Engaging the English Language Learner through Technology: An examination into the teaching practices of technological integration, through TPACK and Critical Literacy in the Primary Setting

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Abstract

The research analyzes the complexities of the English Language Learner, and the best methods for teaching these learners. There is an examination of how these students are being accommodated through technology. The focus of this research is on the Primary Level English Language Learner student, Kindergarten to Grade three, particularly in the area of Literacy. Theoretical frameworks that were examined were TPACK and Critical Literacy. This research examines the English Language Learner, approaches and methods of technological integration, teacher’s beliefs and expectations and how students learn through the use of critical pedagogy. The findings clearly indicate that technology is an integral part of English Language Learner student learning.

Keywords: English Language Learner (ELL), ESL, Critical Literacy, TPACK, Technology, Primary Education
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CHAPTER 1

Introduction to the Research Study

Living in a multicultural society and a diverse city, such as Toronto, we must be aware and sensitive to the cultural diversity that exists. Through my teaching experiences, I have been making connections with English Language Learners (ELL) and have come to understand that there is a gap in the instruction they are given and the engagement of these students. If properly identified and assessed, more than 15 per cent of learners in urban school jurisdictions are from an ESL background (ESLaction.com) and according to recent EQAO data, 58% of ELL are Canadian born. Throughout my classroom experiences with children, I have uncovered a passion of working and supporting children that are identified as English Language Learners (ELL). These experiences have allowed me to gain insight into teaching. I strongly believe in advocating and demonstrating diversity, social acceptance and compassion to all individuals. As an educator, I have come to understand that my role as a teacher is not only about the lessons taught, but also about the educational support system that is built to accommodate all children.

Purpose of the Study

My research paper interest is to explore and further understand the complexities of English Language Learners, what is the best method of teaching these learners and to show how they are being accommodated through technology. I will focus on primary English Language Learners, Kindergarten to Grade 3, and particularly in the area of Literacy. The research will examine the English Language Learner, approaches and methods of technological integration and how students benefit in the area of Literacy to engage students through critical pedagogy. The study will focus on the integration of technology through visual learning software and online
learning, which is supported through interactive white boards, smart tablets and computers. I will be examining its ability to engage the learner and finally give meaning to reading. Technology has become an important aspect of our lives. It influences our entertainment, communication and language. As teachers we must become aware of these mediums and incorporate them into the classroom setting. Technology opens the door for a variety of ways of reading, writing and collaborating for students and teachers. I would like to further explore how we can remove barriers to support teachers in achieving the vision of helping all students succeed.

**Background of the Researcher**

My interest in this area began because I was an English Language Learner. My struggles have made me sensitive to accommodating these learners in the classroom. Growing up in an immigrant family was very challenging. I entered school unable to speak English and I struggled to communicate with children and teachers. My parents were new immigrants to Canada and they struggled with reading, speaking and writing in English. Therefore my only positive exposure to the English language was in school.

I was very fortunate through my educational experiences to work with children from the entire spectrum. It made me aware and sensitive to their challenges. I was introduced to a program called Kurzweil 3000 that was used to help reach identified and ELL students. I discovered that this could be very effective for students and that technology was especially helpful. This has lead me to researching how can we engage ELL through technology. I have realized that students are faced with many challenges. Through my research I would like to find solutions to these challenges and ultimately create an environment that has limited interruptions and removal of barriers that has historically prevented ELL students from becoming welcomed,
valued, and integral members in their schools and their communities. (Brooks, Adams, Morita-Mullaney, 2010) This would be accomplished by looking at how teachers apply their pedagogy to the classroom environment to incorporate the English Language Learner.

**Research Questions**

1. How can we engage ELL in literacy instruction?
2. Can technology be “value added” to literacy instruction?
3. Can we give meaning to reading to ELL through technology?
4. Is technology a feasible solution to bridging the gap between language and practice?
5. What effective technologies are being implemented with ELL?
Defining the English Language Learner

When examining ELL it is important to define the learner. An ELL is a student who comes to school speaking a language other than English. They could know one or two other languages, except English. The learning curve is much steeper for ELL than English speaking students. It is important to note that ELL can be referred to other labels and acronyms; limited English proficient (LEP) student, English as a second Language (ESL) learner, second language learner, non--English speaker (NES), non-native speaker (NNS) and limited English Speaker (LES), among others (Egbert & Ernst-Slavit 2010). For the purpose of this study we will be referring to the acronym ELL. When examining ELL, we must address the issue of new language acquisition. Research indicates that most ELL acquires conversational fluency and day-to-day language proficiency within a year or two. However, it takes much longer for most English language learners to catch up to their peers in using English as a language for learning. Children for whom English is a first language take about five years to acquire a basic vocabulary of 2,000 to 3,000 words and to use simple sentence structures accurately. Once these children start school, however, they add about 1,000 words to their vocabulary each year. They are also exposed to increasingly complex sentence structures. English language learners are working hard to catch up with a moving target. The older they are, the more they have to catch up (OME 2005).

It is also important, as a teacher, to understand the literacy background of ELL. Some families have had rich literacy and prior schooling experiences (Pransky, 2009; Zacarian, 2011). Typically, they are oriented to developing their children’s language and literacy. Speaking frequently in their home language is highly valued because it is known to be important for a child’s communicative development (Vohs, 2010). There is also a large group of students that have no literacy background. The implications for learning and teaching ELL become vital in
understanding the tools or prior knowledge that these students associate with literacy. The teacher must accommodate the ELL according to their literacy background and level. Teachers need to be aware of these issues that exist because it can be vital in creating the appropriate lesson for the student and will result in student success.
CHAPTER 2

Overview

Throughout educational education and practice there is a vast amount of research that focuses on the English Language Learner and the best practices to meet the educational needs of these students. In the last ten years there is evidence of teachers beginning to adapt and understand the significance of these technological tools in the classroom setting. Technology is being incorporated into classrooms, yet there is a lack of usage with English Language Learners. The technology tends to be focused on Special Education and incorporating assistive technology. Yes, the ELL can be supported with assistive technology, but my interest lies in finding more practical, cost effective ways that promote engagement and inclusion. Technology has come a long way.

I chose to focus on Kindergarten to Grade 3 for a number of reasons. First, Kindergarten to Grade 3 is vital in creating a strong foundation in ELL. Another reason, reflecting on the research of Cummins, Brown, Sayers (2007) is when children reach Grade 4 there is a substantial drop in their literacy skills. The reason is that students need to apply their literacy skills through higher-level thinking and are required to reflect and analyze in greater detail. Cummins found that students where memorizing a large portion of their literacy practice and not comprehending what they were learning. What does this mean for the English Language Learner? The implications are that there needs to be a student centered approach in teaching students to think critically and find effective practices to excel students in the English Language.
Approaches and Methods to Teaching the ELL

When teaching ELL, we must look at them through a lens of assets and not deficits (Ferlazzo, 2010). We must realize student potential and not judge and label these students. Many educators focus on students’ limited English skills and not on the vast amount of prior knowledge. According to Krashen (1981, 1982), learning a second language requires the following three core elements (Haynes and Zacarian, 2010):

1. A comfortable learning environment with a low threshold for anxiety;

Reflecting on ELL, we must be aware that in order for this to occur there must be an environment that supports these learners. An Inclusive setting, emphasizing community and allows children to develop in an environment that accommodates all learners. Classroom Inclusion is vital to successful learning. An inclusive classroom setting, determines the success with student learning and relationship that exist within the school setting. I strongly believe that to allow for inclusion, teachers need to be culturally responsive in their practices. Culturally responsive teachers have a high degree of sociocultural consciousness, holding affirming views of students of diverse backgrounds, see themselves as agents of change, understand and embrace constructivist views of learning and teaching and know the students in their classes. It is the combination of all these dispositions, knowledge and skills that enables them to design instruction that facilitates student learning (Villegas & Lucas, 2002).

2. Meaningful tasks that purposely engage students to learn how to speak, listen, read, and write in the new language;

As teachers we make learning meaningful by focusing on prior knowledge and having students relate to the classroom work. We can engage students by utilizing culturally relevant materials in
the classroom. Trying to incorporate various subject, themes and discussions that engage students. We can also give students the tool to be successful by incorporating strategies into our lessons such as; concept mapping, story maps, organizers or story webs that helps in all subject areas across the curriculum (O’Bannon & Puckett, 2010). It provides learning tools for Language, Math, Science, Social Science and Health. Therefore we can give students a purpose for learning and allowing them to take on responsibility for their learning.

3. Engagement in tasks that are just a bit beyond the students' current ability;

Egbert & Ernst-Slavit (2010) make reference to 3 main types of connections that are important for students. They are personal connections, academic or content connections and pedagogical or instructional connections. It is through these connections that students can be engaged and feel comfortable within the classroom. In order to promote engagement we must understand the Brain of an ELL and how they learn. Haynes and Zacarian (2010) examined various theories and emphasized the importance amongst these researchers. Current theories pay particular attention to what occurs in the brain during the learning process; for example, Caine and Caine (1991), and Diaz Rico and Weed (2006). Most researchers on the subject believe that the primary function of the brain is to build connections between new information and what it already knows. It suggests that students are not empty vessels of knowledge; rather, they come to class with a body of knowledge that is based on their personal, cultural, linguistic, social, and academic knowledge. When students are engaged in an atmosphere that helps them to build connections to their varied backgrounds across the curriculum and in a welcoming, nonthreatening way, learning is optimized (Haynes and Zacarian, 2010).
Literacy

It is important to acknowledge and understand that the definition of literacy is evolving and constantly changing. The traditional meaning lent itself to defining literacy as the practice of reading and writing. In the new edition of New Literacies (Lankshear and Knobel, 2006), the definition of literacies is identified as socially recognized ways of generating, communicating and negotiating meaningful content through the medium of encoded texts within contexts of participation in Discourses (or, as members of Discourses). We have moved from an era where print dominated the literacy landscape to one where multiple forms of electronic communication are inseparable from literacy development (Cummins, Brown & Sayers, 2007). Multimodal literacy’s reflect various entry points for teachers. It must be noted that without a positive relationship it is very difficult to reach many English Language Learners. Classroom relationships are an integral aspect of student learning. More importantly, the role that technology plays allowing "a way in" to reaching students that traditionally are left behind or seen as outcast within the classroom. The "way in", cannot only be viewed from a teacher relationship, but also a means in uniting student-to-student relationships as well. We must be sensitive to these issues, because there has been an increase in students entering the educational system with various challenges from the entire spectrum. Creating positive relationships is the first step in accepting each other, respecting each other and creating a community of learners. I believe that technology will promote new teaching methods, and will help identify student challenges. Teachers can now accommodate students through technology and not necessarily modify, or "dubbing down" school work and assignments. Many teachers tend to give students basic, unchallenging work causing boredom and lack of interest in their student learning. Students can now "take control" of their learning, making them responsible for their learning.
“As teachers we must throw the rope further away than the expectations. We must challenge them and heighten intellectual demand.” (Allan Luke 2011) As teachers when we challenge our students, then we truly are engaging them.

**Reading with meaning**

As with all reading instruction, the ultimate goals are reading for understanding, learning, and interest. In the early grades, with most students, the focus is on moving to meaning after assuring that students have foundational skills such as phonemic awareness, phonics, fluency, and vocabulary. How do these goals differ for English language learners? The broad goals of reading are the same for all students (Linan-Thompson and Vaughn, 2007). Examining Language Curriculum, (Ontario Literacy and Numeracy Secretariat, 2009) there is a focus on incorporating the Literacy for Learning (2004) drawn on *Peter Freebody and Allan Luke’s “Four Resources Model”* to emphasize that all text is constructed for a purpose and that reading is not a passive act but an interaction between the text and a reader who looks for meaning, asks questions and challenges assumptions. The model can be used to guide activities for children of all ages, as young as Kindergarten (Vasquez, 2004), and to structure work with any type of text. Critical literacy strategies need to be taught explicitly, but they should not be taught sequentially or in isolation from one another. The four areas are; Code Breaking, Making Meaning, Using text and Analyzing text. We can give meaning to reading by giving students the proper tools to have them become good readers. We can do this by; Deliberating, Activating, Anticipating, Extracting and Challenging students (Abbott, 2009). It is through these strategies that we give readers a purpose. We must try to elevate the level of learning in ELL. Rather than approaching text passively, students need to be encouraged to be a “text participant” – to use their own prior knowledge and
experience when reading to interpret what the author is saying and to anticipate where he or she might be going next. They need to learn how to “deconstruct” text, to understand the author’s purpose and intent, to form interpretations in light of their own knowledge and point of view, and to examine and then find the most effective ways to convey their thinking (Ontario Literacy and Numeracy Secretariat, 2009).

**Comprehension**

We need to examine the levels of comprehension to understand the deeper critical thinking. According to (Gunderson, 2009) There are three areas of comprehension levels:

1. **Literal comprehension**: Reader operates on the surface level of the text. Making no inferences, the reader supplies items that are stated in the text.

2. **Inferential Comprehension**: Readers deal with surface structure of the text and does not involve inferred meaning. The reader deals and understands the writer’s ideas.

3. **Critical/Evaluative comprehension**: The reader is able to evaluate whether or not a text is valid. It can be an expression opinion and also reflective of making connections.

The research will be focusing on the third comprehension strategy. It promotes critical thought and engages students on a higher level. Exploring the significance of higher-level thinking and its implications for technology. Teachers can promote critical thinking through technology by promoting various instructional opportunities for students to learn. Teachers can focus on igniting prior knowledge to deepen their understanding of curricular material. (Hill and Flynn,
2006) state that; without a mastery of academic English, students cannot develop the critical-thinking and problem-solving skills needed to understand and express the new and abstract concept in the classroom. I would like to further explore this statement in my research. Critical thinking plays a vital aspect in promoting Critical Literacy and engaging students. Students need to be provided with the proper tools, to guide their success.

**Technology**

Technology is an important aspect of our society, bringing together people through communication and entertainment. It is through this medium as educators we need to focus on engaging our students learning. It is now clear that as a result of this unique environment and the sheer volume of their interaction with it, today’s students think and process information fundamentally differently from their predecessors. These differences go far further and deeper than most educators suspect or realize (Prensky, 2001). Technology is being promoted throughout classrooms, especially in the area of Language instructions. Using various kinds of technological devices, gives language students the sense of freedom, motivation and encouragement they need for learning (Genc Iltar 2009). There are many forms of technology whether the television, CD-ROMs, DVDs, Smartphone’s, smart tablets and communicative tools such as e-mails, chat rooms, bloggs, discussion boards, and internet conferences. It is important to acknowledge that there are many avenues of technology. There is assistive technology, software technology, and technological apparatuses used to present technology. In this study I will focus on the integration of technology through visual learning software and online learning. Acknowledging financial limitations within various school boards, I will be looking at applications that can be used in combination with the interactive white boards, smart tablets and
computers. I will be examining its ability to engage the learner and finally give meaning to reading. Visual learning software is an example of using a tool, to build in options that support learning differences from the beginning, reducing the need to modify or create alternate assignments or adapt to special learners (Rose & Meyer, 2002). According to David A. Sousa (2011) there are advantages of using technology with ELLs; It encourages Learner Centred Classrooms, Enriches Learning Experiences, and Allows for Immediate Communication and Feedback and is intrinsically motivating. He also goes further, to explain that there are challenges as well; Language, limited access, varying levels of experience, school facilities and staying up to date. It is important to note the challenges faced with technology, but the advantages outweigh the disadvantages. As teachers we must utilize technology and link it in a meaningful way, where the application of technology improves engagement and learning abilities in Literacy. We cannot loose sight of why we are using technology. What is needed instead are computer-related activities that (1) provide authentic and meaningful literacy experiences and (2) are woven into the fabric of the curriculum, connected to units and curriculum (Strickland and Morrow, 2000).

**Teacher attitudes towards technology integration**

The failure to realize the educational potential of technology has much more to do with pedagogy than with technology itself (Cummins, Brown & Sayers, 2007). Pedagogical ideologies and the implications for utilizing technology needs to be further developed. A teacher’s pedagogy plays a vital role in determining the success on technological integration in their classroom.
Mishra and Koehler’s (2006) Technological Pedagogical Content Knowledge (TPACK) framework attempts to describe the nature of knowledge required by teachers for technology integration in their teaching, while addressing the complex nature of teacher knowledge. At the heart of the TPACK framework, is the complex interplay of three primary forms of knowledge: Content (CK), Pedagogy (PK), and Technology (TK).

TPACK focuses on a logical approach to integrate technology, student learning and content learning in a successful manner. The key lies in instructional planning and is conceptualized around content goals and organized according to learning activities, technology
integration methods should be similarly focused. Technology integration is assessed according to student needs and providing tools for effective learning. The central role of content and pedagogy in uses of educational technology – a role previously missing in many discussions. Even though some technologies may indeed facilitate student learning, content and pedagogy are crucial ingredients in this success. If the pedagogical content knowledge required for each discipline differs, it follows that the ways in which technology might best be used for each discipline may also differ. Teaching and learning with technology exist in a dynamic transactional relationship (Bruce, 1997; Dewey & Bentley, 1949; Rosenblatt, 1978) (Mishra & Kohler, 2006) between the three components in the framework; a change in any one of the factors has to be “compensated” by changes in the other two (Mishra & Kohler, 2006). Research findings indicate that when teachers have an understanding of TPACK, they have the foundation to enhance second language learning with a purpose (Rodriguez-van Olphen, 2002). Conversely, if teachers do not have a solid knowledge base, technology becomes one more object—or simply an ornament—in the lesson plan. Therefore, the concept of TPACK, when used as a framework, is intended to further our understanding of language teachers’ cognition to achieve a sound infusion of technology into their content areas, which in turn advances students’ second language competence (Van Olphen, 2008).
CHAPTER 3

Context and Methodology

Procedure

Technological Research is an area of research that has been examined through qualitative and quantitative methods. The methodology of this research study, utilized a qualitative analysis, or naturalistic approach. Strauss and Corbin (1990) claim that qualitative methods can be used to better understand any phenomenon about which little is yet known. They can also be used to gain new perspectives on things about which much is already known, or to gain more in-depth information that may be difficult to convey quantitatively. Thus, qualitative methods are appropriate in situations where one needs to first identify the variables that might later be tested quantitatively, or where the researcher has determined that quantitative measures cannot adequately describe or interpret a situation. As a technology researcher, we must rise to the challenge to find and use rigorous, appropriate research techniques that address the significant questions facing the field (Hoepfl, 1997).

The research study focused on a descriptive method answering questions, formed from my hypotheses. I took into consideration the sample size, including four teachers in my research, which was a representative sample that was reflective of different teachers utilizing technology with English Language Learner. I interviewed teachers, by using semi structured and unstructured questions. The questions were created without bias, and were non-leading and aloud for teachers to express themselves without feeling intimidated or judged. I recorded my interviews with an audio smart pen, and tablet. I also took written notes as well. Other issues to consider were the validity, reliability and inter-rater error.
Participants

The participants that were selected were selected to achieve maximum variation sampling. Lincoln and Guba (1995) found that the most useful strategy for the qualitative, or naturalistic, approach is maximum variation sampling. This strategy aims at capturing and describing the central themes or principal outcomes that cut across a great deal of participant or program variation.

Educators of various backgrounds and experiences were selected to minimize bias. I also incorporated the following criteria to select interview participants. Participants were selected based on their willingness to participate, knowledge of technology, and instructing English Language Learners. They provided useful information about their research and practice as well as advice for setting up programs when working with English Language Learners. The participants were elementary teachers, working with English Language Learners in the public school board.

The first participant, Jenny, a Grade 3 teacher upheld a strong pedagogical belief in technology. Her class consisted of students with diverse students needs and English Language Learners. She had been teaching for eight years. The second participant Sidney was an ESL Literacy Resource Teacher that instructed students with the English Language and had been teaching for eleven years. The third participant was Elle, a Media Literacy Teacher and an ESL teacher. She had eleven years of teaching experience. The fourth participant, was Mary, an ESL teacher, with five years of teaching experience, technology was not part of her program or pedagogy.
Limitations

There are limitations to the research, affected by a number of factors. For instance, the literature review was selective given the time constraints and the requirements of the Master’s program. The articles and books chosen were relevant to the topic presented by the study and offered an overview of important emergent themes in the literature discussing the use of the English Language Learner, technology and literacy.

Other limitations of the study, was the sample size, which could have cause heterogeneity and be a problem because individual cases are so different from each other. Despite the limited number of participants, I feel that the research is still valuable. I was able to gain insights into the English Language Learner, insight into technological practices and pedagogy, and how to incorporate technology into the classroom. This is significant, because I am able to apply my research to my personal practice.

Ethical Review Procedures

I informally asked teachers to participate in my study, giving them background knowledge of my research. I prepared a letter of consent and reviewed the letter with my participant (see Appendix A for Letter of Consent). In the letter, I provided the participant with information regarding the data collection process, how the data would be used, and the confidentiality of the information provided. I then asked the participant to sign the letter and provided the participant with a copy of the consent letter.

Throughout the interview and observation process, I made every effort to ensure that the participant was comfortable. I explained that there was not a right or wrong answer, and that the purpose of the study was to gain knowledge about their experiences (see Appendix B for
Interview Questions). During the interview, I reiterated that the participant could refrain from answering any question, they could return to any of the questions or issues discussed, and indicated that if they did not want the data to be used at any point in the research process, the participate would inform me and it would not be used. For the entire course of my data collection I followed the procedures outlined in the consent letter and did not change any of these procedures during the course of my study. Once I completed the interviews, I transcribed the interview, read over the results and begun to compile my findings.

When completing my research study, I ensured that all information reflected the anonymity of the participant, along with any students that they may have mentioned or referred to. In doing so, I used pseudonyms for the individuals, students, and the institutions. In introducing and discussing the participants, I excluded any personal or professional information.
CHAPTER 4

FINDINGS

The findings of the research will be divided into four underlying themes that were predominant in the research.

1. Educational application of technology
2. Importance of technology for the English Language Learner
3. Correlation between teacher beliefs and teacher practice
4. Barriers to using technology

A careful analysis of the data has revealed connections between English Language Learners, technology and critical literacy.

Educational application of technology

There was a broad range of how technology was used in education. With English Language Learners and the area of literacy, there were many strategies and techniques used to promote reading and comprehension. The research indicated that there are opportunities and challenges to using technology.

There were many opportunities that presented themselves with technology. The participants all agreed that first and foremost technology was an excellent tool for student engagement. Students learned to problem solve, work together and engage students towards learning. For the ELL, technology provided a tool for allowing them to demonstrate opportunities of their prior knowledge, and assisting them in the area of language. Hence allowing them to begin to think critically and give meaning to reading. Participants believed that students did have the capability to think critically, even if English was limited. English Language
Learners can think critically in their own language. The key lied in the instructional strategies that teachers used, to help promote higher-level thinking and connect the two languages. Imagery became a crucial stepping-stone for comprehension. Participant three, Elle stated that technology was a great tool, but we needed to be sensitive about how we utilized technology in the classroom:

*Technology is about Differentiated Instruction. It’s about doing many different things to appeal to all learning. Luckily, technology does this! It hits all learning styles. It’s not the only way…but great way! But I won’t use tech every single day, sometimes its too stimulating. Fun, exploration, get silly and wild, but come back. We need to still keep the wow factor!*

The findings indicated, that three out of the four participants implemented technology whenever they had an opportunity. Technology integration existed through white boards, tablets, laptops, digital storybooks, software and interactive games. Technology provided different strategies of teaching and allowed primary students to be engaged and excited. Technology allowed teachers to provide a medium that connected the “outside” world to student’s lives.

The research indicated primary grades students were engaged and were motivated to learn. When trying to determine the most popular form of technology, there was not one particular. Yet there appeared to be more use of whiteboards and their software, due to the accessibility of transferring from whiteboards to computers. Participants tended to accommodate according to student learning needs and classroom instruction. Technology was also used to complement lessons. Technology was not the only tool that could be used to assist with learning to read, but the technology gave meaning to the English Language. The three participants that used technology all agreed that technology needed to be used in moderation and according to student need.
Interestingly enough, I found that all participants were very keen on trying to have their students think critically and make higher order thinking connections. The participants all agreed that in order to accomplish this, students needed to first understand what they were reading. Participants found the technology useful in translation and allowed students to use their prior knowledge through their first language. Student’s development of the English language became crucial. Teachers would first use technology as a form of communication linking English to their first language. Once student and teacher were comfortable with the language, then the teacher would begin to integrate software technology, smart tablets and smart boards, to link the language to reading.

All participants emphasized the importance of inclusion. The participants that utilized technology found that technology brought students together. By bringing the outside world in, students were engaged and interested in learning. Participant Elle, stated that:

*This stuff is great (technology), but first and foremost students have to be safe and feel safe. Most important is establishing relationships with students and each other. Students need to take risks. It’s a celebration to be wrong, because we are learning.*

Inclusion, allows for all students to have an environment that is safe and promotes student learning. All four participants agreed that Inclusion for ELL is crucial to their learning. Feeling safe valued and included in the classroom impacts significantly student confidence and engagement.

The participants stated that technology provided the opportunity to collaborate and connect with students. Collaborate and connecting with students, led to providing many opportunities for students to think critically and develop inquiry based skills to develop their language. Problem solving played an integral component for all 3 participants that incorporated technology. The technology allowed students to work and connect with others, promoting
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discussion and learning. This was evident through various technologies; White boards, software, smart tablets and creating digital storybooks. The technology also provided opportunities for project-based tasks that linked the components of critical literacy.

All participants acknowledged that there were many factors that determined how technology was used and implemented in the classroom. Factors such as willingness to use technology, time constraints, resource availability and professional development towards using technology determined if technology was integrated into the classroom.

Challenges were also faced in the broad system of technology. The participants determined that the benefits outweighed the challenges. Therefore teachers always had to have back up lessons, or provide other opportunities for students to demonstrate their knowledge. Participants acknowledged that using technology, is the same as any other tool or means of instruction. Teachers found it crucial to be flexible and willing to differentiate or modify according to student needs. While technology could breakdown, the teacher must have other methods of teaching.

**Importance of technology for the English Language Learner**

The research indicated that technology was an excellent form of differentiation. Commonalities for all 3 participants, that utilized technology, found technology to have a positive effect on communication, reading, comprehension, engagement and critical thinking. Participants expressed that without technology, they were not sure how they could reach all their English Language Learners. The ability to translate provided a great starting point for teachers. The technology allowed for students to feel included, and that their new environment would welcome them. The three participants that used technology, all agreed that technology “added
value” to their instructional practice and especially with English Language Learners. Participant Sidney stated;

Yes, I can’t imagine not using technology. It gives students perspective! Many students have never left this town. The interaction is very important, opens more doors...show it on a screen, and then they can talk to me.

The opportunities that technology provided, the vast resources available and the connections that technology allowed English Language Learners students to make were invaluable. Through observations and participant interviews, the research demonstrated that technology allowed students to develop skills that promoted higher-level thinking. For example, problem solving, questioning, inferring, and summarizing. This was accomplished through the integration of whiteboards, tablets, software and online games. It was the application of the technology, to the lesson that allowed students to grasp a higher level of understanding and comprehension. They demonstrated comprehension through digital stories that they created, adding pictures, texts and visuals. Another example, was when participant Elle, allowed the students to play detective, after reading the story of Jack Frost.

The emphasis was placed on investigating, analyzing and problem solving. Elle stated;

I teach higher order reading, thinking skills and inferring through game work. Students become detectives. For example, I introduce a snowman mystery to infer clues for Jack Frost’s family. The game is an anchor to remember when we did this. We look at the pictures and figure it out. The mystery is trying to figure out what the author is saying. Students have to buy into it! If they don’t buy into early they won’t understand it when you put a book in front of them.

When examining Allan Luke and Peter Freebody’s 4 Resource Model and Mary Abbott’s Meaning to Reading Strategies, technology was able to support literacy instruction with the
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English Language Learner. When examining the 4 Resource Model, technology integration promoted the strategies of this model. Through observations, when examining Code Breaking and phonetic development this was developed through software that engaged and focused on different reading skills. Technology provided a medium that allowed for various entry points for different learners. Comprehension, or making meaning of text, was further developed with technology because there were different strategies and techniques that teachers implemented to assist with comprehension. As a result students made connections to text, or gave meaning to reading, through Mary Abbott’s competencies of an inquiry reader. Technology activated knowledge, by allowing students to work in their own language. Using visual cues that assisted with learning, activated student’s prior knowledge. Students anticipated what would happen next, because technology allowed them to communicate and predict what would happen. Extracting information occurred because of the visual cues and references that assisted with vocabulary and meaning. Challenging meaning and interpretation can occur through critical inquiry and discussions. Deliberating beyond the text was demonstrated through critical questioning and helping students go beyond the text. Technology allowed for teachers to combine higher-level thinking and technology together, resulting in a positive learning environment. Technology allowed multiple entry points for student learning. Participant Elle expressed her views about student engagement and technology;

Student engagement is up, more creative and specific lessons tailored to their needs. The teacher is more engaged and more effective. Multiple Intelligences are geared toward all students.

The research demonstrated that there was a link between technology and critical literacy. Teachers strived to create the ideal environment based on individual student needs. Teachers
Teacher beliefs are correlated to teacher practice

The research demonstrated that teacher beliefs were an integral part of how technology was used in the classroom. The participants that strongly believed and used technology effectively, had evolved into including technology into their pedagogy. Three of the participants that used technology in the classroom, continued to develop their knowledge of technology through Professional Development, Conferences and collaboration with educators. Technology became an integral part of connecting curriculum to language, especially reading. Technology allowed the development of each area of reading through various software’s and technologies. The integration of technology, was not about using one particular software or medium, but developing different strategies to use them in the classroom. The teacher accommodated and modified according to specific needs. All four participants, when asked about TPACK, all admitted they had not heard about this pedagogical practice. It is important to recognize that even though the participants had not heard about TPACK, the 3 participants that incorporated technology into their instructional practices and beliefs were reflective of this framework. The key to effective technological integration lied in how teachers incorporated technology to curriculum instruction and content belief, not creating a “techno-centric” classroom but infusing technology into their practice.

The participants admitted that integration of technology was an on going process that evolved and changed constantly. “Keeping up” with technology was a serious concern. Participants expressed that having other teachers to collaborate and work with, helped develop
many lessons and strategies in the classroom. The participants that were ESL teachers found that it was crucial to work together with homeroom teachers, in providing recommendations and strategies on how to accommodate the students in the classroom. The result would be constructing lessons that included all learners.

The research indicated that teachers that upheld a pedagogical belief to critical inquiry used technology to support critical learning. The correlation between the two pedagogies, TPACK and Critical Literacy indicated that technology was a tool to assist in student learning. Technology was not about its basic application of enhancing presentations, but creating an environment that promoted inclusion where higher-level thinking could occur. Participants, that utilized technology, expressed that there were challenges trying to incorporate critical pedagogy and technology together. The integration of these two pedagogies took time and varied with each student. It was an evident struggle, but teachers were trying to get beyond the deficit attitude that was upheld about English Language Learners. Participant Sidney expressed her frustrations;

*Reading with Meaning…*I have a constant battle with English Language Learners, unless you can tell me what you are thinking and understanding, then you don’t know what it means! The key lies in trying to bring it out, and technology helps. My overall philosophy is if they can’t read for meaning, they can’t do anything! I use to teach language all day, but I’ve changed, to incorporate technology. Students need to be given tools to read and think critically, especially in homeroom all day. I’m struggling still to figure it out, there’s a small niche with technology and ELL. It’s a challenge!*

Participants expressed frustration that some colleagues did not believe that students in the primary grades could think critically, and especially the case with English Language Learners. The teacher determined how they sparked the interest to think critically with their students. Participant 3, Elle, expressed her concern;
Some teachers think that ELL’s have no ability to comprehend. There’s a misconception about inferring, synthesizing, predicting, decoding. Teachers say don’t do it! But absolutely you can do it! Inferring, students begin to learn in Kindergarten...schema lesson, words and some excitement, kids can learn anything!

The research indicated that the perceptions that teachers upheld about English Language Learners, determined the instruction and technology that they implemented. Deficit thinking, did not help English Language Learners progress in the classroom. Participants indicated that the most important component of English instruction with English Language Learners was activating their prior knowledge to connect to what they were learning. English Language Learners have the capability to think critically, but in their own language.

**Barriers to using technology**

Educators expressed many challenges and barriers, when referring to technology. When discussing barriers to technology, there were similarities in the participant responses. First and foremost, teachers felt that the biggest obstacle was time. Teachers expressed a frustration about time, not enough time to learn the technology, to implement technology effectively or time to gain more knowledge on technology.

Another barrier was the issue of financial resources. Financial resources affected allocation of technological in the school and the number of technological devices that were available. Therefore resulting in issues of access to technology for students and teachers. Teachers became protective of their technology, and found collaboration difficult. The participants stated that their challenges began with administration and board policies that provided barriers to technological use. Participants indicated that resources were not evenly distributed throughout the school. Participant Mary expressed this;
Administration is our biggest challenge. We, ESL, do not get the same things (technology) as everyone else, maybe because we are older and not pushing technology? I don’t have a computer in here. I was told I would not be given a laptop. I try to take my students out, but the labs are across the hall and always full.

Two participants stated that special education was allotted more financial resources than ESL. Therefore, Special Education Programs had access to particular software’s and technology that would be useful towards English Language Learner. The issue then became one of accessibility to resources. When dealing with issues of access and equity, there needs to be an inquiry into the examination of why there is a variance to resources within a school? Participants expressed an interest in collaboration between different programs within the school, therefore providing access to all teachers and students. Other ideas set forth were combining ESL and children with exceptionalities together. Then there were issues of inclusion and equitable environments. One participant expressed that combining the two programs might not be a good fit, due to the difficulty of meeting student learning needs. Yet on the other hand, students would gain access to all the technological resources.

Participants indicated that there was not enough Professional development available within their school or school board. They found that if they did attend Professional development, it was not helpful because it was very basic or they already had the knowledge. The participants indicated that there was an obstacle obtaining technology or assistance to technology, because they were ESL teachers. They stated that many teachers viewed English Language Learner not needing technology. The deficit perception of the English Language Learner limited students, in regards, to tools to technological tools and higher level thinking instruction.

The participants indicated that teacher attitude and beliefs were barriers to using technology in their school. It was very difficult to collaborate with teachers that did not uphold a
pedagogical belief in technology. Participants found that teachers would use technology for basic presentational needs and not focus on building higher-level thinking skills with students. They also found frustrating when ESL students were integrated into the classroom, the homeroom teacher would not allow for technology to be used.

The participant that did not use technology with the English Language Learners was scared of incorporating technology into this setting, because of lack of experience. The participant expressed concern, because she did not grow up with technology and felt that it was not an integral part of the curriculum. The participant, Mary expressed her thoughts about technology:

*I have mixed feelings about using technology, because I think technology takes away from community. Technology, I think is more important in grade 4. It’s my own bias, because I’m scrambling to keep up. It’s an effort, because technology is not my language.*

The research findings demonstrated the importance of trying to overcome barriers to technology. We must provide more opportunities for teachers to incorporate technology and critical pedagogy into their classroom instruction. Barriers to utilizing technology results in many missed opportunities for both students and teachers.
CHAPTER 5

DISCUSSION

Missing opportunities

By not using technology in the classroom, there are opportunities being missed for both teachers and students. The research indicated that there was a variance in how the needs of English Language Learners were being met, whether pedagogically or technologically related. The barriers that teachers were faced with caused them to miss opportunities for ELL. Missed opportunities resulted in student needs not being met, therefore there was not a level playing field for all learners. Students must have all tools available to them to learn; otherwise students will not be engaged.

There are three key components of ELL and technological integration that has been presented. First, technology was being utilized, second, technology was being utilized but not being utilized effectively, and finally technology was not being utilized. Teachers expressed feelings of being overwhelmed. In order to assist teachers with these challenges we need to address these gaps in technological integration. Teachers all have the same common goal, which is to support and provide the best instruction for their students. The question becomes, what can we do for teachers to help them attain these goals and inform their practice?

Implications for practice

Identifying the gaps and informing teacher instruction can occur through a range of areas. It is important to understand the challenges teachers faced, within their schools. Teachers expressed concerns with support that were available to them, in regards to administration. Board and school wide initiatives, impacted significantly on how technology was being implemented
and how English Language Learner’s were being instructed. Funding issues were a concern, as well as technological access. This brings us to the issue of initiatives and professional development. There needs to be initiatives brought forth to develop Professional Development for teachers, in order to develop their pedagogy and practice. In light of my findings, if we remove all barriers for teachers, there is still an issue of pedagogy. The research suggests TPACK knowledge is vital. Even if all the training is available to teachers, there are still teachers who will not use technology or not use it effectively. This leads me to conclude, that the reason is due to pedagogical beliefs. The research indicated that participants were not familiar with technological pedagogy, and had not heard of TPACK. Therefore, introducing the TPACK framework to teachers and focusing on the importance of incorporating technology, and integrating curriculum and technology together would be beneficial. Technology must be seen as a tool to engage and inform practice, not define instructional practice. This pedagogical belief, can be fostered and developed through mentoring programs, team teaching and bringing in professionals, whether specialists or new teachers to foster the development of technological integration. Technology has not become a mandated aspect of curriculum instruction, therefore it is important to note that not all teachers can vision a classroom of technology. As brought forth through the research, not everyone feels comfortable using or implementing technology, but the possibility for use can be increased by practical professional development and mentoring programs. Introducing this framework, also promotes a collaborative environment that can foster strong teacher-to-teacher and teacher-to-student relations.

In regards to critical literacy, mentoring programs between ESL and classroom teachers, can allow for teachers to create and assist with English Language Learners. The development of critical literacy with English Language Learners is a process that takes more time than English
speaking students. Recognizing that English Language Learners come into our classroom with prior knowledge, in their own language, is the first step to igniting their interest in learning. Technology becomes an ideal medium for this learning process to begin. Mentoring can also allow for teachers to work together, share instructional practices, technological implementation, questions and concerns.

Recommending a forum for teachers to collaborate and share is also another possibility of further development. Examining Learning Networks, whether through the school, school board or in an online forum. Technology has revolutionized how we communicate and interact with each other. Introducing teachers to other possibilities of professional development and collaboration can assist in overcoming challenges and missed opportunities that teachers are faced with.

Recommendations for students, begins by informing parents about what is going on in the classroom. Language is a barrier to learning, but technology can provide access to learning and assist children’s learning needs. Identifying solutions, such as providing open access from home, creating online learning environments for students and providing access to technology for home use is crucial. Equitable teaching practices, giving access to all children will allow students to thrive.

It is also very important to emphasize, to parents of English Language Learners, that literacy, communication and writing in their own language is very important to continue developing. Keeping up in their own language and continuing to develop their literacy skills is important regardless of language. The strategies and tools of language development do not change. They can be transferred and utilized, because the broad goals of reading are the same for all students (Linan-Thompson and Vaughn, 2007).
Conclusion

The research brought forth many important practices and issues for the English Language Learner, teachers and technological instruction. The research examined the English Language Learner, approaches and methods of technological integration and how students benefited in the area of Literacy to engage students through critical pedagogy in the primary setting. Recognizing the limitations of the study, it is important to acknowledge that the findings can be expanded to all learners and instruction of technological integration. Pedagogical framework and informing teacher practice will allow teachers to implement technology and allow students to connect higher level thinking to language development. The skills and strategies used by students and teachers to acquire the English language are similar; the difference lies in filling the language gaps for our English Language Learners through the proper instruction. The findings from the research, uncovered other areas of interest for further exploration. In order to gain more depth, there needs to be further research about integrating technology practices within school boards, professional learning networks for teachers and pre-service teacher training of English Language Learners and technological integration.
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http://www.cast.org/teachingeveryystudent


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Appendix A: Letter of Consent for Interview

Date: ___________________

Dear ___________________,

I am a graduate student at OISE, University of Toronto, and am currently enrolled as a Master of Teaching candidate. I am studying ________________ for the purposes of a graduate research project. I think that your knowledge and experience will provide insights into this topic.

I am writing a report on this study as a requirement of the Master of Teaching Program. My course instructor who is providing support for the research process this year is __________________________. My research supervisor is _____________________.

The purpose of this requirement is to allow us to become familiar with a variety of ways to do research. My research data collection consists of a 40-minute interview that will be tape-recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you. I can conduct the interview at your office or workplace, in a public place, or anywhere else that you might prefer.

The contents of this interview will be used for my research project, which will include a final research paper, as well as informal presentations to my classmates and/or potentially at a research conference or publication. I will not use your name or anything else that might identify you in my written work, oral presentations, or publications. This information remains confidential. The only people who will have access to my assignment work will be my research supervisor and my course instructor. You are free to change your mind at any time, and to withdraw even after you have consented to participate. You may decline to answer any specific questions. I will destroy the tape recording after the paper has been presented and/or published which may take up to five years after the data has been collected. There are no known risks or benefits to you for assisting in the project, and I will share with you a copy of my notes to ensure accuracy.

Please sign the attached form, if you agree to be interviewed. The second copy is for your records. Thank you very much for your help.

Yours sincerely,

Researcher name: ________________________________

Phone number, email: ________________________________
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Instructor’s Name: __________________ Phone number: __________________

Research Supervisor’s Name: __________________________

Phone #: __________________

Consent Form

I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw at any time without penalty.

I have read the letter provided to me by ______________(name of researcher) and agree to participate in an interview for the purposes described.

Signature: ____________________________________________

Name (printed): __________________________________________

Date: ______________________
Appendix B: Interview Questions

1. How many years have you been teaching?
2. What grades have you taught?
3. What is your teaching philosophy or pedagogy?
4. What ESL stage level are your ELL’s?
5. Are you using an ESL program?
6. What strategies do you use with ELL?
7. What strategies do you use to include ELL in the regular classroom?
8. What type of Literacy program are you using win your ESL program?
9. Do you use technology in your classroom? If no, why not? Are there issues of training, barrier or access?
10. What type of technology are you using in your program?
11. Do you favour one type of technology over another? Why or why not?
12. Do you find that technology enhances engagement in your classroom? Why or why not?
13. What type of online software do you use, if you use any in your classroom?
14. Do you feel that technology adds-value to your literacy program? Why/Why not?
15. Have you heard of TPACK? Or Technological Pedagogical and Content Knowledge Framework?
16. Do you use graphic organizers in your classroom? If yes, which ones and why do you find them beneficial?
17. Do you incorporate “critical literacy”, or “critical thinking” with your ELL’s?
18. How do you encompass “critical literacy”, into your class?
19. What are you thoughts about Critical Thinking in the classroom?
20. Do you think that ELL have the capability to think critically? Why or why not?

21. What board/school initiatives/programs are put into place for your instruction with ELL?

22. What strategies do you use to include or help integrate ELL in the regular classroom?

23. Are teachers flexible with utilizing technology in the classroom to help enhance ELL instruction?

24. When teaching students to learn to read, or practice reading skills, what strategies do you use?

25. What type of technology do you use to assist ELL students with reading?

26. Do you use translators in your classroom? If yes, what programs and technology do you use?

27. What challenges have you faced with technology?

28. Do you find that technology engages ELL or frustrates them?