wrote down three life events they wanted to represent in their digital narratives. There were no restrictions, and they did not have to have three; they could do as few as one. The story content was up to each participant to decide so they could incorporate their own linguistic resources.

In the third step we created storyboards on paper to plan out the stories. I drew a picture of one of my life events on a storyboard, and shared it with the students. Since this was visual and they could, in a sense, read the pictures I drew, they quickly and enthusiastically went to work on their own storyboards. The students wrote under each storyboard how they would represent in their digital Power Point presentations. From

there, they chose the kind of media they wanted to use for each story, whether pictures, music, language, etc.

Next the students created their digital stories on the computer. All of the participants were familiar with Power Point and created their stories with few problems. Sometimes they had questions about how use different functions; these were either answered by me or (more often) by a capable peer. Most students chose to use pictures, words, and music for their stories. When the stories were completed, they presented them to the class.

Phase three: Digital project for social studies

As the digital stories project culminated, I noted, and discussed in a peer debrief with my dissertation supervisor, that while the students were highly engaged in language and technology negotiation during the digital project project, they were not necessarily acquiring the language necessary to succeed in their content area classes. I also noted, during my observations across the school with the participants, that this would be an important support for them. I became curious about how the students would take up content-related language and carry their language and technology skills into their other classes. So I decided to make our next project relate to the social studies classes the students attended.

For this phase of data collection, I also acted as participant-researcher. I first met with each participant's social-studies teacher to find out what they would be studying in two weeks' time. For Alexia, my eighth -grade participant, the teacher told me they would

be studying principles of the U.S. Constitution. Roberto and Junior, my seventh-grade participants, would be discussing the state revolution. Yardia, my sixth-grade participant, would be studying countries of Europe. I brought these topics back to the ESL classroom and engaged the students in creating power points related to them. All the students in the class, including those who were not a part of my study, participated in this project, and the ESL teacher worked with me. Up to this point, in their ESL classroom the students had been learning about sources of information, cause and effect, and presentation skills. Those concepts became the grounding material for the social studies project. The students would work with different sources to gather more information about their given topic and create a Power Point presentation that showed the cause and effect of a person's past actions.

To begin this project, I sat down with the students in a circle, and we discussed what research was. Yardia informed me, "Miss, research is when you want to find out something you don't know." We then discussed what types of sources we could use to get information on our topics. Participants easily came up with answers such as books, the internet, other people, etc. To practice, each student was given a person, place, or thing to research using internet sites in Spanish. Spanish internet sites were used so that students could more easily understand their topic and focus on the research skills that were the objective of the lesson. Thus, when it came to creating their Power Point, having developed their skills and their understanding of the topic, they could then focus on the English they needed to describe their topic. For example, I gave Alexia a site on the principles of the U.S. constitution. She read that website in Spanish, wrote down three

things she found interesting about the topic; how the concept of cause and effect appeared in the constitution; and what her predictions for the future of the constitution were. It was evident to me at the time that due to the difficult concepts involved, she would not have been able to complete this project without having some Spanish language support; the Spanish sources allowed her to understand the concepts with ease.

For the next step, the students created their Power Point presentations using five guiding items: one, an introduction to their topic; two, three things they found interesting about their topic; three, what cause and effect their topic had on history; four, what predictions they made for the future; and five, any vocabulary words that were needed to understand their topic. All Power Point presentations were created in English, even though I did give the participants the option to use Spanish. One plausible reason why the participants choose English could be due to the “English only” policy in the class.

In the last part of the project, the students did class presentations on their topics to their ESL class. While the students were presenting, the audience wrote down questions, and what they liked about the presentation. At the end of each presentation, audience members asked questions and the presenters answered. This part of the project was conducted in English.

Phase four: post-study interviews

During this final phase of data collection, I conducted semi-structured interviews with the four students to see how participants' feelings about English and school had changed, if at all, over the past three months. All students were able to complete the post-

study interview in English and no translator was needed. Juanita had an individual interview, while Roberto, Yardia, and Alexia did their interviews together. The reason for this was so they could assist each other during the interview if one person did not understand a question. One study showed that when participants are in a focal group interview, they can assist each other in clarifying ideas as an individual or as a group (Tong, Sainsbury, & Craig, 2007). Additionally, another study found that when children learn together and use “exploratory talk” they improve language, reasoning and social skills (Wegerif, Littleton, Dawes, Mercer, & Rowe, D., 2004). For these reasons, and because the students were interested in it, I decided to conduct the post interviews for these three participants as one focal group conversation.

Continuous: field notes, observations and sampling of student artifacts

For the duration of this study I spent two to three days per week in the ESL and/or social studies classrooms for three hours at a time. During the times I was not participating I was observing class and writing thick, descriptive field notes on participants’ actions and engagement in class, and on teachers’ interactions with the participants. I also took pictures of student work and the materials, including textbooks and worksheets, that the students were using. During the time the students were working on projects and not receiving direct instruction, I would circulate with the teacher in the class and help when needed. Then I would return to my field notes to write about the interactions I had had with the students. I organized my field notes by date and then by participant. In my field notes I strove to get down as much detail as possible, focusing on

what I saw and heard. After completing notes, I then wrote up any reflections I had in a separate paragraph, set apart from my observations (Emerson, Fretz & Shaw, 1995).

DATA ANALYSIS

I based my analysis on the framework that Glaser and Strauss recommend for constant comparative method. The first step in this approach to qualitative thematic analysis is general coding, that is to read through the data several times, make memos in the margins for codes and potential themes that you find across the data, and compare those with other instances that you find matching the same theme. In the second step, themes are collapsed into larger categories. The last step is to compare those themes to theory and further reduce the categories (Glaser and Strauss, 1967).

Based on Glaser and Strauss, I first analyzed data by coding my field notes from my observations. As I read over all of my field notes several times, codes and eventually themes emerged inductively. My more than 254 codes gradually collapsed into 35 themes I then coded my observation field notes for these themes; ultimately, all of the themes seemed to fall into two general categories relevant to my research questions: *learning strategies* and *using technology for learning English*. After my field notes were coded, I looked for examples and counter-examples of these themes across my other data sources, including the interviews and the student artifacts in order to triangulate. Any examples or counter-examples that were not relevant to my research questions were eliminated. For example, although identity construction was a theme that emerged in my data, it was not

immediately relevant to the phenomenon that I was most interested in; I therefore did not further pursue analysis of this category for inclusion in this dissertation. Member checking was done informally with the ESL teacher. In addition, I interviewed the school principal in order to gain a better understanding of the overall goals and administration of the school, in order to fill out my picture of the educational experiences and the expectations for my participants. My observations along with interviews with the principal, teachers and students were used to construct the context of this study. I wrote thick descriptions of the research site in order to contextualize the findings. Analysis of the data began during data collection and continued until I completed writing up the findings.

Chapter 4: Findings

The purpose of this chapter is to report the study's findings about newcomer EB students' learning strategies as well as their use of technology to learn English. The participants used a variety of language learning strategies within their ESL and content classes. Most of the language learning captured in the data involved learning vocabulary and new language structures by using technology and conferring with each other or the teacher. The chapter is organized by starting with a snapshot picture of Roberto creating his social studies digital project. Roberto's example highlights the dynamic learning process that students engaged in when creating their digital projects. Then findings are organized by under two major themes: *student-led learning strategies* and *language strategies used in the mainstream classroom*. Under the major theme of *student-led learning strategies*, four different categories are used: using Google Translate, using primary language to support second language learning, collaborating and translating with a more capable peer, and asking the teacher for clarification. In the second section of this chapter, under the major theme *language strategies used in the mainstream classroom*, the data is organized first by providing data examples of the contrast between the kinds of language tasks students had to engage in their ESL and ELA (English Language Arts) classes. Then data examples are provided from their social studies class to illustrate the kinds of learning strategies students engaged in while learning social studies.

DIGITAL STORIES

The digital story-telling project (described in Chapter 3) was designed to allow students to draw on their language resources to negotiate a complicated task using their personal learning strategies as well as technology.

For the social studies digital project, I intentionally assigned a different project to each student based on what they would be learning in their classes. The seventh-grade social studies teacher said they were studying the historical figures of the Texas revolution. He said that it would be helpful for the students to each focus on one historical figure, and he provided a list of four people that the students could research. I had the students focus on predictions and cause and effect in the digital stories because these were both concepts that the students were expected to use in their social studies class. The following is an account of my work with Roberto on his digital story. This interaction with Roberto and myself gives an overall picture of how students participated in learning.

In order to start the project, Roberto and I first discussed cause and effect in English about a context familiar to him. I asked him “what happens if there is a storm?” and he suggested several possibilities: flooding, rain, and wind. By discussing concrete examples of cause and effect, Roberto was able to understand in a very tangible sense what these words and concepts meant. He then had the necessary knowledge base to develop and further understand the more abstract concept of cause and effect as it related to historical figures in the Texas Revolution.

Next, Roberto took out his history book, and I asked him to look for information on Stephen F. Austin, his chosen historical figure. We looked at the index and then turned to the pages that were listed for Austin. I asked him to read and look for the types of actions Austin had taken and how those actions led to the Texas revolution. He found a letter that Austin had written, and I asked him to describe the consequences of the letter. Roberto explained that Austin went to prison because of the letter. I asked him to look for other similar examples in the text. As he found more examples, Roberto created a power point slide illustrating the concept of cause and effect.

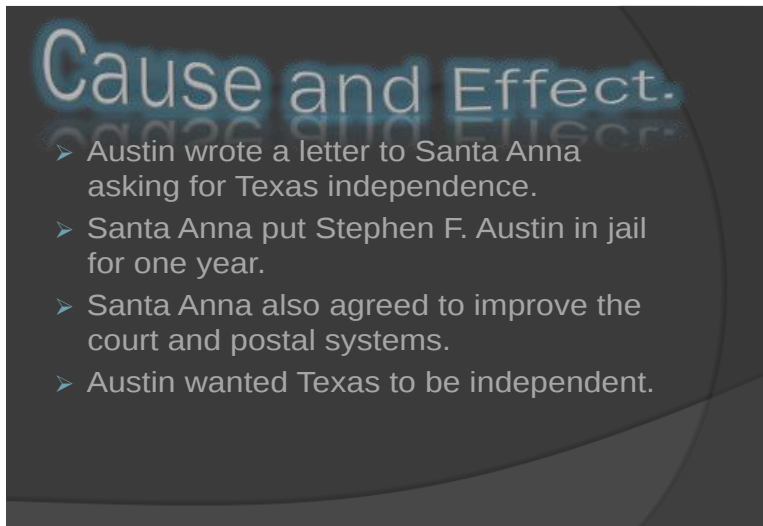


Image one: Roberto's digital social studies project 11/12/12

This slide illustrates how Roberto was able to capture cause and effect events from the text he was using displaying he understood the concept.

Next, Roberto and I worked on predictions. We first discussed the meaning of the word *predictions*, which is a cognate in Spanish, and he had no difficulty in understanding the concept. I asked him "what do you think will happen next?" He

explained, “Mexico wants Texas and Texas wants to be separate” based on his reading of the history text. Here are Roberto’s predictions of what would happen next:

Researcher: “what happens when people do not get along?”

Roberto: “they go to court.”

Researcher: “what else could happen?”

Roberto: “a fight?”

Researcher: “Yes, a fight.”

Roberto: “A war?”

Researcher: “Ok, a war, a fight, a revolution, which word do you want to use?”

Roberto: “War.”

(field notes, 11/12/12)

Then Roberto added the following slide to his power point, which illustrated his understanding both of prediction and of the events in which Stephen F. Austin was involved.

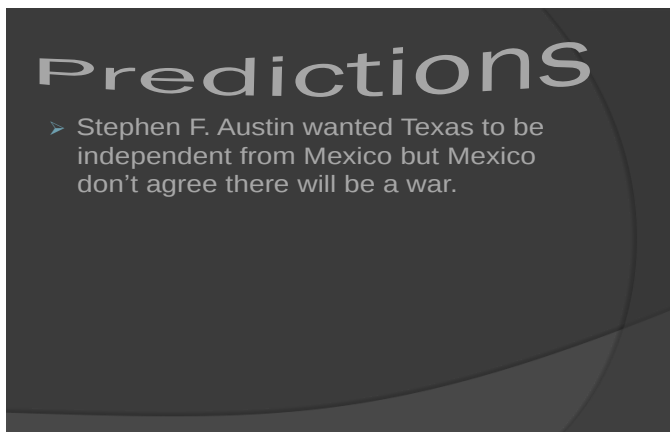


Image two: Roberto’s digital social studies project 11/12/12

In the digital social studies project, Roberto experienced a number of helpful language experiences that were not common in his other classes. Roberto was exposed to a complex text in his history book, to new concepts and vocabulary (cause and effect, the postal system and war), to negotiating meaning of the text, and to creating summaries of his findings on power point slides. In addition, the information that Roberto was learning in his ESL class supported his understanding of his Texas history class by using concepts and language that he would be expected to learn and know. Roberto had agency in this project; although the project topic was assigned to him, he had choices about the content he wanted to add to his digital story as well as what vocabulary he needed to use in order to complete the project. For example, when we discussed his predictions, he said there was going to be a “fight”, and then asked me “a war?” I responded by repeating the two vocabulary words plus the word “revolution”, and he then chose which word he wanted to use. Although these words are not synonymous, they all represent aspects of a conflict. Roberto’s work on the social studies digital project offers an example of how the use of technology and coordination of concepts across classes from the Social Studies class can help ESL students develop the academic language they need.

I will next elaborate on each of the learning strategies that emerged in the data, highlighting students’ use of technology throughout the different digital projects.

STUDENT-LED LEARNING STRATEGIES IN THE ESL CLASS

Across the data, it was clear that students drew on a wide range of strategies for learning English. These strategies included using Google translator, using primary language to learn English, collaborating and translating with a more capable peer, and asking the teacher for clarification in order to learn English.

Use of google translate

One of the most common strategies among students was the use of Google Translate. When the participants were allowed to use the school computers or their personal iPads, the use of Google Translate was prevalent. They used Google to translate everything from single words to entire sections of text from textbooks for the internet. The variety of ways in which students used Google Translate was especially notable when participants were developing their digital stories. They often used it to look up words or phrases in Spanish that they did not know the English equivalent for and then typed the word into their digital story.

Because the framework of this narrative digital story was flexible, students could change the format of the assignment if they wished, and questions often arose about whether they were doing the assignment correctly. During such occasions, Alexia often used Google translate to type her question in Spanish, translate it to English and then asked me to look at the screen. For example, following a session working on the first digital stories project, I noted in my field notes: "Alexia asks if she can change one of her

events from her storyboard by asking me through Google translate. It's not a problem to change I tell her. " (Field notes, 9/19/2012)

Alexia used this strategy often throughout my time at the school. If she had a question and did not know how to say it in English, she would type it out in Google translator. While Google translator is limited and often left us guessing as to what the exact question was, we were normally able to communicate this way. I would then respond to her question orally or use non-verbal communication to see if she understood. If she did not understand, I would type my answer into Google translator in English and then translate it to Spanish. Sometimes when a more proficient bilingual speaker was around, the person would translate the answer for me. I did not generally have to ask the other students to translate; they did it voluntarily in order to support each other in learning.

The participants all knew how to use the basics of PowerPoint and how to locate the help menu for Microsoft software. When students encountered computer questions that could not be answered by other students, they would then type their computer question in Spanish in Google translator, then take the English translation and cut and paste into the Microsoft help menu, then cut and paste the English answer back into Google translator and translate it to Spanish. I would ask if they understood the instructions and often they would say "a little." Normally between using this strategy, trying different things out in Power Point, and discussing with a peer or me, the students were able to figure out how to do the desired action in Power Point. Their perseverance to accomplish these tasks was impressive.

Alexia used Google translator the most during this study. While composing her digital project, she read materials in Spanish about the U. S. Constitution and then searched on the Internet for text she could cut and paste into her presentation. This required her to cut and paste English text into Google translator, look at the translation and then decide if she wanted to use it in her presentation. Here is an example of her work.

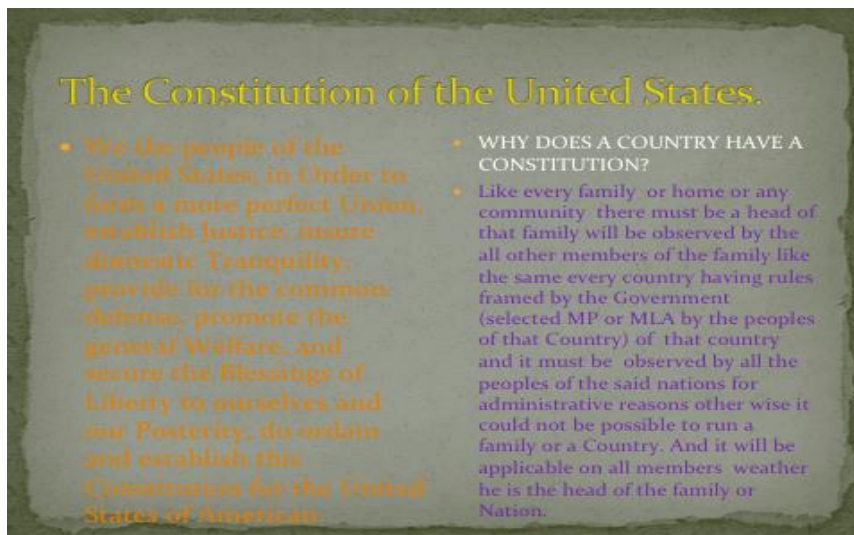


Image three: Alexia's Social Studies Power Point Project

The Constitution of the United States.

- We the people of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defense, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of American.
- WHY DOES A COUNTRY HAVE A CONSTITUTION?
 - Like every family or home or any community there must be a head of that family will be observed by the all other members of the family like the same every country having rules framed by the Government (selected MP or MLA by the peoples of that Country) of that country and it must be observed by all the peoples of the said nations for administrative reasons other wise it could not be possible to run a family or a Country. And it will be applicable on all members weather he is the head of the family or Nation.

In this example, in order to choose text for her presentation, Alexia needed to have understood the question she had to answer (Why does a country have a constitution?), do an online Google search in English, and read and translate different texts to find one that could address the question.

In another ESL lesson, led by the ESL teacher, participants were given iPads and a book to read titled “Huang’s Journey” about a Vietnamese refugee’s journey to the United States. The ESL teacher instructed the students to read the book and create questions from the simple sentences. For example, the book said “She left Vietnam with her on a boat.” And the students had to create questions like “How did she and her son leave Vietnam?” This was a group project, so the students were seated at a group table and able to freely talk to each other. Yardia, who knew how to use the iPad better than the other students, showed everyone how to use Google translate on the iPad. The students decided to each take a section of the book to type into Google translate and then

tell the others what that part of the story said. After they translated their section of the story, they joined all their sentences together (field notes, 10/1/2012). During this activity, the students mostly used Spanish to talk to each other about the meaning of the book and how to create the questions in English. At the end, they produced a list of questions that the teacher checked and was pleased with. This was an activity in which the students were completely engaged and used technology as well cooperative work to complete.

The range of use of Google translate by the participants is important because it appeared to me that the more proficient the participants became in English, the less they depended on Google translator. Alexia was the participant who relied the most on Google translator, and her English proficiency was the lowest of the four participants. In addition, her English proficiency did not improve as quickly as the other students, probably because of her hearing impairment. Thus, Google translator was a particularly useful tool to help her to understand more of what she heard and saw. As the other participants' English improved, they used less Google translator.

The use of Google translate for completing classwork was pervasive through my field notes. For example, when Alexia was working on her digital narrative story, she wanted to know how to insert music into her PowerPoint presentation. She asked me for assistance and,

“I told her I do not know.” She took my response and types it in English into Google translate, and reads the Spanish response. I asked her if she understands what Google translate says, and she says a little, then types a question for me in

Spanish into Google translate explaining she wants help with the music tomorrow.

(field notes Sept. 25th, 2012)

This was a common interaction between Alexia and me while working on projects. If another student could not answer her questions, she would then type it into to Google translate and ask me.

Even though Google translator was a help to many of the participants as they tried to navigate their assignments, the ESL teacher seemed to think of iPads and computers as a privilege that could only be used when class work was finished. Generally, the ESL teacher would have students do traditional assignments on paper. At one point in November, Alexia actually had her iPad taken away, for the duration I was conducting research, for using Google translator too much. Alexia was using translator in all her classes to understand what she was reading and what she had to do. The inclusion teacher (not a participant in the study), along with the ESL teacher, decided to take away her iPad because they thought she had become too dependent on it (Field notes, 11/5/12). From my observations Alexia did depend on her iPad, mostly for Google translate, but also Google images, more than others, not only because of her lower English proficiency but also because of her hearing impairment. It was often hard for her to hear and understand what was being said in English, even with hearing aids. She was visibly upset when her iPad was taken away as it was a tool that was helping her understand the target language (field notes, 11/5/12).

All students used Google Translate. The ability to use Google Translate showcases the literacy skills that the students had before they came to the U. S. Importantly, these participants already had basic computer knowledge and full reading and writing skills in Spanish. Given the opportunity to access these assets, they were better able to comprehend the text they needed to understand in order to complete assignments. Although language policies at the school discouraged the use of Spanish, a number of recent scholars favor allowing English learners to more freely use their first language to support their acquisition of new language. Garcia and Sylvan (2011) for example argue that teachers of newcomer secondary students should create environments where multilingual students can access all the languages they know and to learn from how students “engage in meaningful instructional activities” (p. 398). In this study, using translation did not halt the participants’ English development; on the contrary, translation appeared to serve as a strategy that supported their learning of both English and content knowledge. When the participants in this study became better English users, they decreased using translation and adopted other learning strategies. In the next section, I will further explore students’ use of their primary language skills in their acquisition of English

Use of Primary Language to Support Second Language Learning

Another example of these students’ primary language supporting their English learning was when Alexia was working on her social studies digital presentation of the principles of the U.S. constitution (described above). I had found an age appropriate site

with both Spanish and English resources. I asked her to read the Spanish version first and then the English version. While she was reading the Spanish version, she was completely engaged in the reading process, as evident by her total concentration on the screen and reading aloud under her breath. After reading in Spanish, she called to me in a very excited voice "miss, miss, come here!" I went over to see if she needed help, and she looked at me and pointed to the screen and said, "this is very important!" (Field notes 11/12/12). I had not seen her respond to other activities with such adamant enthusiasm before. Reading about the principles of the constitution, which took her only about 15 minutes in Spanish, allowed her to complete her assignment in English, not only with an understanding of the task, but also with enthusiasm for the topic.

Once given the space to use Spanish, the students incorporated a much wider array of strategies to understand the academic content of what they were doing. One important strategy was to hold discussions in Spanish. The participants had rich conversations around English language use in Spanish, which increased their understanding of the task they had to do in English. On one occasion, I had the students sit around in a circle, and we read the bilingual book titled *Upside Down Boy*, about a boy who moves to America from Mexico and starts school for the first time. The migrant family in the book comes from a rural area of Mexico. While reading the book, the students noticed the word *campesinos* (farmers) in the book. The students discussed together the meaning of this word in Spanish; they also wanted to know what it meant in English. However, in the book, they use the same word (*campesinos*) in the English section with no translation. While the participants talked about the possible different

meanings this word had, the teacher came by and shut the conversation down with "English only!" The students immediately quit talking and lost interest in reading the rest of the book (Field notes 9/16/12). Although I do not speak Spanish, I listened to the students discuss this word. It was clear to me that they were talking about the word *campesinos*. They pointed to the text in the book, asking me for the word in English. I also noted the number of times each student used the word *campesinos*, and their non-verbal cues such as pointing to words in the text, leaning forward in their seats listening intently, and maintaining eye contact with each other.

Collaboration and Translation by peers

The students also worked together by translating what they knew or code switching with different words. While we were working on storyboards for our narrative digital stories, we worked together as a group at one big table so everyone could see each other and ask each other questions. Often the participants would call out a word in Spanish and if someone knew what the word was in English they would say it back. For example, Alexia asked what's the word for "*queso*" in English, many of the students responded at the table by saying "cheese" while they continued to work. Yardia did not know the word for "*embarazada*" in English, so first she asked everyone at the table; the other students did not know. Next, she drew a picture for me and I gave her the word "pregnant" in English. She repeated the word in English and then asked me to help her spell it. I wrote it down on a piece of paper, and she copied it onto her storyboard. While I was doing this, some of the other students noticed the word and also repeated it, and

then continued working. We continued to work like this until the storyboards were finished. Each student was thus able to contribute to the learning of English even while using Spanish. Each student had different language needs in order to create their stories, and the English vocabulary that each student knew also varied. No single student was able to answer all the English vocabulary questions, but as a collective group (sometimes with my help) they were able to get all of their questions answered.

Even though the ESL teacher preferred English only spoken in the class, she became more lenient throughout the time I collected data. One reason is because Juanita was exited out of the ESL class, and this meant that the teacher did not have a more capable translator. When students worked together they took these opportunities to confer with each other on English vocabulary and computer assistance for their ESL class projects. For example, during the time students were creating their narrative digital stories and seated in front of the computers, Yardia asked Roberto for help:

Yardia: *Sabes como se hace la linea?* (Do you know how to make a line?)

Roberto: *¿cual? ¿Esa?* (Which one? This one?) While pointing at Yardia's computer screen.

Yardia: *no esta* (no this one) – Roberto leans over and helps Yardia create the line in her power point. (Digital story making – class video – October 2012)

This example represents the kind of computer assistance that participants gave to each other when needed. Although many of these conversations were in Spanish, they were

navigating Microsoft power point in English, thus navigating both language and computer functions.

Participants also spent time while working on their narrative digital stories frequently to check on word spellings in English and word choices, as highlighted in the example below in which Juanita helped Alexia understand the difference between *he* and *his*.

Juanita: I like his music. (pointing to the screen of a popular Mexican singer)

Alexia: I like it?

Juanita: his

Roberto: his music

Alexia: He? Him?

Juanita: No, I like.....

Alexia: *Hache i* (spelling “he” with Spanish letter names)

Juanita: His

Alexia: His.... His. Oh! *I-es* (spelling i-s using English letter names)

(Storyboard narrative-class video-2012)

In this exchange Alexia is trying to figure out the right pronoun to use to say “I like his....”. She hears Juanita saying “I like his music” and questions her on her pronoun use by asking “I like it?” Juanita repeats for her the right pronoun “his” and Roberto adds “his music” to try and clarify that to Alexia. Alexia, still not quite sure, asks “he? Him?”. Then Juanita patiently repeats “no, I like...” and Alexia asks again “*Hache –e*”, spelling

the word to make sure she understands. Then Juanita repeats again “his,” and finally Alexia understands that the word is “his”. Although some of this exchange may be due to Alexia’s limited hearing, everyone was working together to help each other understand English. This exchange was not prompted by the assignment, but by Alexia’s drive to understand a bit of language in which she was interested.

Similar interactions between the participants can be seen in these examples as they asked for vocabulary they needed for their digital stories:

Alexia: *¿Cómo se dice “con” en inglés?*

(How do you say “with” in English?)

Roberto: *¿como?*

(What?)

Alexia: *¡Con!*

(With!)

Roberto: with

Alexia: *uh huh pero es doble u-i-te-hache* (spelling using Spanish letter names)

(Uh huh, but it’s w-i-t-h)

Roberto: yeah

Yardia: *¿cómo se dice ahora?*

(How do you say “now”?)

Roberto: now

Yardia: time?

Roberto: now, *Ahora?* Or *hora*, time?

Yardia: *ahora*

Roberto: now

It was common for the participants to ask each other how to say different words in English, as seen in this example:

Yardia: *como se dice ella llamado* [in English]? (How do you say “called”?)

Alexia: *Llamado* talked

Yardia: *llamado!?*

Alexia: *Llamado? No se* (llamado? I don’t know) (storyboard – class video – Oct. 2012)

Because Alexia could not answer her question on how to say *llamado* in English, she went to Google translate and typed in “*llamado*” and found that it means “called” in English. Students would normally ask another peer for a word translation first before they went to Google translate. Asking a peer was a faster way to get a word they needed than checking Google translate.

Many times these interactions became a way of working and were done quickly while students maintained focus on their work. For example:

Juanita: *Como se dice mi dueña en inglés?* (how do you say “*mi dueña*” in English?

Roberto: Lady (storyboard – class video – Oct. 2012)

Both Juanita and Roberto continued to work while exchanging these few words. Here is another exchange between the participants, a little different in that it includes a cognate:

Yardia: *¿cómo se dice “enchiladas” en inglés* (How do you say “enchiladas” in English?)

Alexia, Roberto, and Juanita: *enchiladas* (storyboard – class video – Oct. 2012)

Sometimes the discussions about how to use different words in English required more time and attention, for example this discussion on plantains vs. bananas.

Roberto: *banana*

Alexia: *banana y platanos* (banana and plantains)

Roberto: *platano es las mas grande* (plantains are the bigger ones)

Yardia: *banana y banana es lo mismo* (banana and banana are the same)

Alexia: *no*

Roberto: *no platano es banana. Guineo es banana* (No, plantain is banana.

Guineo is a banana) (Roberto is referring to dialectal difference in Spanish between banana and plantain).

Alexia: *guineo?* (banana?)

Roberto: *es banana* (its banana)

Yardia: *aqui no!* (here it isn't)

Teacher: *plantain?*

Teacher: *plantain. Plantain banana*

Alexia: *entonces platano no es banana* (so a plantain is not a banana?)

Teacher: Two different. Plantain is different from banana.

This exchange started with Roberto helping Alexia with the word banana; she was looking at a picture of fried plantains with cheese. Roberto called it a banana and Alexia questioned him on whether that was the right choice of word or not. Roberto explained that plantains are bigger than bananas, and Yardia interrupted to argue that they are the same (banana and banana). Alexia rejected Yardia's explanation, and Roberto tried to explain the difference between the two fruits in Spanish. Yardia responded by saying it's not the same in America. At this point the teacher intervened, pointed at the picture and said "plantain." Alexia asked for clarification that they are different, and the teacher responded with yes. These kinds of exchanges represent more than searching for the right word, but also the right representation of a concept, across languages where sometimes they did not directly translate.

Asking the ESL teacher for clarification

Asking the teacher for clarification on classwork was not as common as other strategies, but it did appear in the data. The participants employed a variety of strategies to ask for clarification. If it was a whole class activity, one student would normally ask "¿Qué?" in Spanish. If other students responded with "no sé", then someone in the group would try to communicate to the teacher what the question was. The most common ways students would ask for clarification would be to say, "what?" or "I do not understand" in

English. The teacher normally responded to these requests by providing more examples or restating what she said in different words until one of the participants understood and then could explain it to the whole group if needed. For example, when Roberto was asking when to use “his or her” the teacher gave him many examples of things that belonged to male or female students, “his shirt, her shirt, his pencil, her pencil” until he understood the difference (field notes 9/26/12). The teacher was very responsive to whole group inquiries, and during my observation period, I never witnessed a time that directions were not understood at all.

Students would also ask questions to clarify their own work. For example, Yardia asked the teacher what the word "barked" meant by pointing in her notebook at the word; the teacher responded by barking like a dog. Yardia giggled and wrote down the word in Spanish in her notebook.

Normally, for clarification questions, the teacher was patient and used different types of examples, physical objects, gestures, and body movements to explain. She would also check for clarification from students to make sure they understood. For example, one day she was showing pictures of objects to the class. The class did not understand that they had to respond with "that is a..." When Roberto said he did not understand, the teacher showed a picture of a book and said, "this is a book." Then she showed different pictures to each student and waited for the person to respond with the correct answer of what object was in the picture.

LANGUAGE STRATEGIES IN THE MAINSTREAM CLASSROOM

In this section of the chapter I present data that offers the contrast between vocabulary that was needed in the ESL class room and in their ELA and Social Studies classes. As a result of the different learning contexts between the classes, the ESL classroom was a small class with only EB students, whereas content area classes were large and included students whose primary language was English. Participants engaged in different learning strategies when they were in their content classes than they did when learning in the ESL class.

The ESL Class and English Language Arts Classes

The students' regular ESL class began with a five-minute warm-up that consisted of learning a grammar point, such as, turning statements into questions. To illustrate, the teacher gave the students a list of sentences, such as "It snowed today." and then they would have to produce "Did it snow today?" (field notes 10/12/12). These kinds of warm-ups highlight the kinds of basic language that was taught in the ESL class. Because the participants in my study were newcomers, who did not have any English language proficiency before coming to the U.S., this kind of language instruction was necessary. However, a question arises about how much time should an ESL teacher in this kind of situation dedicate to teaching students basic language skills, and how can she/he include instruction of the academic language skills and structures students already need for their content learning in English? During the time of my study, there was very

little academic language taught in the ESL classroom that connected to content area classes; this is a common challenge that has been identified in the literature (Valdés, 2001).

As I have already illustrated, leveraging cognates and students' prior knowledge in Spanish has the potential to save time in the ESL classroom that would allow more instruction of content-related academic language. Unfortunately, Mrs. Smith's English-only rule in the classroom rendered both of these strategies less available; much of the vocabulary she taught the students were words with which they were familiar in Spanish. For example, when the teacher in the ESL class introduced a new book to the students titled "Race Around the World," she introduced the words "title, author, publisher, chapter, and pages." Next, she showed an example with another text on how to find this information and asked the students to do the same with the "Race Around the World" text. Yardia, Alexia, and Roberto used their iPads to translate the words and then quickly found the information in their book. Then, the teacher wrote questions words on the board, "what, who, why, where, whose, how many". She then took a word off the word wall, "title" and asked the students to make a question out of it. One of the students responded with "What is the title of this book?" This activity continued until all the vocabulary words were made into questions (field notes 10/10/12). In the ESL class, the sentences were presented in context. The students had the book in their hands; they could look at the book and see the vocabulary words they were learning. The students could also access their iPads. The vocabulary words were also embedded in a simple sentence with simple vocabulary. Although these words would seem to be words that the students

would need in their content classes, “title, chapter, and cover” were most likely terms that the students already had knowledge of from their previous exposure to Spanish texts.

Even so, the students sometimes used their iPads.

Because she did not speak Spanish, the ESL teacher used a variety of strategies to communicate with students. Her most common strategy was having a student more proficient in English translate for the students who had more limited English. These translations ranged from simple to much more complicated utterances. A simple translation would be a word translation, such as how do you say "coat" in Spanish, to the very complicated undertaking of having a student translate that the school needed “proof of residency” from a student. The teacher depended on Juanita for translation before she was exited out of the ESL class. After Juanita left the class, the teacher had to use a wider range of strategies to communicate with students. She started to use more pictures, to act out more vocabulary words, to give more examples, and to be generally more careful to build on language and grammar that had already been taught in the class. Towards the end of my time in the classroom, she became more accepting of students’ use of Spanish. She would have students say words in Spanish to help others understand, she would ask students to say words in Spanish to see if they had an English cognate. Thus, I would conclude that, especially in comparison with the regular English Language Arts class, the ESL class provided an environment where students had multiple opportunities to understand the work they were doing.

The English Language Arts class

In the English Language Arts (ELA) class, students required more difficult and less contextualized language. Whereas in the ESL class the language was basic, in the ELA class the language expected was much more complex, and with less scaffolding for students to learn the new language structures and vocabulary.

On the same day that the ESL teacher introduced a new book (A Race Around the World) to the students, Juanita's English Language Arts (ELA) teacher also introduced a new text (Ghost Stories). The ELA teacher had the students guess vocabulary words from context as a pre-reading activity. He first wrote three sentences on the board, "Quick as he could, he flung the cabin door open and sent his last dog out into the night." "Snow melted into mud. The white mountains next to the driveway dwindled to a hill." and "You watch for a chance to strike against the murdering, thieving lobsterbacks. Be vigilant, and your chance will come." The students were then divided into groups of three to copy the sentences from the board and underline the words that they needed to guess the meanings of: "flung, dwindled, and vigilant." Next, the students were told to write what "flung" meant and to provide an explanation of their "thought process" - meaning the context clues they used to define the word (field notes 10/10/12). Clearly, for EB students this lesson provided them little scaffolding or support to understand complex new words.

In both the ESL and ELA classes, the teachers asked students to define key terms. However, in the ELA class, the students were expected to work in groups to *guess* the meanings of vocabulary words from context. Although the words presented in the ELA

class were not all abstract, compared to the ESL class, the words were embedded within dense, complex sentences.

ESL class:

“What is the title of this book?”

(Independent clause)

ELA class:

“Quick as he could, he flung the cabin door open and sent his last dog out into the night.”

(Dependent clause with two independent clauses and coordination)

In addition, the students did not have a copy of the book in the ELA class because the teacher did not have a class set for students. Finally, the purpose of word-guessing was likely test-driven. The teacher wanted students to get experience guessing the meanings of unknown words they might encounter on the STAAR test (Texas’ high stakes state test). These vocabulary words were also presented within complex sentence structures that the ESL students may or may not have encountered before in English. The language in the sentences was also dense including several content words. In the example sentence from the ESL class, there were only two content words (title and book), whereas within the example sentence from the ELA class, there were nine content words. It is of course likely there would be more than one word in this sentence that an EB would not know. In the ESL class, the vocabulary taught was generally simplistic without connection to

words they would need in other classes. By contrast in the ELA class, the language was difficult with little scaffolding provided for the students to grasp and connection with the meaning and use of these vocabulary words.

The Social Studies Class

Because students needed to learn a much more complicated level of vocabulary and language structures in their content classes than in their ESL class, they needed strategies to help them learn the necessary terms. When I interviewed Juanita about how she felt about the required standardized tests, she commented that the math was easy but that the reading was too difficult, adding that she did not understand most of the words in the reading sections (interview, Juanita, 9/11/2012). The kinds of words that participants were learning in their ESL class, although necessary for day to day interaction, simply did not seem to prepare them for the language demands of their content area classes. In their ESL class, for example, one project had to do with different kinds of clothes that people wear, while at the same time in Alexia's history class, she had a project on the constitution of the United States. See artifacts below:

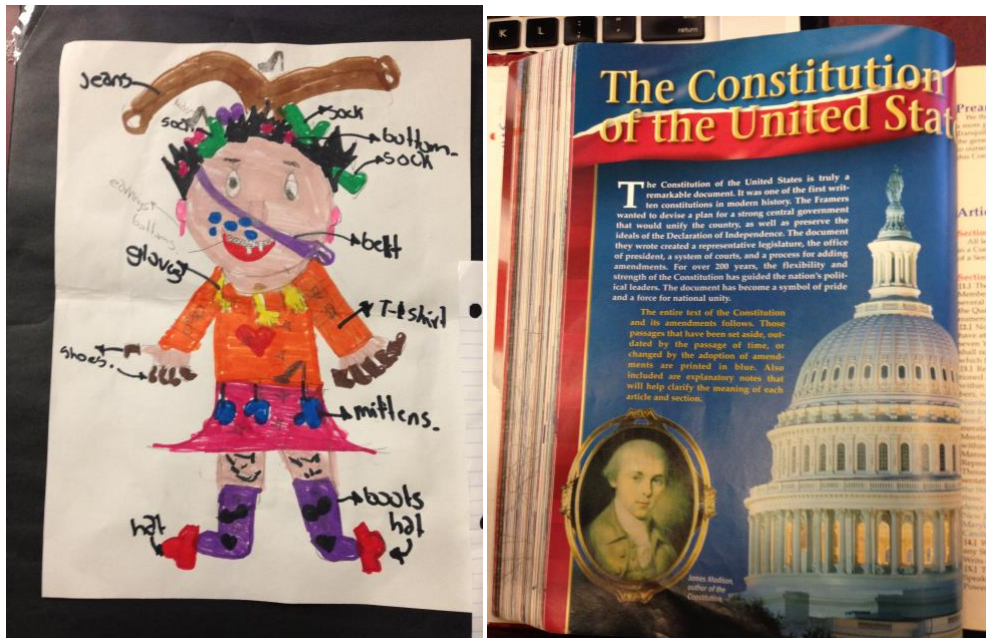


Image four: Alexia's drawing for ESL class

Image five: Copy of a page of Alexia's Social studies text

Although the language at this point in time in the ESL class was to learn words like jeans and hat, in social studies class the expectation was that students would read a dense academic text with words like “remarkable,” “representative,” “flexibility,” and difficult concepts like “a force for national unity”. Although newcomers do need to learn the basics of English, there appeared to be no opportunity for communication between content area teachers and the ESL teacher regarding how to prepare students better for the difficult, abstract language they would encounter in their other classes. This is not uncommon in U.S. secondary education contexts (Valdés, 2001). As a result, often in the content area classes the students just copied directly from their textbooks.

Fortunately, the participants were usually able to find key words in the social studies text and then copy what came after, whether or not they understood it. For example, during an activity in Roberto's social studies class students had to identify the issue being discussed, the goal of the historical figure involved and what action was taken. Juanita translated the instructions for Roberto, but he still had to grapple with the text to try to complete the assignment (see Image 6). Figure X below is a transcription of Roberto's work.

PERSON	ROLE
James Polk.	Became an issue during the United States presidential election of 1844. Gained momentum from growing support for expansion. He feared the country would split over the issue of slavery.
John Tyler.	He asked Congress to reconsider annexation. Tyler argued that Congress could no longer delay its decision.
Anson Jones.	Elected president in Texas in 1844. Called a special session of the Texas Congress to consider the terms of annexation. Texas approved annexation by a vote of 4,254 to 257.
J. Pinckney Henderson.	The first governor of the state. The Lone Star Flag was lowered, and the stars and stripes was raised. Texas officially became the 29th state in the United States of America.

Image six: Roberto's assignment from Social studies class

Person	Role
James Polk	Became an issue during the United States presidential election of 1844 Gained momentum from growing support for

	expansion. He feared the country would split over the issue of slavery.
John Tyler	He asked Congress to consider annexation Tyler argued that Congress could no longer delay its decision.
Anson Jones	Elected president in Texas in 1844. Called a special session of the Texas Congress to consider the terms of annexation. Texas approved annexation by a vote of 254 to 252.
J. Pinckney Henderson	The first governor of the state. The Lone Star Flag was lowered and the stars and stripes was raised. Texas officially became the 28th state in the United States of America.

(Transcription of Roberto's assignment from Social Studies class)

Roberto was able to name the person and find what action they took in the text by copying, but was not able to take the additional step of identifying the goal each person had. I was working with Roberto during this assignment and watched as he found each name in the text and then copied the required information (Field notes 9/24/12). The

resulting writing above is very different from Roberto's regular writing, which normally used simpler vocabulary and sentences. For example:

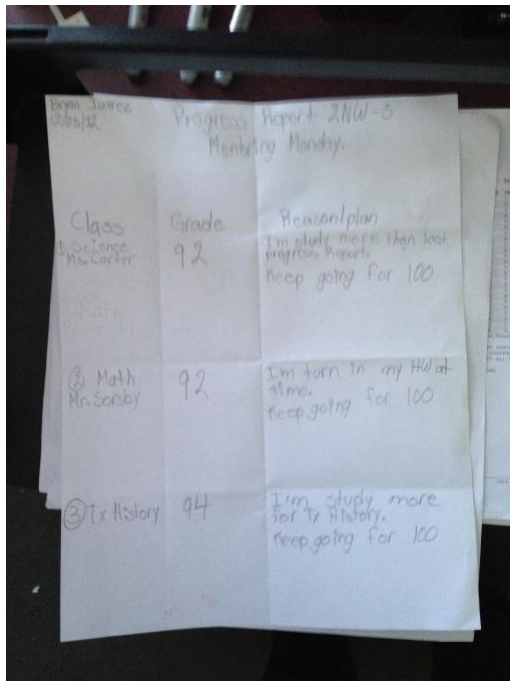


Image seven: Roberto's self-report on his grades, assignment for mentoring class

Roberto 12/3/12		
Progress Report 2NW-3		
Mentoring Mondays		
Class	Grade	Reason/Plan

Science	92	I'm study more than last progress report. Keep going for 100
Math	92	I'm turn in my HW on time. Keep going for 100
Tx History	94	I'm study more for Tx History. Keep going for 100

(Transcription of Roberto's self-progress report)

These data show much less dense sentence structures and much more basic vocabulary in his writing because there was nothing for him to copy to create his progress report.

The students received very limited help in their content area classes to acquire the necessary vocabulary. Most of the time, the participants would simply copy the definition of the word without understanding it. During Yardia's social studies class (where iPads were permitted), the teacher put a list of vocabulary words on the board dealing with Incan history. He asked each student to define words, like "indigenous", "tribute", and "succession" and then asked students to write their own definition. Yardia looked at the text on her iPad, tapped the word so the definition came up and then cut and pasted that definition into her notes for the assignment. I asked her if she understood the words; she said no. I asked the teacher whether they were supposed to cut and paste definitions into the note section on their iPads for this assignment, and probably not surprisingly, he said no (Field notes 12/3/12). In this class, Yardia had a "non" learning strategy of cutting and

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pasting definitions for social studies into her assignments; in other words, the strategy that she adopted was not supportive of her learning of either English or the content concepts.

Chapter Five: Discussion, Conclusions and Implications

This chapter is divided into four different sections; discussion of findings, implications for pedagogy, implications for policy and programs, and limitations and further investigation. In the section, implications for pedagogy, I will discuss how my findings relate to current theories of pedagogy in the field of ESL. Next, I will address how these findings could inform policy and programs that are designed to serve the EB population. Finally, I will discuss the limitations of the study and what I would recommend for further studies.

DISCUSSION

When participants were given the opportunity in the classroom to use the myriad of skills and technology available to them, they showed a wide variety of modes of learning to understand their schoolwork. The most prominent strategies used by students to learn were code switching, using google translate, asking the teacher for clarification, Spanish to Spanish discussion, and supporting each other's computer literacy. Students also engaged with other strategies that did not show up as frequently in data such as: composing in Spanish and then translating to English; using Google images to understand vocabulary or concepts; engaging in the writing process of brainstorming, drafting, revising and editing through digital stories and without instruction; and jigsawing – dividing up assignments equally amongst themselves then putting the assignment together.

One of the most notable findings was the decline in usage of Google Translate as a student's proficiency in English increased. In this study, Alexia and Yardia had the lowest level of English proficiency, whereas Roberto and Juanita were more proficient speakers of English. Alexia and Yardia depended much more on Google translate than Roberto and Juanita did to help them understand different tasks. Roberto and Juanita did not need to use it as much, as they had a higher level of English and were normally able to communicate their needs and accomplish tasks without much clarification.

Google Translate also proved to be an asset for my participants and me when we did not share a common language. Through Google Translate, we were able to communicate instructions and ask questions in addition to allowing the students to be more independent during the learning process as they did not have to wait for a more bilingual classmate to ask questions, give answers and translate. In their use of Google Translate, Alexia and Yardia were able to transfer to English a strategy they were already comfortable with in Spanish.

Garcia and Sylvan (2011) see biliteracy as a dynamic process where all language knowledge is connected and interdependent. Languages are not separate silos in our brains, but interdependent. Both new and native languages inform each other, creating a form of linguistic symbiosis where both languages support and bolster the knowledge and understanding of the other. Students will often engage in translanguaging, a process of drawing on both new and native languages at the same time, to master the task that is in front of them (Garcia & Sylvan, 2011). This is a fluid process where students draw on different languages and knowledge over time to engage in a given task. The chart shows

this change in the participants' language use. At the lower levels of proficiency, Yardia and Alexia used Google translator more consistently, whereas the other participants used a wider range of strategies. As students increased their biliteracy, their strategies for using both languages changed and evolved. It appeared counter-productive not to allow the beginners access to their first language or their technology tools out of fear that it would inhibit their learning of English.

The different modes and literacies in which the students were able to engage while creating their digital social studies projects included listening to the audio of their social studies book while reading along, watching short movies on their topic, reading Spanish language materials on the internet that supported the research for their projects, engaging in digital literacies, using Google translate, working in discussion groups, and rereading written instructions for the project. During the creation of this project, Alexia and Yardia depended much more on reading Spanish language materials on the Internet, whereas Roberto used audio in English and read along in his social studies book (by this time, Juanita had already been exited from the ESL program). In the same way the less proficient students depended more on Google translate, they also chose to use more Spanish language materials, whereas Roberto, who was more proficient in English, chose to use audio enhancement. The audio enhancement for the text also had short movies he could watch on his topic during which different historical situations were acted out. Having the choice of text they wanted to read, and choosing the language of the text, allowed the participants to access the content knowledge needed to complete the social studies project. In expanding the idea of literacy for this project (such as using images,

drawing, engaging in technology, and discussions), students were able to read many different types of text as well as compose their own work. When the students were provided with scaffolded projects and access to technology, like the digital social studies project, they were able to participate in the learning of academic English with more ease.

While participants were engaged in both digital projects, they used a variety of interactions to support each other's learning. Vygotskian learning theory would suggest that this is learning from a more capable peer (Vygotsky, 1978). According to Vygotsky, the "more capable" peer is not static and can change to different individuals depending on the learning situation/moment. Supporting each other's learning was not an isolated incident, but something that appeared across the data in several different kinds of learning contexts. Students would code-switch, translate, help with computer instructions, explain assignments, give each other examples, discuss, and encourage each other. The role of more capable peer changed depending on the learning situation. Participants created a learning and teaching community of their own, in the ESL classroom, without the assistance of the teacher. Vygotsky's theory of a learning system also took into account mediational tools. Mediational tools could be language, symbols, or physical objects that help a learner construct new meaning (Vygotsky, 1978). The participants in this study used the computer/iPad as a mediation tool. In a study conducted by Lan (2012), she noted that when students were using the computer to learn vocabulary, they created their own Zone of Proximal Development using each other and the technology as mediation tools. Martin-Beltran, Daniel, Peercy, and Silverman (2017) noted that when students had more time to engage with a more capable peer, they were able to construct meaning and

created their own ZPDs. Participants in this study created the same kinds of learning environments for themselves. It is noteworthy that this learning environment existed only in the ESL classroom. When students were in their content area classes, they were often in different classes, and normally quiet. However, given the opportunity to work together, they formed their own learning community, one in which they continued to collaborate and learn from each other.

The culture at the school presented some challenges for language learning. Student conversation seemed to be limited in both English in Spanish. Students often reported being told to be quiet while in the halls, eating lunch, and working in classes, even when they were working on activities together. As I described above, in the halls, students were made to line up in silence before entering their classes. Similarly, during their lunch period, students were grouped by grades, separated by sex, and told to eat silently. In the final interview, the students made the following comments:

I: “What do you like least about school?”

Roberto: “When the principals say “don’t talk!”.

Yardia: “Don’t talk!”

Alexia: *Esto es lo que no me gusta* (That’s what I don’t like)

(final interview with Alexia, Roberto and Yardi, 12/12/12)

In fact, the translator and transcriber for interviews for this study made an analytic note:

“they speak quietly when in Spanish. It seems like they feel it isn’t permitted”

(Transcriber, final interview, 12/12/12).

Limitations on student conversations held true for ESL classes as well (field notes, 9/25,10/2). The culture of “no talking” unless permitted by a teacher or administrator was so pervasive that often when I entered the school campus, silence echoed through the halls and classes. The restrictive environment in the school did not allow for a dynamic learning context in which students could freely interact and learn from each other. This was especially problematic for EB students because the role of peers becomes paramount when the teacher does not share a common language with the students. If students do not understand the teacher, they are going to rely on each other for further explanation.

Additionally, standardized testing had a large impact on the pedagogy and curriculum at the school. If students scored below expectations on tests, they were put into after-school tutoring programs that focused on "drill and kill" methods of teaching whatever skill was deemed deficient. This reduced opportunity to talk was apparent in both the students' ESL class and their content classes, although it was even more pronounced in the content classes.

There was also a lack of overlap between the students' ESL and regular English Language Arts class (ELA). The ESL teacher did not have an opportunity to work with the ELA teacher to coordinate curriculum and lessons. For example, when the ELA teachers had an in-service day and worked together to coordinate curriculum and lessons between the different classes, the ESL teacher was not invited to participate.

IMPLICATIONS FOR PEDAGOGY

In this study, I attempted to understand how participants were learning English with the assistance of each other and technology. This was highlighted by the two different digital stories projects: the narrative story and the social studies project. These projects offered participants more autonomous learning opportunities than common in their regular classroom environment. Participants drew on a larger variety of language learning strategies when given space and opportunity to do so.

I would extend this further to say students who enter schools as newcomer adolescents already have a great deal of background/concept knowledge that teachers can draw upon, often from previous schooling experiences in their home countries. For example, with the concept of cause and effect, Roberto had that knowledge, he just did not know what to explicitly call it in English. This has implications for classroom practices; if metacognitive strategies are explicitly taught, like cause and effect, and then built back up to integrate the new content area, the subject will be easier to understand for these students (Chamot & Uhl, 2009; Echeverria, Vogt, & Short, 2013; Gibbons, 2002; Levine & McCloskey, 2009; Ovando & Combs, 2011; Peregoy & Boyle, 2001). After Roberto understood what cause and effect meant, he was able to go through the text and look for other examples related to the subject of Texas history. In this case, the knowledge that he already had was validated while he grappled with applying this concept to his social studies class. Gibbons notes in her book that children's previous learning experiences have to be taken into account when they are being asked to learn a new language and learn content (Gibbons, 2002). In addition in the SIOP model, created

by Echeverria, Vogt, and Short, they recommend that ELL students have focused language instruction that includes connecting previous knowledge with what they are learning in their content area classes in order to improve understanding. The SIOP model also calls for explicit teaching of strategies for learning (Echeverria, Vogt, & Short, 2013). This process of explicitly teaching strategies supports the research that Echeverria, Vogt, and Short have done in order to create the SIOP model.

Two of the many teaching suggestions that Kramsch (2009) advocates for are multimodality and valuing silence in a foreign language classroom. In the first suggestion, multimodality, Kramsch asserts that when language learners engage in learning, that they are using all their senses, and different modes to make sense of the new language. She also says, “the development of visual literacy can be a pathway into verbal literacy” (pg. 203). The participants in this study, given the opportunity, drew on all their senses to learn, and used visual literacy often to make sense of concepts and language in English. In making digital stories, the students integrated many different modes of learning; they used visual symbols to highlight meaning, technology to create meaning from their content area classes, listened to audio on different subjects, looked at texts, asked family members for photos, drew pictures, and collaborated. Through using myriad senses and modes of learning they were able to complete two different digital story tasks with full engagement and participation.

In addition, participants looked at different pictures to develop their understanding or to create their message for others to understand. Through using multimodalities, the participants were able to create meaning in their digital stories for

themselves and others viewing the stories. This process also allowed students to have a better grasp of the message they were trying to relay. For example, when Yardia was working on her digital narrative, she did not have a picture of a friend that she wanted to use in her story. She pointed to a picture of friends from Google images and asked if it was ok to use this picture even though it was not actually herself or her friend. Through this activity, she was able to make herself understood that she wanted to represent her friendship; I would argue that the language she needed to express the concept of friendship would quickly follow because she was ready to use that language and wanted to know how to express herself.

Valuing silence is also important in the language classroom. Kramsch states that although silence is often seen as a negative behavior in the classroom, students need silence to reflect on and connect with what they are doing (Kramsch, 2009). I would also argue that silence is important with newcomers learning English. They need to be given space to create their own agency in language learning, that includes students being able to identify times when they need silence to think. In the case of my participants, I was often silent because they needed time to think about what they wanted to say. When I was working with Roberto on his social studies project, he often needed time to think about what he wanted to ask. If I did not give him sufficient time between asking a question and expecting his response he often got frustrated because he could not express himself. However, if I said I would be 'back to ask you again in a little bit', he would take that time to think about what he wanted to say. Roberto may have needed to translate a few words, or look at a picture again, or find an area of text he wanted to ask about, but

usually by the time I came back he was able to ask me what he needed. These kinds of reflections allowed him the time to clarify what he needed and the opportunity to frame his questions in his own words, creating agency in his learning. This silence was not only important for students, but also for me as an instructor. When different funds of knowledge (Moll, et. al., 2009) are brought into the classroom, I am no longer the expert. The role of expert changes between student and teacher; like my students, I also needed time to reflect on the question, research an answer, and think about how to ask the student more questions to understand what they were trying to say. I will extend Kramsch's claim that silence is not only important for students, but also for teachers as their role changes from expert to learner.

Gutierrez, et. al. (1999) suggest in their work to not focus on fluency in a given language, but instead to set up classrooms and activities that allow for students to draw on all their linguistic resources in order to understand and engage in content-area related tasks. This kind of fluidity between spaces creates a hybrid space allowing for the focus of the class to be on learning the complex content knowledge needed for mainstream classes. If the focus is on language to the exclusion of content, the students end up missing out on both - the vocabulary they learn in ESL has no application in their other classes, and they fail to understand content because the language demands of their content class materials are beyond their current level of comprehension, which prevents them from attaining meaning. Were students able to pull from all their linguistic resources, and had they been introduced to vocabulary and language structures needed in content classes, learning could be more connected to school success.

When the participants had the opportunity to draw on all of their linguistic tools (e.g. as they worked on the digital story projects), they created a hybrid space for themselves, one that had a focus on learning. Having the ability to be fluid in their learning helped to create a context in which the focus of the class was not language development but creating meaning, telling their stories, and learning content that would be needed in their social studies classes. These kinds of projects represent the possibilities of learning for linguistically and culturally diverse students.

In order to further address the needs of a multilingual classroom, Garcia and Sylvan (2011) promote the idea of a “plurilingual” class. In their view, there are seven core principles that shape the creation of this kind of learning environment: “heterogeneity and singularities in plurality, collaboration among students, collaboration among teachers, learner-centered classrooms, language and content integration, “plurilingualism” from the students up, experiential learning and localized autonomy and responsibility (pg. 393).” This framework in general takes the teacher out of the expert role. As an ESL teacher, I rarely share a common language with my students, which was also the case with this research project. One of my guiding questions as I was designing projects for the students was how could I be an effective teacher in this environment and how could my students learn? Many of the core principles that Garcia and Sylvan suggest were employed to create a successful learning experience for the participants.

Implications of findings for policy and programs for adolescent newcomers in middle school

Forest Hill Middle School had a strong focus on standardized testing and a limited view of literacy. Having a limited view of literacy means following the traditional five pillars of reading instruction; phonemic awareness, phonics, reading fluency, vocabulary, and reading comprehension (National Reading Panel, 2000). These pillars make up basic reading instruction for first language readers, and many schools have not adapted these pillars to take into account second language reading. This is not unique to Forest Hill Middle School, many secondary school programs that serve EB students across the U.S. have a similar focus. This put teachers in a position of having to adhere to a set curriculum with little opportunities for innovation in the classroom. As an ESL teacher myself, with some of the same challenges, I wanted to investigate how newcomers were learning language in these contexts in order to inform teaching practices.

While I was at Forest Hill, the school became a designated “tech” school. It would take three years for the school to become a full “tech” campus. I was there during the first semester of implementation. The access students had to technology added another layer of questions as to how technology might be able to serve the learning needs of newcomer ESL students. How can teachers and students use technology in the classroom to promote language learning?

Teachers in this middle school dealt with intense constraints in terms of curriculum and instructional mandates. If we are to expect them to be successful with immigrant newcomer students we need to give teachers space and support from

administration to practice their own “divergent” thinking. There is more than one way to meet curriculum goals, while still allowing for hybrid spaces for students to learn. In creating digital stories with me, students were able to draw on their knowledge and linguistic tool kit without upsetting the goals of the curriculum; in fact, with the connections we made to their social studies curriculum, they were most likely better able to understand and achieve within the regular curriculum. And they were certainly more engaged in their learning. What I offered them was divergent from their “regular” classes. However, I had the luxury of working with my participants in small groups, and I had time to reflect on my teaching process that most teachers do not have. This created a special circumstance that gives a picture of what could be possible. Garcia and Sylvan (2014) offer a broad framework for teachers to start considering how they can make their classrooms more “plurilinguistic”. Mrs. Smith, the ESL teacher in this study, although she was new to technology, was dedicated to her students and worked hard to ensure their adjustment to their new country, community, and school. Mrs. Smith welcomed me into the classroom and willingly invited me to explore the use of technologies with her students. As my projects with the students evolved, she became more open to these “divergent” pedagogies. Although the teacher’s practices were not the focus of this study, evidence of Mrs Smith’s willingness to learn new tools for her own teaching serves as an example of the possibilities inherent in allowing space for agency for both students and teachers.

Another way in which administrators could make learning more meaningful for EB students is to have ESL and content-area teachers work together to make the

curriculum accessible to EB students. When time is limited for newcomers to “get up to speed”, it is imperative that every moment in school helps them to achieve this goal. This can be better accommodated when the curriculum between courses is aligned and reinforces learning in multiple content areas.

In addition, teacher education programs are paramount in preparing new teachers for culturally and linguistically diverse classrooms. How does one prepare new teachers and in-service teachers to be effective in a diverse classroom when often they themselves do not have the experience of being on the fringe of a dominant society? In order to achieve the goal of better-prepared teachers, researchers, community members, students, administrators and teachers need to form a collaborative learning environment. As the EB population grows in the United States and especially in urban settings, it is no longer enough to assume that the ESL teacher will manage the language needs of students. Through collaboration, teachers can come to a better understanding of how to address the learning needs of EB students. This is not a perfect process, but one that takes time, as well as trial and error.

Curriculum in teacher education programs should integrate theories of language acquisition and ESL methods into standard curriculum and instruction courses. Instead of these ideas being taught in “periphery” courses that are sometimes required and other times not, integration of ESL curriculum needs to be part of every course. For example, teaching a course on emergent literacy for young learners could incorporate what multilingual emergent literacy is for students from diverse backgrounds. In doing this, not only is the EB student being moved from the periphery to the center, but also the

conceptualization by the new teacher of an EB student is to inhabit an integral part of the curriculum instead of residing on its fringes. The shift in curriculum from the fringes to the center would allow for the creation of hybrid space within teacher education programs.

While this study, and many other studies, focus on how to better serve EB populations, there remains a very one-sided view of language education in the United States. The norm in the United States is to be monolingual instead of multilingual. Language education for mainstream students starts very late in schooling (often in middle school) and is not a central focus of the curriculum. In order to really impact the view of EB students, language education for all students needs to start earlier and have a larger role in the curriculum. This is one way that teachers and students from monolingual backgrounds could have a better understanding of language learning and development, and a closer connection to the experiences of EB students.

Finally, this study has implications for research in language education. More researchers need to work in multiple fields of inquiry and or collaborate, known as “academic border crossing” (Luke, 2003). This study was an attempt to cross several different fields of study in order to better understand newcomer EBs in middle school. While my background is in TESOL and higher education, in order to develop a better understanding of EB students in k-12, I had to crossover to the fields of literacy, ESL k-12 education, and bilingual education. This kind of academic border-crossing is what Luke (2003) posits as the new frontier in academia. While not every researcher needs to be a “border-crosser”, as there is need to have specialists in each field, collaboration with

researchers outside of an area of expertise would help to bring a broader and deeper understanding to the educational needs of adolescent newcomers.

Limitations and further investigations

This study was a small case study that investigated the assets and identities that adolescent newcomers utilize in the classroom while learning content and language. As in the nature of qualitative studies on the whole, they are meant to offer a “snapshot” of a particular context in a given period of time. Because of this, the implications are not meant to be a one-size fits all solution, but to offer suggestions and to add to the literature that has already been published to contribute to a more nuanced understanding of the phenomena under study. This study had other limitations; all my participants were from the same country and had the same L1. What might be different in a newcomer class if students have different L1’s? What other assets do they employ to engage in hybrid language practices? Also, being a researcher-participant had its drawbacks. What kind of interactions was I not able to catch when I was involved in teaching?

Further studies are needed that investigate the interplay between first and second language learning spaces in order to gain a broader perspective on how students use these spaces and how teachers can facilitate these learning environments. As researchers, we have an imperfect understanding of this interplay as well as how to develop curriculum and prepare teachers for a plurilinguistic classroom.

References

- Adesope, O. O., Lavin, T., Thompson, T., & Ungerleider, C. (2010). A systematic review and meta-analysis of the cognitive correlates of bilingualism. *Review of Educational Research*, 80(2), 207-245.
- August, D. (2006). Demographic Overview. In Diane August & Timothy Shanahan (eds), *Developing Literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth*. 43-50. Mahwah, NJ: Lawrence Erlbaum.
- Bernhardt, E.B. (2011). *Understanding Advanced Second-Language Reading*. NY, NY: Routledge.
- Birdsong, D. (2005). Interpreting age effects in second language acquisition. In Judith R. Kroll & Annette M.B. DeGroot (eds.), *Handbook of Bilingualism: Psycholinguistic Perspectives*. 109-127. New York: Oxford University Press.
- Bravo, M. A., Hiebert, E. H., & Pearson, P. D. (2007). Tapping the linguistic resources of Spanish/English bilinguals: The role of cognates in science. *Vocabulary acquisition: Implications for reading comprehension*, 140-156.
- Brown, C. L. (2007). Strategies for Making Social Studies Texts More Comprehensible for English-Language Learners. *Social Studies*, 98(5), 185–188. <https://doi-org.ezproxy.lib.utexas.edu/10.3200/TSSS.98.5.185-188>
- Callahan, R. (2005). Tracking and high school learners: Limiting opportunity to learn. *American Educational Research Journal*. (42) 2, 305-328.
- Cassady, J. C., Smith, L. L., & Thomas, C. L. (2018). Supporting emergent literacy for

- English language learners with computer-assisted instruction. *Journal of Research in Reading*, 41(2), 350–369. <https://doi-org.ezproxy.lib.utexas.edu/10.1111/1467-9817.12110>
- Cavus, N., & Ibrahim, D. (2017). Learning English using children's stories in mobile devices. *British Journal of Educational Technology*, 48(2), 625–641. <https://doi-org.ezproxy.lib.utexas.edu/10.1111/bjet.12427>
- Center for Applied Linguistics.(2003). A National study of school effectiveness for language minority students' long term academic achievement.
<http://www.cal.org/resources/digest/ResBrief10.html>
- Cheung, A. C. K., & Slavin, R. E. (2013). Effects of Educational Technology Applications on Reading Outcomes for Struggling Readers: A Best-Evidence Synthesis. *Reading Research Quarterly*, 48(3), 277–299. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1014479&site=ehost-live>
- Christianakis, M. (2011). Hybrid texts: Fifth graders, rap music, and writing. *Urban Education*, 46(5), 1131-1168.
- Cohen, J. (2012). Imaginary community of the mainstream classroom: Adolescent immigrants' perspectives. *The Urban Review*, 44(2), 265-280.
- Collins, B. A. (2014). Dual language development of latino children: Effect of instructional program type and the home and school language environment. *Early Childhood Research Quarterly*, 29(3), 389-397.

- Crawford, L. (2013). Effects of an Online Mathematics Curriculum for English Language Learners. *Computers in the Schools*, 30(3), 248–270. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1023032&site=ehost-live>
- Cumming, A. (2013). Multiple Dimensions of Academic Language and Literacy Development. *Language Learning*, 63, 130–152. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1009051&site=ehost-live>
- Cummins, J. (2000). *Language, Power and Pedagogy*. Clevedon: Multilingual Matters.
- Dobao, A. F. (2014). Vocabulary Learning in Collaborative Tasks: A Comparison of Pair and Small Group Work. *Language Teaching Research*, 18(4), 497–520. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1041187&site=ehost-live>
- Duran, L., Roeth, C., Hoffman, P., & Robertshaw, M. B. (2013). Spanish-speaking preschoolers' early literacy development: A longitudinal experimental comparison of predominantly english and transitional bilingual education. *Bilingual Research Journal*, 36(1), 6-34.
- Dworin, C. (2003). Examining children's biliteracy in the classroom. In A.I. Willis, G.E. Garcia, R. Barrera & V. Harris (eds.), *Multicultural issues in literacy research practice* (29-48). Mahway, New Jersey: Lawrence Erlbaum.
- Enright, K. A. (2010). Academic literacies and adolescent learners: English for subject-

- matter secondary classrooms. *TESOL Quarterly*, 44(4), 804-810.
- Faggella-Luby, M.N., Ware, S.M., & Capozzoli, A. (2009). Adolescent Literacy-
Reviewing Adolescent Literacy Reports: Key components and critical
questions. *Journal of Literacy Research*. (41) 4, 453-475.
- Gagne, N., & Parks, S. (2013). Cooperative Learning Tasks in a Grade 6 Intensive ESL
Class: Role of Scaffolding. *Language Teaching Research*, 17(2), 188–209.
Retrieved from
<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1005781&site=ehost-live>
- Gan, Z. (2010). Interaction in Group Oral Assessment: A Case Study of Higher- and
Lower-Scoring Students. *Language Testing*, 27(4), 585–602. Retrieved from
<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ902737&site=ehost-live>
- Gee, J. P. (2004). *Situated language and learning: A critique of traditional schooling*.
NY: Routledge.
- Golonka, E. M., Bowles, A. R., Frank, V. M., Richardson, D. L., & Freynik, S. (2014).
Technologies for Foreign Language Learning: A Review of Technology Types
and Their Effectiveness. *Computer Assisted Language Learning*, 27(1), 70–105.
Retrieved from
<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1025557&site=ehost-live>

- Grabe, W. (2009). *Reading in a Second Language Moving from Theory to Practice*. NY, NY: Cambridge University Press.
- Gutierrez, K.D., Baquendano-Lopez, P., Alvarez, H.H., Chiu, M.M. (1999). Building a culture of collaboration through hybrid language practices. *Theory into Practice*. (38) 2, 87-93.
- Gutierrez, K.D., Baquendano-Lopez, P., Tejeda, C. (2000). Rethinking diversity: Hybridity and hybrid language practices in the third space. *Mind, Culture and Activity*. (6) 4, 286-303.
- Hadi-Tabassum, S. (2006). *Language, Space and Power: A Critical look at bilingual education*. Clevedon, U.K.: Multilingual Matters.
- Hornberger, N. (1989). Continua of Biliteracy. *Review of Educational Research*. (59) 3, 271-296.
- Hur, J. W., & Suh, S. (2012). Making Learning Active with Interactive Whiteboards, Podcasts, and Digital Storytelling in ELL Classrooms. *Computers in the Schools*, 29(4), 320–338. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ997182&site=ehost-live>
- Ivey, G., & Broaddus, K. (2007). A formative experiment investigating literacy engagement among adolescent Latina/o students just beginning to read, write, and speak english. *Reading Research Quarterly*, 42(4), 512-545.
- Jewitt, C. (2008). Multimodality and literacy in school classrooms. *Review of Research in Education*. 32, 241-267.

- Kanno, Y. & Norton, B. (2003). Imagined communities and educational possibilities: Introduction. *Journal of Language, Identity, and Education*. 2(4), 241-249.
- Kim, S. U. (2015). Exploring the knowledge development process of English language learners at a high school: How do English language proficiency and the nature of research task influence student Learning? *Journal of the Association for Information Science & Technology*, 66(1), 128–143. <https://doi-org.ezproxy.lib.utexas.edu/10.1002/asi.23164>
- Kim, Y. (2008). The Contribution of Collaborative and Individual Tasks to the Acquisition of L2 Vocabulary. *Modern Language Journal*, 92(1), 114–130.
Retrieved from
<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ789852&site=ehost-live>
- Kim, Y., & McDonough, K. (2011). Using Pretask Modelling to Encourage Collaborative Learning Opportunities. *Language Teaching Research*, 15(2), 183–199. Retrieved from
<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ918018&site=ehost-live>
- Krashen, S.D. (1985). *The input hypothesis: Issues and implications*. New York: Longman.
- Krashen, S.D. (2008). Language Education: Past, present and future. *Regional Language Center Journal*. (39)2, 178-179.

- Langman, J., & Fies, C. (2010). Classroom response system-mediated science learning with English language learners. *Language and Education*, 24(2), 81–99.
<https://doi-org.ezproxy.lib.utexas.edu/10.1080/09500780903096553>
- Li, J. (2010). Learning Vocabulary via Computer-Assisted Scaffolding for Text Processing. *Computer Assisted Language Learning*, 23(3), 253–275. Retrieved from
<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ886084&site=ehost-live>
- Li, J. (2018). A Resource-Oriented Functional Approach to English Language Learning. *Canadian Modern Language Review*, 74(1), 53. <https://doi-org.ezproxy.lib.utexas.edu/10.3138/cmlr.3302>
- Li, J., Snow, C., & White, C. (2015). Urban Adolescent Students and Technology: Access, Use and Interest in Learning Language and Literacy. *Innovation in Language Learning and Teaching*, 9(2), 143–162. Retrieved from
<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1088762&site=ehost-live>
- Liu, S. H.-J., & Lan, Y.-J. (2016). Social Constructivist Approach to Web-Based EFL Learning: Collaboration, Motivation, and Perception on the Use of Google Docs. *Educational Technology & Society*, 19(1), 171–186. Retrieved from
<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1087154&site=ehost-live>

- Lotherington, H. (2007). Rewriting traditional tales as multilingual narratives at elementary school: Problems and progress. *Canadian Journal of Applied Linguistics*, 10(2), 241–256. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=a9h&AN=27982696&site=ehost-live>
- Luke, A. (2003). New directions in research. *Reading Research Quarterly*.
- Luke, A. (2012). After the testing: Talking and reading and writing the world. *Journal of Adolescent & Adult Literacy*, 56(1), 8-13.
- Martin-Beltrán, M. (2014). “What Do You Want to Say?” How Adolescents Use Translanguaging to Expand Learning Opportunities. *International Multilingual Research Journal*, 8(3), 208–230. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1033329&site=ehost-live>
- Martin-Beltrán, M., Daniel, S., Peercy, M., & Silverman, R. (2017). Developing a Zone of Relevance: Emergent Bilinguals’ Use of Social, Linguistic, and Cognitive Support in Peer-Led Literacy Discussions. *International Multilingual Research Journal*, 11(3), 152–166. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1150298&site=ehost-live>
- Maxwell, L. (2009). Shifting landscape: Immigration transforms communities. *Education Week*. 28(17), 1-8.
http://www.cal.org/qualitycounts/quality_counts_cal.pdf

Mayo, M. D. P. G., & Zeitler, N. (2017). Lexical Language-Related Episodes in Pair and Small Group Work. *International Journal of English Studies*, 17(1), 61–82.

Retrieved from

<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1146764&site=ehost-live>

Mennim, P. (2012). Learner Negotiation of L2 Form in Transcription Exercises. *ELT Journal*, 66(1), 52–61. Retrieved from

<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ950625&site=ehost-live>

Merriam, S.B. (2009). *Qualitative Research a Guide to Design and Implementation*. San Francisco, California: Jossey-Bass.

Min Liu, Navarrete, C. C., & Wivagg, J. (2014). Potentials of Mobile Technology for K-12 Education: An Investigation of iPod touch Use for English Language Learners in the United States. *Journal of Educational Technology & Society*, 17(2), 115–126. Retrieved from

<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=a9h&AN=96172813&site=ehost-live>

Moje, E. (2002). Re-Framing Adolescent Literacy Research of New Times: Studying Youth as a Resource. *Reading Research and Instruction*.(41) 3, 211-228.

Moje, E., Ciechanowski, K.M., Kramer, K., Ellis, L., Carrillo, R., & Collazo, T. (2004) Working toward third space in content area literacy: An examination of

- everyday funds of knowledge and Discourse. *Reading Research Quarterly*. (39) 1, 38-70.
- Moll, L.C., Amanti, C., Neff, D., Gonzalez, N. (2009). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*. 31(2), 132-141.
- National Council of Teachers of English
- National Center for Education Statistics. (2019). *Fast Facts: Title I*. Washington D.C. U.S. Department of Education. Retrieved from <https://nces.ed.gov/fastfacts/display.asp?id=158> .
- National Institute of Child Health and Human Development (NICHD), (2000) *Teaching children to read: An evidence-based assessment of the scientific research literature on reading its implications for reading instruction. Reports of the subgroups*. Washington, DC: National Institute of Child Health and Human Development.
- Padrón, Y. N., Waxman, H. C., Yuan-Hsuan Lee, Meng-Fen Lin, & Michko, G. M. (2012). Classroom Observations of Teaching and Learning with Technology in Urban Elementary School Mathematics Classrooms Serving English Language Learners. *International Journal of Instructional Media*, 39(1), 45–54. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=a9h&AN=73332415&site=ehost-live>

Parr, M., & Campbell, T. A. (2012). Understanding literacy as our WORLD inheritance:

Re-visioning literacy discourse and its implications for teaching practice.

International Review of Education/Internationale Zeitschrift Fur

Erziehungswissenschaft/Revue Internationale De l'Education, 58(4), 557-574.

Pyle, D., Pyle, N., Lignugaris, K. B., Duran, L., & Akers, J. (2017). Academic Effects of

Peer-Mediated Interventions with English Language Learners: A Research

Synthesis. *Review of Educational Research*, 87(1), 103–133. Retrieved from

<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1132746&site=ehost-live>

Rodriguez, C. D., Filler, J., & Higgins, K. (2012). Using Primary Language Support via

Computer to Improve Reading Comprehension Skills of First-Grade English

Language Learners. *Computers in the Schools*, 29(3), 253–267. Retrieved from

<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ979378&site=ehost-live>

Rong, X.L. & Brown, F. (2002). Immigration and urban education in the new

millennium: the diversity and the challenges. *Education and Urban Society*.

(34), 123-133.

Ryoo, K. (2015). Teaching Science through the Language of Students in Technology-

Enhanced Instruction. *Journal of Science Education and Technology*, 24(1), 29–

42. Retrieved from

<http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1050396&site=ehost-live>

- Sarah Hsueh-Jui Liu, Yu-Ju Lan, & Cloudia Ya-Yu Ho. (2014). Exploring the Relationship between Self-Regulated Vocabulary Learning and Web-Based Collaboration. *Journal of Educational Technology & Society*, 17(4), 404–419. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=a9h&AN=99574682&site=ehost-live>
- Schechter, R., Macaruso, P., Kazakoff, E. R., & Brooke, E. (2015). Exploration of a Blended Learning Approach to Reading Instruction for Low SES Students in Early Elementary Grades. *Computers in the Schools*, 32(3), 183–200. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1082218&site=ehost-live>
- Shaaban, K. (2006). An Initial Study of the Effects of Cooperative Learning on Reading Comprehension, Vocabulary Acquisition, and Motivation to Read. *Reading Psychology*, 27(5), 377–403. <https://doi-org.ezproxy.lib.utexas.edu/10.1080/02702710600846613>
- Shin, D. (2014). Web 2.0 Tools and Academic Literacy Development in a US Urban School: A Case Study of a Second-Grade English Language Learner. *Language and Education*, 28(1), 68–85. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ1028571&site=ehost-live>

- Sparks, R., Patton, J., Ganschow, L., & Humbach, N. (2009). Long-term crosslinguistic transfer of skills from L1 to L2. *Language Learning*, 59(1), 203-243.
- Stewart, M. A. (2014). Social networking, workplace, and entertainment literacies: The out-of-school literate lives of newcomer Latina/o adolescents. *Reading Research Quarterly*, 49(4), 365.
- Suarez-Orozco, C., Suarez-Orozco, M.M. & Todorova, I. (2008). *Learning a new land: Immigrant student in American society*. Cambridge, MA: Harvard University Press.
- Swain, M., & Lapkin, S. (2000). Task-based Second Language Learning: The Uses of the First Language. *Language Teaching Research*, 4(3), 251–74. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=eric&AN=EJ614855&site=ehost-live>
- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6), 349-357.
- understandings. In *Miscue Inventory, 2nd Edition*, 23-42. Katonah, NY:
- Valdes, G. (2004). Between support and marginalization: The development of academic language in linguistic minority children. *Bilingual Education and Bilingualism*. (7) 2&3, 102-132.
- Vygotsky, L.S. (1978) *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

- Wegerif, R., Littleton, K., Dawes, L., Mercer, N., & Rowe, D. (2004). Widening access to educational opportunities through teaching children how to reason together. *Westminster Studies in Education*, 27(2), 143-156.
- Yin, R.K. (2009). *Case Study Research: Design and Methods*. Thousand Oaks, California: Sage Publications.
- Yu-Ju Lan. (2013). The Effect of Technology-Supported Co-Sharing on L2 Vocabulary Strategy Development. *Journal of Educational Technology & Society*, 16(4), 1–16. Retrieved from <http://search.ebscohost.com.ezproxy.lib.utexas.edu/login.aspx?direct=true&db=a9h&AN=92862025&site=ehost-live>
- Zhong, Y. X., & Shen, H. Z. (2002). Where is the technology-induced pedagogy? Snapshots from two multimedia EFL classrooms. *British Journal of Educational Technology*, 33(1), 39. <https://doi-org.ezproxy.lib.utexas.edu/10.1111/1467-8535.00237>
- Zhou, M. (1997). Growing up American: The challenge confronting immigrant children and children of immigrants. *Annual Review of Sociology*. (23), 63-69.