

ROLE OF TECHNOLOGY IN SUPPORTING ENGLISH LANGUAGE LEARNERS

Role of Technology in Supporting English Language Learners in Today's Classrooms

By

Maria de Lourdes Andrade

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Abstract

This qualitative research study examined the role that technology plays in supporting Kindergarten to Grade 8 English Language Learners (ELLs) in the classroom. The purpose of this study was to identify different teachers' methods and strategies used in the classroom to support ELLs, as well as to identify some technological tools, such as computers, tablets, and Smart Boards that can be used to assist classroom teachers and English as a Second Language (ESL) teachers and their students during the language learning process. The data collected from an in-depth literature review and two interviews with experienced teachers from different grade levels were analyzed. Five themes emerged from the findings and included: 1) A variety of teaching strategies support ELLs during the learning process, including the use of technology such as computers, tablets, and Smart Boards; 2) Some benefits in using technology with ELLs include a positive increase in their independence and language skills; 3) Students and teachers face some challenges when using technology in the classroom, including technical difficulties, student engagement and off-task behaviour, lack of teacher familiarity with the technology, and new technologies not being children/user-friendly; 4) Students, parents, and teachers have a positive perception about the use of technology in the classroom. The discussion explored some strategies teachers can use while teaching ELLs, the pros and cons of using technology in the classroom, as well as the way technology is perceived in the classroom by students, parents, and teachers. This paper is intended for teachers who are interested in using technology with their ELLs.

Key Words: English Language Learners, English as a Second Language, technology

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Follow your dream...take one step at a time
And don't settle for less, just continue to climb.
Follow your dream...if you stumble don't stop
and lose sight of your goal, press on to the top.
For only the top can we see the whole view,
Can we see what we've done and what we can do;
Can we then have the vision to seek something new,
So press on and follow your dream. (Amanda Bradley)

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Chapter 1: INTRODUCTION

Introduction to the Research Study

The population in Canada is and will continue to become increasingly diverse (Statistics Canada, 2006). All Canadians are immigrants to Canada or descendants to immigrants. According to Statistics Canada, between 2001 and 2006, 1.4 newcomers, or an annual average of 242,000 individuals, were admitted as permanent residents. Moreover, it reported that one-fifth of Canada's population speaks a language other than English or French at home in 2011 (Statistics Canada, 2011). In order to participate in Canadian society, students have to speak either French or English, the official languages of the country. Many students will need more specific instruction and support in learning English as a Second Language (ESL). In addition, some of the students who were born in Canada will need some support in learning the language due to the fact that their home language is other than English. In order for students who are newcomers to Canada, or English Language Learners (ELLs), to achieve academic success and be able to get into higher education, they need to be fully engaged in their studies. Additionally, they need to be surrounded by educators who truly understand their needs and who make sure they know what is going on in the classroom (Ontario Ministry of Education, 2008).

Students in Canada are growing up in a media-saturated environment. One of the main concerns of teachers and parents is to facilitate an environment in which they can use all the resources technology offers in the best and safe way (Schwartz & Pollishuke, 2013).

Purpose of the Study

The purpose of this study is to understand the needs of ELLs in a classroom setting, and to learn the methods or strategies that either ESL teachers or regular classroom teachers use to encourage both language acquisition and learning curriculum content. Specifically,

the study explores how technology can potentially help students achieve academic success while being in an inclusive classroom instead of a pull out or withdrawal program. This research focuses on students from Kindergarten to Grade 8. It examines the methods and strategies used by teachers in elementary classrooms to help ELLs achieve academic success, and explores how technology can be helpful for ELLs, as well as for teachers.

Research Questions

My main research question is: What role can technology play in supporting ELLs in today's classrooms? My sub-questions that support my main question are:

- 1) What methods or strategies are teachers using to help ELLs be engaged in the class?
- 2) How can technology support teachers who are teaching ELLs?
- 3) How can technology support ELLs in the classroom?
- 4) What technology tools are being used in order to help ELLs in an inclusive classroom?
- 5) What challenges do teachers face when using technology with their ELLs?
- 6) What is the perception of teachers, students, and parents about the use of technology to support the ELLs learning?

Background of the Researcher

My interest in this research about ELLs and ESL programs has its origins in my own language learning experiences. I was born and raised in a non-English speaking country and studied ESL all my school years. While I was doing my undergrad degree, I decided to take my initial teacher training courses, and two years later completed my Certificate of Overseas Teachers of English (COTE). My passion about language acquisition started right when I began working with children. It is a real pleasure to see how their language skills grow day by day by learning new vocabulary and grammar, and by being able to express their own ideas and understand complex texts or conversations.

My biggest challenge has been teaching a girl who came from China with no English at all. We started communicating by pictures and sign language and since there were no resources at my school (books or technology) I had to use my phone to help her. I spent long hours searching for good websites to help her while I was working with the rest of the class, as I could not do one-on-one with her all the time. One of my fears was that this would begin to affect her self-esteem because I could not give her the time she required to learn the language. Since then, my interest of the use of technology in the classroom increased. My research will focus on finding out how technology can help students whose first language is other than English while being in an inclusive classroom.

Overview

Chapter 1 includes the introduction and purpose of my study, my research questions, as well as how I came to be involved in this topic and study. Chapter 2 contains a review of the literature about ELLs as well as how technology is used in the classroom. Chapter 3 provides the methodology and procedure that I used in this study including information about the sample participants, the data collection instruments, and the data analysis process. References and a list of appendices follow at the end.

Chapter 2: LITERATURE REVIEW

English Language Learners (ELLs)

The Ontario Curriculum describes English Language Learners (ELLs) as those students attending provincially-funded English language schools whose first language is not English, who have diverse backgrounds and school experiences, and have a wide variety of strengths and needs. Some ELLs were born in Canada and raised in families or communities where English is not spoken (e.g. aboriginal students, students born in immigrant communities). Language acquisition is extremely important for children's physical, social and cognitive development (Clark, 2000). According to Fred Genesee in his article *Educating second language children: The whole child, the whole curriculum, the whole community*, he notes that Jean Handscombe, an expert in second language learning, contends that language acquisition is as important as social integration and academic achievement for the successful education of linguistically diverse students (as cited in Genesee, 1996).

All ELLs need to learn the language of instruction in English language at the same time as they are working towards meeting the curriculum expectations (Ontario Ministry of Education, 2008). ELLs need different time periods to catch up to their peers in the proficiency of the language. It usually takes two years for ELLs to be moderately fluent in English and to get basic decoding skills in English and at least five years to be at the same academic English level as native speakers (Cummins, Bismilla, Cohen, Giampapa, & Leoni, 2005). Teachers must use different methods so that ELLs can gain access to the curriculum within an accepted time frame. If this is not achieved, many of these ELLs will end up dropping out of school or not meeting graduation requirements. Between 1989 and 1997, research conducted by Roessingh and Watt concluded, after following 540 students who spoke a first language other than English, there was a dropout rate of 74% for students who arrived as beginners in English (as cited in Duffy, 2004).

Technology in the Classroom

More and more often, there are schools in which technology is recognized as an instructional tool. Early introduction to technology, just as early introduction to language, gives learners ways to engage themselves with language producing task-based language acquisition. D. Briggs (1998) states in his book *A class of their own: when children teach children* that technology provides affirming and enriching instructional-learning environments and lends itself well to individual use and collaboration (as cited in Anderson, Grant & Speck, 2001). The use of technology in English as a Foreign Language (EFL) classrooms can provide a meaningful and interesting approach for language learning. It motivates the learners as well as engages them in speaking, reading, listening and writing easier (Ilter, 2009); however, technology alone is not sufficient to teach ELLs. It requires a teacher with clear objectives, who knows the curriculum and effective instructional strategies, and who can give children engaging learning experiences to grow and to have more experiences to relate to their prior knowledge (Schwartz & Pollishuke, 2013).

Computer Assisted Language Learning

In order to help language learners, teachers need to become familiar with ESL technology. Common acronyms for technology-enhanced language instruction include *CALL* (*Computer Assisted Language Learning*), *CELL* (*Computer Enhanced Language Learning*), and *TELL* (*Technology Enhanced Language Learning*). Although technology is the key to CALL, the teacher needs to create a whole learning environment system with his or her students (Egbert, 2005). The computer is not a substitute for a teacher; it has to be seen as a support or medium for language teaching and learning. There are many uses of the computer in the classroom; however, it is important to note that when using a computer, students should be involved in the authentic learning settings (Egbert, 2005).

The following conditions, based on Egbert's (2005) work, can be achieved effectively by CALL, and ensures greater success in second language and literacy acquisition. Students feel empowered and validated. Students take an active role in the process. They receive continued comprehensible input in the target language as well as in their primary language and are immersed sociolinguistically, having the benefit of multiple instructional media, a sustained instructional-learning environment, and varied input and feedback sources (Anderson, Grant, & Speck, 2001). Students are motivated, do not feel intimidated, and have ample time to complete their assignments (Egbert, 2005).

Tablets and Smart Boards

Mobile touch-screen technologies have introduced a new generation of educational tools in which students can have access to a wealth of resources allowing students to learn anywhere and anytime (Goodwin, 2012). There is an emerging evidence to suggest that *apps* have a significant potential to support the learning process (Shuler, 2012). An app is short form for "mobile application", which is "application software designed to run on Smartphones, tablet computers and other mobile devices" (Wikimedia, 2014).

The Sydney Region, in Australia (NSW Curriculum and Learning Innovation Centre, 2012) conducted a research study in order to provide schools with information regarding the use of iPads and apps in the classroom, to identify critical use of table technologies on teaching and learning, and to identify appropriate opportunities for professional learning for teachers. In this research study, 75 iPads were bought and distributed to three primary schools involving five teachers and over 90 students during the second semester of 2011. This research provided important insights into the use of iPads and apps in primary classrooms and their impact on teaching and learning. Although the iPad placed additional demands on teachers' prep time since teachers needed to spend a lot of time evaluating

educational apps and their relevance to the curriculum, as well as installing these on individual student devices, researchers noted some alignment between the curriculum documents and apps available in the iTunes App Store. In fact, 43% of the apps were classified as instructive. At the same time, the games-based apps were useful when memorization was needed such as spelling and multiplication facts. Teachers believed that the best use of the iPads was achieved when students used content-creation productivity apps as this developed higher order thinking skills and provided creative ways to express their understanding. Another advantage teachers noticed during the research was increased collaboration among students (Goodwin, 2012). Tablets need to be considered as educational tools that can potentially support learning by affording new opportunities for student-centered pedagogy and authentic learning experiences.

Smart Boards are whiteboards displaying the image from the computer monitor with the surface operating as a giant touch screen. These devices can be mobile or wall mounted. They present some advantages in the classroom. They are interactive and great for demonstrations; they provide a means of learning for students of different learning styles, and they capture the attention of students and also encourage participation. In addition, it is not only engaging for the students but also for the teachers (Wikimedia, n.d.).

Preston and Mowbray (2008) reported on their classroom-based research, which found that Smart Boards are important and useful tools that give teachers and students innovative ways to enhance teaching and learning and facilitate assessment in primary Science. However, they agreed with other researchers and teachers that Smart Boards are very expensive. They realized too that some of their kindergarten students were distracted as the students focus on it as soon as they enter the room. Moreover, they also reported that they have less access to it when it is mounted in a specific place at the school.

Won Hur Jung and Suh Suhyun (2012) asserted in their research *Making learning active with interactive technology in ELL classrooms*, that the introduction of the whiteboard (Smart Board), podcast and digital storytelling has a positive impact as the ELLs improved their vocabulary skills.

Technology and Differentiated Instruction (DI)

Differentiated instruction (DI) is a pedagogical strategy that allows students to work collaboratively on meaningful tasks at their own level and pace. Diverse researchers agree that differentiated learning, collaboration, and communication between learners are beneficial for language learning to occur (Erben, Ban & Castaneda, 2009). In student-centered learning environments, students are actively engaged in creating, understanding, and connecting to knowledge while teachers share the control with them. In addition, computer technologies provide more venues for all students to be equally and actively engaged in language learning activities. (Erben et al., 2009).

In the following table, Erben et al. (2009) summarize what differentiated instruction is and what it is not. The document *Reach every student through differentiated instruction* (Ontario Ministry of Education, <http://www.edugains.ca/resourcesDI/Brochures/DIBrochureOct08.pdf>, n.d. p. 5) defines DI as the effective instruction that is responsive to students’ readiness, interests and learning preferences.

Table 2.1: What differentiated instruction is and is not

DI is	DI is not
1. Having a vision of success for our students.	1. Individualization. It is not a different lesson for each student each day.
2. Providing a variety of assignments within units of instruction, realizing that students do not all learn in the same way.	2. Giving all students the same work or even identical assessments all of the time.

3. Recognizing the variance in learning styles of our students.	3. Assuming that all students learn by listening.
4. Allowing students to choose, with teacher direction, the route to their learning.	4. Merely having centers in the classroom.
5. Providing opportunities for students to demonstrate proficiency in an area they already know and allowing them to move forward.	5. Assigning more work to students who have demonstrated mastery in an area.
6. Offering tiered lessons, of varying degrees of difficulty, dealing with similar content.	6. Only for students who demonstrate a need for acceleration.

(Erben et al., 2009, p. 57)

Some specific strategies for differentiated instruction are:

- 1) Assessing learners for their readiness to learn
- 2) Adjusting questions
- 3) Compacting curriculum
- 4) Tiered assignments or tiered activities
- 5) Peer teaching
- 6) Reading buddies
- 7) Learning centers
- 8) Anchor activities
- 9) Independent study projects. (Erben et al., 2009, p. 57)

From Vygotsky’s theoretical perspective, technology has the potential to mediate students’ learning in a multitude of creative ways and to open up many potential dynamic zones of proximal development. Using technology in creative student-centered ways means, for ELLs, being one more step removed from relegation to silence and non-participation at the back of the classroom (Erben et al., 2009). In order to use technology on an ongoing basis in your lessons, it is important to know your students and choose the correct materials to help them learn.

- For ELLs at the preproduction stage (level 1), choosing technology that supports text with images such as photos, graphs, or charts is highly advisable since it links text with its visual representation and acts equally as a mnemonic device.
- For ELLs at the early production stage (level 2), in addition to those listed for level 1 ELLs, choosing technology that promotes vocabulary, grammar, and listening acquisition such as exercise builders, as well as digital stories, audio podcasts and online videos (YouTube) is recommended since all ELLs will go through a silent

period when learning English. This means that, before speaking, ELLs will spend a lot of time just trying to understand their linguistic environment. To help them at this time, it is more important to create language rich opportunities to further their listening comprehension strategies.

- For ELLs at the intermediate fluency stage (level 3) in addition to those listed for level 1 and 2 ELLs, it is important to use technology that promotes speaking, reading and writing skills such as synchronous VoIPs (skype.com, gizmo.com), online elaborated texts and process writing tools such as writeboard.com.
- For ELLs at the speech emergent stage (level 4), in addition to those listed for level 1, 2, and 3 ELLs, it is important to promote an ELLsCALP, in other words, their subject-specific language ability. Technologies that would naturally support this are tools that work in tandem with each other. Examples of this include a website or VLE that combines multiple links to e-communication tools, e-listening tools, e-creation tools, and e-assessment tools. (Erben et al., 2009, p. 80)

Challenges of Technology Use in Classrooms

Whenever teachers introduce technology in their classrooms, they have to be aware of the potential frustrations in order to avoid them. Some of these challenges may be summarized as: a) technical difficulties; b) classroom management situations (i.e. when a link on the website is broken, or when a server that hosts a website is temporarily down); c) security blocks in place at some schools for students to stop from accessing questionable sites from school computers; d) quality and appropriateness of the technology or software or websites; e) broadband speed too low in some schools, causing video conferences to appear pixilated video on a screen; and f) classroom control in which teachers have to facilitate learner-centeredness and student independence (Erben et al., 2009).

Summary

This study explores the question “What role can technology play in supporting ELLs in today’s classrooms”. It investigates the methods and strategies some teachers in elementary classrooms are using in order to support ELLs. Additionally, it explores how technology is integrated in these classrooms with ELLs, the pros and cons of using

technology in the classroom, and the way teachers, parents, and students perceive the use of technology as a tool to enhance ELLs' language skills.

Chapter 3: METHODOLOGY

Procedures

My research study follows a qualitative research methodology, as my main objective was to gain a deep understanding of methods and strategies used nowadays to help ELLs as well as explore the technological tools available to assist teachers while delivering their lessons. Qualitative research uses a naturalistic approach that seeks to understand phenomena in context-specific settings (Hoepfl, 1997). In addition, qualitative methods can be used to better understand any phenomenon about which little is yet known (Strauss & Corbin, 1990). My research involved a literature review about ELLs and the use of technology in the classroom. I researched different technological tools (tablets, Smart Boards, computers) and their use in education. The information gathered came from different sources, mainly from journal articles from databases like ERIC, CRCA and Summon. I considered, as well, information from newspapers and other recent articles, which helped me gain better insights about my topic.

After the literature review was completed, I followed this up by interviewing two practicing ESL teachers. The first of the interviews was made face to face in the school environment, while the second one was conducted using Skype. Both interviews helped me understand these teachers' approaches to teaching ELLs. Moreover, I was able to identify how these teachers were using technology as a tool to help their students. Subsequently, I proceeded with an in-depth data analysis of the interview transcripts.

Instruments of Data Collection

The type of interview I followed was a *General Interview* guide approach (Turner, 2010), which was intended to ensure that the same general areas of information were collected from each interviewee. This provided more focus on the conversation (using a set

of pre fixed questions) while still allowing some freedom and adaptability when interviewing the person (using impromptu follow-up questions). This last characteristic is important, as it gave me some flexibility when performing my interviews.

My goal was to interview experienced teachers who are using some technological tools in the classroom as well as some teachers using technological tools while the students were pulled out or withdrawn from the regular classroom for more one-on-one teaching. This allowed me to be able to modify some of my questions or add some more questions in order to get a better understanding of my interviewees' experiences, without affecting the main focus of my questions. (See Appendix B to see the list of interview questions.)

In addition, I used a professional journal with my experiences throughout my first year of the Master of Teaching (MT) program. It includes a bibliography of professional books and articles that I read, ideas I had heard about, and specifically all knowledge and experience gained through my practicum placements.

Participants

Some important characteristics or criteria that I looked for in my participants were:

- Teachers who are currently using technology to help their ELLs in their classroom. This was important because I was looking to gain as much information as I could about the use of technology to help ELLs achieve their goals while learning the new language.
- Teachers who have at least five years of experience using technology. This ensured that the data I collected was from participants who were well-informed practitioners, and who had lots of experiences with which to draw from in order to provide detailed responses.

There were two participants in this study, discussed in this paper under assigned pseudonyms. My first participant, Anna (pseudonym), is a practicing ESL teacher with ten years of classroom experience, currently teaching ESL in Mexico City. My second participant, Mia (pseudonym), is a current teacher in a board in the Greater Toronto Area currently teaching ESL and library, and she is also the technology expert supporting many teachers in the school.

Data Collection and Analysis

Analyzing your data is an ongoing process that begins as soon as you start collecting it. Each time you collect data, you should try to make time to review what you have and reflect on it (Falk & Blumenreich, 2005). In order to analyze my data, I first transcribed each of the interviews myself, with the help of Express Scribe, a transcriber, which allows the user to reduce the speed of the conversation and transcribe both interviews in a much faster way. The interviews were transcribed verbatim. After having transcribed and reread both interviews, I wrote all the information from both interviews in an Excel sheet. The information was divided into three columns. In the first column, I copied the interview question and in columns two and three, I wrote the answers of both of my participants. All the data collected was read several times and thoroughly analyzed and compared.

I highlighted all the information that provided insight into answering the research questions. As I marked relevant comments on the transcript, on a separate sheet, I took notes on the statements made by interview participants.

Once completed, I categorized each of the statements by theme. As Falk and Blumenrich (2005) suggested, I, as the researcher, began to see themes emerging from my note-taking that made me more aware of themes and other situations that fit into the themes. When organizing the data, I created a table using Word Processor. During the process of

describing, classifying and interpreting, I developed codes or categories, and I began to sort the text into categories (Creswell, 2007; Falk & Blumenreich, 2005). I discarded some of my data, similar to Creswell's suggestion that "not all information is used in a qualitative study; some can be discarded" (p. 152).

I divided my information into my major themes, categories, and codes used throughout the *Excel* sheet used to categorize the information. (See Chapter 4: Findings for the themes that emerged and the subsequent discussion.)

Ethical Review Procedures

My research study followed the ethical review approval procedures for the Master of Teaching program, OISE, University of Toronto. I asked the two teachers to participate in my study and provided them with the background of my research. I provided each participant with a letter of consent containing information regarding the raw data collection process, how the data was used, and the confidentiality of the information provided (see Appendix B for a copy of this Letter of Consent). The raw data was stored safely on a computer with restricted access. The letter of consent was reviewed with each participant beforehand.

It was important to ensure the participants felt comfortable during the interview. I explained that there were no right or wrong answers to the questions, emphasizing that the main objective of my research was to gain knowledge about their experiences (see Appendix B for Interview Questions).

I also explained that if they didn't want to answer a specific question they were not obliged to do so. I followed the procedures outlined in the consent letter and did not change any of these procedures during the course of my study. When completing my research study,

I ensured all the information reflected the anonymity of the participant. I used pseudonyms for the individuals and the institutions.

Limitations

My first potential limitation was the sample size. Although I interviewed one teacher working with ELLs in the classroom and one teacher pulling ELLs from the classroom for one-on-one instruction, it was still a very small sample size. Interviewing and gathering information from more teachers would have offered a wider perspective.

Time was another limitation as I completed this study over a two-year period, which is not a long enough time, especially with so many other commitments amidst a very busy teacher education program. Additionally, the literature review was not too extensive due to the time factor as well as the fact that there is not enough literature about ELLs specifically benefitting from using technology as a tool to enhance their learning in an inclusive classroom.

Chapter 4: FINDINGS

This section of this qualitative research paper begins with a brief explanation of the participants, whose names as well as the names of the institutions in which they work were changed to ensure their confidentiality. In this chapter, I analyzed the interview statements made by my participants, Anna and Mia (pseudonyms) about the use of technology in the classroom to support ELLs. Subsequently, five major themes emerged from the analysis of this interview data, and pertinent parts of my participants' comments were quoted and referenced throughout. Discussions of the themes themselves and how they relate to my overall research question and to the literature are also included in this chapter. Within this chapter, the statements of my participants are collated and compared to each other in reference to the relevant themes guiding this research.

Background Information of Participants

The two participants selected for this research are professionals in the field of education with at least five years of experience using technology as a tool to help ELLs during their learning process. As mentioned before, this ensured that the data collected from both participants was reliable and as accurate as expected. In order to select my participants, I asked my associate teachers, my colleagues at school, as well as my professors, if they had met a teacher with at least five years of teaching experience and with a wide experience using technology as a tool to teach ELLs. Moreover, I posted a tweet on the Educational Computing Organization of Ontario (ECOO) tweeter page. Anna (pseudonym), my first participant was recommended by one of my professors. As I could not find anyone else who met my criteria, I decided to look abroad. Since I have a sister who is a teacher in Mexico City, she contacted me with a school where technology is widely used to teach ELLs. An email was sent to all teachers there explaining the nature of this research and asking them to

contact me if they were interested in participating. My second participant, Mia (pseudonym) who clearly met the criteria, emailed me and agreed to be in my study.

Anna.

For the past year and currently, Anna (pseudonym) has been working in Mexico where Spanish is widely used. She is a practicing ESL teacher with ten years of teaching experience, and has taught all grades from Kindergarten to Grade 8, including special education. Originally from New York City, United States, in all of her teaching experience, she has worked with ELLs in her classes. Passionate about the use of technology in the classroom, Anna stated that she has always used technology as a tool to help her students acquire the reading, writing, speaking and listening skills they need to communicate.

I selected this participant for my research study because, as I mentioned before, I was looking for a teacher with experience teaching ESL as well as one who used technology without the support of a resource ESL teacher withdrawing ELLs from the classroom. Anna has taught in a variety of schools including those with limited access to technology, and mentioned that teaching in a technology rich classroom makes a great difference to ELLs, especially in their motivation. She uses technology constantly throughout the day, regularly during literacy activities, regularly during math activities, and in any free moment, which would be at least half the day each day.

Mia.

The second participant, Mia (pseudonym), was recommended to me by one of my professors who has known her for many years. Mia is a current teacher in a school board in the Greater Toronto Area. A teacher with 19 years of experience, both in the public board and in private schools, Mia has taught ESL to different grades ranging from Kindergarten to Grade 6, has taught computers to students in grades Kindergarten to Grade 8, and, in addition, is currently the technology expert in the school and supports the technology

learning of other staff members. Currently, she is working as an ESL teacher and librarian and uses technology as a tool to enhance all her students' learning. Mia uses technology where it fits during the day. She mentioned she uses it daily whether it is an iPad, Smart Board, computer, or laptop.

Key Findings

After a thorough analysis of the statements made by my participants, four main themes were identified and are discussed throughout this chapter. The main themes identified were:

- 1) A variety of teaching strategies support ELLs during the learning process, involving the use of technology such as computers, tablets and Smart Boards.
- 2) Some benefits in using technology with ELLs include a positive increase in their independence and language skills.
- 3) Students and teachers face some challenges when using technology in the classroom, including technical difficulties, student engagement and off-task behaviour, lack of teacher familiarity with the technology; and new technologies not being children/user-friendly.
- 4) Students, parents, and teachers have a positive perception about the use of technology in the classroom.

Within this chapter, the statements of my participants have been collated and compared to each other and relevant themes have emerged. Discussion of the themes themselves and how they relate to my overall research question and sub-questions as well as to my literature review are also presented in this chapter.

Theme 1: A variety of teaching strategies to support ELLs during the learning process, involving the use of technology such as computers, tablets, and Smart boards.

In this section, I share and discuss a variety of different strategies that were mentioned during the two interviews, and these were also supported by the literature. These include: a) a balanced literacy approach; b) students' and parents' use of their first language; c) visual scaffolding; d) different technologies used in the classroom; e) communication with homeroom teachers to support ELLs; f) teaching about tolerance and patience; and g) encouraging students to follow routines in the classroom.

A balanced literacy approach.

Both my participants, Anna and Mia, use a balanced literacy approach in which they use technology to support their students' learning. Anna, my first participant, stated the importance of using visuals, giving clear instructions, using vocabulary within context, and giving children an opportunity to speak, as key factors to acquire the language. She said,

What is most beneficial to students who are learning English is the use of visuals, clear and consistent directions, I think that conversation is key when kids are learning English and in order to really acquire the language they have to speak it, they have to write it, they have to really use it and produce it.

Mia stated that she uses technology to support her students' reading, writing, and speaking. She said, "I use lots of visuals and I really teach from where they are, so it is individual programming for each of the students. Now within the balanced literacy, it is modeled, shared, independent, scaffold."

According to Facella, Rampino and Shea (2005), in their article *Effective teaching strategies for English Language Learners*, a) gestures and visual cues; b) repetition and opportunities for practicing skills; c) use of objects, real props, and hands-on materials; and

d) multisensory approaches are four strategies named by the majority of the teachers being interviewed in their study as being effective in general.

In *Teaching English Language Learners through technology*, Erben et al. (2009)

outlined five principles for creating effective second language learning environments. These are:

- 1) Give ELLs many opportunities to read, to write, to listen to, and to discuss oral and written English texts expressed in a variety of ways.
- 2) Give classroom time to use their English productively. They explain that when ELLs are engaged in talk, they make communication modifications that help language become more comprehensible, they more readily solicit corrective feedback, and they adjust their own use of English.
- 3) Draw attention to patterns of English language structure.
- 4) Give ELLs opportunities to notice their errors and correct their English.
- 5) Construct activities that maximize opportunities for ELLs to interact with others in English. (p. 85-86)

Students' and parents' use of their first language.

As an essential strategy to support ELLs at home, Mia mentioned the importance for parents to continue with their first language at home and to use it in reading and talking with their children, because it gives the students that very strong vocabulary in their first language that they can transfer into English. The key to literacy engagement for ELLs is connecting what they know in their first language to English (Cummins, 2007). This is equally important when using technology. When parents can share with their children in their own language in all areas of the program, children will benefit (Cummins, 2007; Schwartz & Pollishuke, 2013).

Visual scaffolding.

Visual scaffolding is an excellent way to provide comprehensible input to ELLs so that not only will ELLs learn the essential subject content, but also they will make progress in their acquisition of English. When students can see an image of what the teacher is describing or see the key words that the teacher is explaining, it makes the input much more

comprehensible and removes the affective filter which results from the fear or boredom that comes of understanding very little in class (Patnoudes, 2012).

Anna stated,

The first couple of times that the children do it, we did it together, you know, ‘open Safari; go to this page’. We had a bookmark and I let them know that they were responsible for doing this so they had to know the username and the password. I put as a poster at the wall so they can refer to it and I said I will do it with you this time but the next time you have to do it on your own, or if you don’t know, ask each other questions, but one time I showed it and they were able to do it themselves.

Scaffolding is supported in the literature by Patnoudes (2012). He contends that teachers should never assume that their students know how to do anything when it comes to technology. He describes some experiences in which he realizes why scaffolding not only applies to teaching content, but is also good to employ when introducing new technology in the classroom.

Different technologies used in the classroom.

Anna and Mia use all types of technology to support their ELLs in the classroom.

Anna includes iPads, computers, Smart Boards and has started using a SMART Table. Mia as well uses all sorts of technology with her ELLs. She said,

.... iPads, Smart Boards, the internet, laptops, portfolio programs. Wherever the technology meets their needs, and whatever the technology is, I use it, with the older kids the translators on the iPads or on the phones; any way that they need the technology benefits them and I will get.

Mia added,

I will use my own personal technology, my iPad to put my pictures if there are words that they don’t understand, so they can get the visuals with it. I use the Smart board which is usually up and running and they can use it as a center... They can use the iPad when they are done, or as part of daily five to work on any of the English programs they use.

Integrating technology into the curriculum has become an imperative for teachers at all grade levels (Edutopia, 2014). Teachers must seamlessly integrate various technology

tools in the classroom such as computers, DVD's, iPads, interactive white boards, Smartphones, software, internet, document scanners, electronic music devices, among others. In *What is successful technology integration* (Edutopia, 2014), effective integration of technology is achieved when students are able to select technology tools to help them obtain information in a timely manner, analyze and synthesize the information, and present it professionally. The technology should become an integral part of how the classroom functions – as accessible as all other classroom tools (Edutopia, 2014).

One software Anna just started using in her classroom is the McGraw-Hill Education *SRA Flex Literacy*, which is a Reading and Language Intervention System for struggling readers, Grade 3 and above. SRA FLEX Literacy™ is built on a research-based instructional model to reach students of various reading levels, as low as Beginning Reading. Students are engaged as never before through high-interest interactive tools, technology, and rich text selections. Teachers are empowered to tailor instruction through ongoing assessment that provides true differentiated instruction. Administrators are equipped with the tools they need for critical decision-making (McGraw Hill, 2014). Anna contended that the fact that this program has a lot of visual support makes it very useful for her ELLs. She stated, “I think technology that we have available now gives them lots of visuals. There are so many visuals on the internet, just within the programs and the apps on the iPads.”

Another program Anna has widely used in her classroom with her ELLs is iBooks Author. This is a software created by Apple that allows everyone to create beautiful iBooks or textbooks. It offers different templates, fonts, colours, background and foreground images, styles, galleries, video, interactive diagrams, 3D objects, etc. from which to choose. Monica Burns (2014), in her blog, *5 reasons to try iBooks Author*, states that iBooks Author gives teachers the ability to create online books that can be shared with students by adding them to individual devices or published to the iBookstore to share with the world.

Mia, my second participant, mentioned that she uses specifically a program called Raz-kids, which is a leveled, guided reading. According to her, the program underlines certain words within the story and when the students click on it, they hear the word, so even if they can't read the word, the word is provided for them. Mia also uses the Smart Board to support her students.

I also use the Smart Board where I created audio files. I made guided reading books on the Smart Board where each word I put pictures besides it as well as my voice, using Audacity, to underline the words, so I created my own stories for the students, with the vocabulary they need, with the audio files, and they can move them on the Smart board so they get them one to one correspondent with the words as well as the pictures cues to help them with the word they hear.

Anna, as well, uses the Smart Board in the classroom as she thinks it is very interactive and engaging.

Besides using a Smart Board, Anna started using a Smart Table, which is a special table where children press things and interact with it. The Smart Table is a social, inclusive and captivating collaboration tool that makes it easy to help young students become excited about learning. It is a great way to enhance the social and academic skills of active learners and help all students achieve success (SMART technologies, 2014, www.smarttech.com/table). However, Anna states that it is actually very difficult to use for the children, as it is not yet as user-friendly as it could be.

Both my participants agreed that the iPad is a very important tool to support ELLs in the classroom. Anna mentioned, "You can incorporate an iPad into the lesson whether be the camera or stop motion animation; the options are limitless." Although Anna mentioned she uses too many apps to be listed, Keynote and Pages are two she mentioned she widely uses with her ELLs. She said that it is great to use the iPad, especially for research as all the information is there, including all visuals.

Communication with homeroom teachers to support ELLs.

Mia stated the importance of communicating with the homeroom teachers. She mentioned,

I will talk with their homeroom teachers so there's lots of communication between myself and the homeroom teacher, as to what level they are reading at, what they are doing in their writing, what they are doing in the classroom. I have the homeroom's teacher long range plans so that I can build my program where she is, what works for the students, so that my program runs somewhat parallel to theirs. If they are doing recounts in the classroom and my students are ready for them, they will do their recounts in here so when they go back, there is a nice transition, and I also offer the homeroom teacher many modifications, accommodations to the lesson plans, to the units, as well as help with the tests.

According to Mastruserio (n.d), in her research, *Teachers' perceptions of push-in or pull-out model effectiveness and learning outcomes*, collaboration is a necessary key to making the Pull-out program effective, as is providing adequate time, space, and teachers for the ESL classes (p. 29). Finding a time to take students out of their content classes can be difficult, and needs collaboration and understanding among all teachers and administrators, as content teachers can become frustrated with trying to monitor their students and assignments.

Teaching about tolerance and patience.

One important point Anna stressed was that, as a teacher, one of the most important things is that she teaches tolerance and patience, whether it be with someone who is just learning English or someone with a special need, and so modeling, teaching, and expecting that tolerance from one another is key to making the ELLs more comfortable to share their experiences and feelings. The more secure the student feels with the teacher and other students, the more likely the ELL is to take risks and produce language, with or without the use of technology.

According to Whitsett and Hubbard (2009), teachers who respect and value their students for who they are, send out clear messages by recognizing their needs and desires;

expecting the best from and for them academically and committing to equity in the classroom.

Encouraging students to follow routines in the classroom.

One thing that was emphasized during the interviews was the importance of establishing and encouraging all students to follow routines in the classroom, especially in regards to technology use. Anna assured, "...definitely, you have to establish routines, to take care of the technology like, walk this way with the computers, make sure the cord for the headphones is wrapped...".

Monica Burns, in her blog, *Introducing mobile technology into your classroom: Structures and routines* (<http://www.edutopia.org/blog/introducing-mobile-tech-structures-routines-monica-burns>, 2013), mentions that trying something new in your classroom, especially with technology, can be intimidating. Although she comes from an iPad classroom, she asserts that routines are great for introducing all one-to-one devices. Similarly, the Ontario Ministry of Education *Classroom Design and Routines* (n.d.) guide from the Kindergarten Curriculum Guide, mentions, "The organizational structure and daily routines of the classroom should make children feel safe while supporting and encouraging them to take risks and to work cooperatively with others to become confident and independent learners" (Ontario Ministry of Education, p. 25).

Craig Crowley (2010) also indicates, in the video, *Establishing technology routines and student ownership of flexible tools in a read 180 classroom*, that teachers need to invest time in establishing technology routines on the front end. He added the idea to establish routines related to groups/stations and transitions before plugging in technology.

Theme 2: Some benefits in using technology with ELLs include a positive increase in their language skills, as well as motivation, independence, and self-confidence.

Both my participants found several advantages or benefits to the use of technology to support ELLs, including a) greater opportunities for students to express themselves, which increases their language skills; and b) an increase in motivation, independence and self-confidence among ELLs.

Technology provides greater opportunities for students to express themselves, which increases their language skills.

Anna indicated that one of the many advantages technology brings to her ELLs is that ELLs can really put into practice what they have learned as it gives them greater opportunities and more ways to express themselves. She mentioned, “Children can record themselves saying something and put it in a blog; they can share it with their families; they can put something in YouTube. It really opens a lot of possibilities.” She added that children “can take pictures of things that are important to them, record their voice, which is probably a lot easier than typing or writing out their ideas”, so technology gives them a lot more ways to express themselves.

The article, *Learning: Engage and empower* (Ontario Ministry of Education, n.d.), claims that technology can inspire imagination and intellectual curiosity that help people engage actively as learners and open new channels for success or visions of career possibilities. Technology also “provides opportunities for students to express themselves by engaging in online communities and sharing content they have created with the world” (p. 6).

Technology increases motivation, independence, and self-confidence among ELLs.

For Anna the use of technology increases motivation as students really enjoy working in the computers and iPads a lot more. She mentioned,

I think the biggest thing I can see is motivation, which is huge. I mean, I have kids who are writing books at playtime...where in the past no, no, they wouldn't be interested in doing that so it gives them the chance to use what they have learned.

Both Anna and Mia shared the idea that the use of technology gives her students independence. Anna confirmed that once the children know how to use the technology, either a program in the computer or an app, then technology provides independent practice in an inclusive classroom. As well, Mia mentioned, "...within the balanced literacy its modeled, shared, guided, independent, scaffolding, they are able to become independent giving them the tools they need to get there."

Mia stated that technology provides students a safe environment to practice without having to go out too far with risk. Scaffolding and giving them visuals help students take risks to try the language. Furthermore, she noticed that the confidence of her students improves with the use of technology as students can independently look up words without the constant help of the teacher or peers.

According to Krashen (1982), students with high motivation and self-confidence are more likely to perform better at language acquisition than those without. In addition, Ban, Jin, Summers and Eisenhower (2006) point out that the use of technologies in the classroom can increase motivation, decrease anxiety, lead to more student-centered activities, provide students with an authentic audience for which to write, and in terms of language learning, can promote greater language production along with a higher level of language sophistication (p. 5).

Dr. Ilter (2009) writes that students should be encouraged to use computers and other technological devices since these can increase students' motivation in English courses and as a result of this, effective and successful goals can be achieved. However, he emphasizes that the teacher should not think that using technology is the only solution for good motivation; all lessons should be based on thoughtful use of technology and strong pedagogical considerations.

Anna confirmed that while the use of technology does not affect or limit communication, students experience communication in different ways. She mentioned, "I think technology does not limit communication, communication is done in so many ways; there is written communication, there is verbal communication...it gives new ways for children to communicate and your audience is much larger actually." According to her, technology opens up a lot of possibilities. She said, "I mean children can record themselves saying something, and put it in a blog; they can share it with their families; they can put something in YouTube. It really opens a lot of possibilities."

Access to technology can open up many possibilities for early childhood learning, extending children's worlds, and helping them to expand and explore their thinking. (*Early childhood program guidance for children ages birth through eight*, para. 1, <http://www.nj.gov/education/ece/psguide/TechnologyGuidance.pdf>). The Ontario Public School Boards' Association states in *A vision for learning and teaching in a digital age* (Carruthers & Fairbain, 2013) that today's technological environment allows students to draw on sources around the globe and integrate what they discover into their learning using a range of media (p. 3).

Anna confirmed that technology can help ELLs learn in the mainstream classroom given the fact that students know how to use the technology. She mentioned;

Once the children know how to use the technology, know how to use the program or the app, then absolutely it can provide independent practice and...they can do it right there in the classroom and we do that...where at one time, we have the large group working on one thing and we have one or two children off on the side using technology, whether with a laptop or an iPad. You know, they can use the headphones so they're engaged and it's not disrupting the rest of the group.

Mia, as well, confirmed this idea when she said, "if they are using their translators for sure...the primaries are doing so much scaffolding, and accommodating and visuals, and once they know how to log in and do all those things." She added,

With the juniors and the intermediates, if you pre-taught a lot of the technology, then they have the independence and they are fine, too. I have heard other teachers saying that once they use the translators, it makes it a lot better because they can communicate back and forth and having the iPad, you just pull up the picture and you can have a conversation and make sure that what you are communicating is correct.

Robertson (2008) asserts that in order to make the most of instructional technology, ELLs need to have the language skills and vocabulary necessary to understand how to use the technology. According to Ban, Jim, Summers and Eisenhauer (n.d.), input and training in the use of technology should be given *before* ELLs are expected to do an assignment using them. "Not only should students be trained on the use of a new program, but they also should be advised about any customs surrounding its use" (p. 7).

Theme 3: Students and teachers face some challenges when using technology in the classroom, including technical difficulties, student engagement and off-task behaviour, lack of teacher familiarity with the technology; and new technologies not being children/user-friendly.

Both my participants agreed that they have faced some challenges while teaching ELLs with the use of technology. These include: a) technical difficulties; b) student engagement and off-task behaviour; c) lack of teacher familiarity with the technology; and d) new technologies not being children/user friendly.

Technical difficulties.

Anna and Mia claimed that having technical glitches is one big disadvantage of using technology. Mia admitted,

All those glitches... that happen with technology that they (students) can't independently fix on their own, so as the teacher, if I am conferencing, they either have to wait or interrupt which they are not supposed to do when I am conferencing, because they can't just independently fix in on their own.

Andrew Marcinek, Director of Technology & EducatorU.org Co-founder

(<http://www.edutopia.org/blog/technology-and-teaching-finding-balance-andrew-marcinek>.

2014), states that one of the biggest distracters of technology integration is when the technology fails, which, according to him, is inevitable, but can be prevented by putting in place procedures that will allow the classroom to progress smoothly. He adds that the more we fail with technology, the more we will learn from it. According to him, not trying technology is doing students a major disservice.

Lauren Kenney (2011) mentions in her research that time allowance for technology can be difficult, especially with system glitches which can take away valuable time during the day. Conversely, she stated that as communication technologies are being used more frequently in the classroom, even with certain obstacles, it could be a true aid to learning.

Susan M. Gay (1997) agrees and argued that teachers tend to learn by default rather than by design. According to her, they learn software applications and machine operating systems as they encounter tasks and glitches rather than through planned or guided instruction.

Student engagement and off-task behaviour.

Anna and Mia believed that another challenge they go through during their day with their ELLs is that their students have a tendency to go off task and move to different apps or other programs. Mia commented,

...if they are on the apps they have a tendency to go off on to different apps that I'm not wanting them to work on that day, or is not beneficial for them for what we are working on, so they'll just...it is just for exploring, they are off task.

She added that when the Smart Board shuts down is another downside of technology, as children become distracted and interrupt her in order to get her to fix it.

In his article *The use of a SMART Table to increase on-task behaviour*, Warner (2012) writes that because off-task behavior is a common problem teachers now face in their classroom dynamics, it is important they have tools and resources to help eliminate this as much as possible. He agrees that students who are off-task do not only limit themselves, but they become disengaged and distract their peers.

Luci Boella (2013) cannot agree more on this. In her article *Using Smart phones and Tablets in the classroom*, she says that the first drawback to using Smartphones and Tablets in the classroom is the potential for students to go off task and use their devices inappropriately. However, she adds, where motivation and engagement is high, distractions are minimized.

Lack of teacher familiarity with the technology.

Both of my participants consider familiarity with the technology as a challenge in the classroom. For Anna, my first participant, she mentions that one important challenge is to be familiar, at a fair level, with the technology because in order to have them create something, she herself has to know how to do it. Mia agreed by saying, “know what programs you are going to use and how they work so that you are not wasting your time trying to figure it as you teach”, which is similar to what all teachers need to do when preparing their teaching materials.

Mishra and Koehler (2006) state that today, knowledge of technology is often considered to be separate from knowledge of pedagogy and content. They argue that this leads to ineffective application of technology to education and ineffective teacher

professional development that emphasizes the learning of specific hardware and software skills, instead of the learning of how best to adapt available technologies to appropriate pedagogy and content.

Susan M. Gay (2011) explains that computers can be effective teaching tools in the classroom; however, they are complex machines and require knowledge and skills to operate them. She also expresses that some of the skills or knowledge teachers are required to learn to use technology in the classroom are not to be anticipated, and therefore, occur as teachers encounter it.

New technologies are not children/user friendly.

Another challenge one of my participants, Anna, mentioned, is that new technology is not “kid” friendly and it is hard for students to use it. Anna said, “...we haven’t had a lot of luck with it because it’s actually very difficult to use for the children. It’s not so friendly yet. I think the technology right now is developing.” She finds using new technology sometimes very difficult to use as it may be not be child/user friendly. For instance, she mentioned the Smart Table, an interactive tool where children press things and interact with the table, which, according to her, is not as friendly as it could be since students still struggle while using it.

Theme 4: Students, parents, and teachers have a positive perception about the use of technology in the classroom.

Students’ perspectives.

Anna stated that her students have a positive reaction toward using technology during their learning process. “Oh, they love it. They get so excited about it”. At the same time, Mia, my second participant echoed the same belief; “Oh, they love it. They love using technology”.

In her book, *Can we skip lunch and keep writing*, Julie D. Ramsay (2011) states that today students have different expectations than our past students. According to her, we need to focus on the C's of education (communication, collaboration, critical thinking, creativity, citizenship). Students expect to be able to communicate, collaborate, create, and use critical thinking to solve real problems. As teachers we need to bring that in our classrooms.

One of Julie D. Ramsay (2011) students mentioned that writing is more than just preparing for tests; it is a preparation for life. This student felt that he and his classmates have more of an opportunity to voice their ideas to others. All of their ideas are student-produced because Mrs. Ramsay, their teacher, lets them lead her in projects. He added he actually feels that he communicates with others better the more he writes; He felt that all classes should write with technology because it's a skill necessary for life (Ramsay, 2011).

Parents' perspectives.

Both my participants agreed parents have a very positive perception about the use of technology in their children's school. Anna mentioned that the use of technology is one of the reasons why many of the families attend the school in which she teaches.

Very positive feedback. It's actually beyond that. I think the reason that lots of the families come to the school where I teach is because their children have access to technology all the time, and really in our school in particular is very cutting edge.

Mia states that her students' parents really like the Raz-Kids program mentioned before because, besides giving them practice in reading, the parents, who sometimes feel hesitant to help their kids, feel more confident to work with them and actually work together with their kids.

According to the *Use of Tablet technology in the classroom* booklet (2012), provided by the New South Wales government, parents need evidence-based information about the safe and effective use of mobile devices, where to seek quality apps, and suggestions for ways these devices can be used at home to support learning. In particular, parents expressed

a need for alternatives to ‘game’ apps, with a preference for their children to use learning apps. Parents are also looking for information about the impact of these devices on student learning and development.

Teachers’ perspectives.

Both of my participants feel very strong about the use of technology in the classroom. Anna, feels that teaching her students using technology as a tool has made her keep learning, as sometimes according to her, some of her students know more than she actually does. Feeling like a life-long learner, she stated, “I actually sit in there with them and learn along with the students... they actually know a lot more than me, sometimes, so I like the challenge you know, of learning, myself.”

Sabzian and Gilakjani (2013) state in their article *Teachers’ attitudes about computer technology training, professional development, integration, experience, anxiety, and literacy in English language teaching and learning*, that teachers should be convinced of the usefulness and benefits of technology resources in improving teaching and learning.

Lawrence (2013) asserts that professional development that facilitates reflective practices can be a mechanism for supporting teachers’ technology use as a pedagogical method and foster opportunities for them to articulate how they use technology and other digital tools to support student learning.

Anna also mentioned that the use of technology needs to be taught. She stated that using technology to help ELLs in the inclusive classroom is very easy to implement having taught the children how to use it as it provides independent practice in the classroom. Mia echoed this belief. She added,

...you may have to teach the ELLs specifically what some of the terminology is around it...you will have to pre-teach some of the technology terms that we take for granted, like, ‘go to the internet’, ‘Google this’, ‘save it’, so that they can switch the technology language in their heads so they know what it is and what you are talking about.

Ybarra and Green (2013) write in their article *Using technology to help ESL/EFL students develop language skills*, that Dr. Butler-Pascoe has noted that while the theoretical framework of computer-assisted language learning (CALL) continues to evolve as more research is conducted, new technologies develop at staggering speeds and offer opportunities not imagined just a few years ago. The challenge for today's second language teacher is to understand the theories and principles of CALL, keep current with apps, critically assess the latest and ever-changing technologies, and harness technology to provide the most effective learning environments (*Center for Digital Education*, <http://www.centerdigtaled.com/>, 2010).

Anna acknowledged that technology makes a difference in the classroom as she considers it an added element. Mia agrees and considers technology as one more tool to help the ELLs. She stated,

it is just one more tool, and even the older kids... the fact that they are allowed to use something to help them translate when they feel, 'Oh, so you mean I can use my first language', it is a benefit for them.

Adding the computer into the instructional mix affords many opportunities for ELLs. Learning what language sounds like, looks like, and means, can be supported and enhanced through teacher and student talk about what they see on the computer screen (Meskill, 2005)

Anna expressed the need to distinguish between formal communication and informal communication. According to her, the language you use when using Twitter or Whatsapp is very different to the one you will use in a formal document. She recommends, however, that other teachers should think outside of the box, as technology can be used in so many ways. She thinks that the options are limitless and that teachers should have an open mind to think out of the box and to be willing to try new things.

Borges (2013) contends that, when combined with good teaching practices, a flexible approach, well established routines, engaging lessons and a multifaceted approach to teaching that takes into account the strengths and needs of all students, technology allows all students to participate in rich and meaningful learning experiences and demonstrate wide-ranging forms of success.

Summary

As has been illustrated throughout this chapter, each participant has their own ideas and experiences using technology in the classroom. Each has come to understand that using technology not only increases motivation, independence and self-confidence in ELLs, but also improves their language skills. Despite their unique experiences, many similar themes did emerge throughout both interviews. As discussed, the themes were also reflected in the literature and have provided invaluable insights that have enriched my understanding of the role technology plays in supporting English Language Learners.

Chapter 5: Discussion

I use this chapter to share my reflections and growth over the course of this research journey as an educator and as a researcher. I, as well, explore the implications of my key findings and importance of the use of technology with ELLs. Finally, I end this chapter with limitations to this study and suggested areas of interest for future research.

Reflections and Implications

As my journey as a researcher was coming to an end, I took the time to reflect upon my growth as an educator and as a researcher. I started this research study in search of ways that some ESL teachers use technology in their classrooms. At the end of my study, I reflected on the importance of the use of technology with ELLs.

Through the course of my research, it became evident that the use of technology can bring a series of benefits to ELLs. Technology is just a tool, but if used appropriately, it can bring so many benefits to ELLs, as mentioned by my participants, as well as to all students. Technology is a resource to be used by the students as they solve problems, seek information and understanding, and find ways to apply what they have learned in ways that are both personally and socially meaningful. In addition, I realized that technology should not change teaching methods, but its inclusion should enhance and improve students' learning.

As seen in my literature review, one fifth of Canada's population speaks a language other than English. More than half of Ontario's English-language elementary schools (60%) and secondary schools (54%) have ELL students; in the Greater Toronto Area, the figure increases to 85% in elementary schools (People for Education, 2012). With a 30-40% student dropout rate and funds from the Ontario Ministry of Education being used to cover other gaps, it is my responsibility, as it is other educators', to use the resources available to

help ELLs in the classroom. In this way, the Ontario school boards will be putting to full use the funds they receive from the provincial government to meet the needs of ELLs.

As seen through my research study, not all schools have enough ESL teachers to support these students. In fact, most of ELLs in elementary schools learn in a regular classroom. As educators, we have to ensure that all ELLs have the resources they need in order to succeed in their school life. The fact that it was very hard to find a participant in an Ontario school board using technology on a regular basis to help their ELLs tells me that not many teachers are approaching technology the way they should. I believe that it might be because some teachers do not have enough knowledge themselves to use technology, or because they do not see it as a tool to enhance learning, or because they simply refuse to use it. According to *Study: Teachers love edtech, they just don't use it* (Lepi, 2013), teachers and administrators agree that the biggest challenges to integrating technology in the classroom are lack of funds, lack of time to implement, lack of trained appropriate staff, lack of training for teachers on how to use and implement, and insufficient technology infrastructure in the classroom. I believe some ELLs are really falling behind in their academics, as does Cook, a fifth grade teacher in Texas who thinks students with no access to up-to date computers at home would fall behind academically

(http://definetheline.ca/dtl/wcontent/uploads/2013/03/Technology_in_the_classroom.pdf, n.d.).

The implications of using or not using technology in the classroom with English Language Learners need to be analyzed. I believe technology is an excellent resource for giving students the chance to practice English skills without worrying about the response of other classmates, or even the teacher.

Something I learned as an educator and researcher while interviewing my participants is that, although just another tool to enhance learning, technology needs to be

taught in order to be effective and used efficiently in the classroom. In order to use technology on an ongoing basis, it is important for teachers to become familiar with your students' familiarity with technology. We cannot assume that students will automatically know how to make a PowerPoint, a podcast or a website, although they may know how to text friends or surf the web.

Choosing the correct technology to be used in a lesson must depend on the stage at which students are assessed. Anna, my first participant and grade 1/2 teacher, uses software or apps for ELLs at stage one that support text with images such as photos, graphs, or charts since this technology links text with its visual representation. Similarly, Mia, my second participant, also uses software or apps according to the stage of her students, K-8 grades.

Through my research, I learned that one of the biggest challenges of technology integration into classroom tasks is the role of the teacher. As seen in my literature review, the constant use of technology in the classroom shifts from a teacher-centered classroom to a more student-centered classroom (Erben et al., 2009). I now can see the relationship between student-centered teaching and the constructivist model in which students construct rather than receive or assimilate knowledge. I believe that the more students build their own schema by experimenting, the more likely they will retain information.

Using technology in the classroom may also bring some challenges to teachers. Technical difficulties, learning to use the technology properly, off-task behavior of the students, among others, can just frustrate teachers. If we, educators, plan ahead and check the technology (hardware and software) first before using it in the classroom, we can avoid those frustrations and be more confident in the use of it.

Limitations

I have gained different insights through my research journey that have helped me reach a better understanding of me as an educator and researcher. I intend to use these insights to help me become a better educator in the future. The goal of my research was not only to recognize technology as a proper tool to help ELLs in their learning process or to list all different technologies teachers use in their classrooms to help their ELLs, but also to find out how ESL teachers are using technology to enhance their students' learning, as well as explain some pros and cons that the use of technology may bring. Although I tried to explain what some teachers are doing to help their ELLs, there are some limitations to my research study.

As stated in Chapter 3, limitations of the study include time constraints, amount of research available, access to technology, and interview questions and researcher bias. My research was conducted over a period of two years, but, given the fact that interviews were done during the second year, time became a limitation. It would have been beneficial to have interviewed more than two participants, which is what I initially thought to do, but finding the right participants became a hard task to do, especially within my limited time span.

Another big limitation I found was the amount of research available. A significant base of research, developed over many years, is available to inform educators about effective approaches to teaching ELLs. However, there is not much research conducted in the use of technology in the classroom in relation to ELLs. Most of the information I found was from teachers' experiences from blogs, newspapers articles, and websites while little information came from research done with ELLs.

Another limitation I can see, not on my research study, but on the use of technology with ELLs is the access to technology. My first participant, Anna, worked in a school with

cutting edge technology, while Mia, my second participant, works in a board with a lot of funding towards technology; however, I have experienced firsthand the lack of technology in some other boards and schools.

My final limitation of this study is the way in which the data was analyzed and interpreted by the researcher. As individuals, we each have different values, beliefs, biases, assumptions and experiences, which make the researcher, analyze the data in a subjective way. Moreover, I as the researcher approached this study with a firm belief that technology holds many benefits to improve the skills of ELLs.

Further Study

Although four themes emerged from my interviews and gave me different insights about the use of technology with ELLs, more research is needed. One theme I believe that requires further research is on methods and strategies used with ELLs in the classroom. Although I tried hard to find research on how technology improves the reading, writing, and speaking skills of ELLs, little information was found. According to the *New Millennium Research for Educational Technology* (2003), although it is a bit dated, it indicates that “increasing costs of maintaining technology infrastructure and evidence of low use of technology by teachers has generated an urgency for research to help provide a rationale for specific uses of technology to support teaching and learning” (p. 2).

Another theme I would like to explore is the perception of teachers, students, and parents in the role technology plays in helping ELLs. Although both of my participants feel strongly about the use of technology with ELLs, it would be interesting to research some of the perceptions other teachers have about the use of technology and the reasons for or against including it in their teaching. In addition, it would be beneficial to hear from student

ELLs in different stages of language development; that is, how they feel about the use of technology in their classrooms and at home.

Summary

I would like to end this research study with a few quotes that resonate with me in relation to this study. These are: “Tell me, I’ll forget. Show me, I’ll remember. Involve me, I’ll understand” (Chinese proverb), and similarly but in relation to technology and this study, “Differentially instruct me, I’ll internalize. Use technology with me, I’ll participate, I’ll transfer, I’ll employ and I’ll create” (Erben et al., 2009, p. 65).

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APPENDICES

Appendix A: Interview Questions

Hi, my name is Maria Andrade and I am a Master of Teaching candidate at the University of Toronto. First of all I want to say thank you for participating in my research study and taking the time for this interview. The information collected in this interview will contribute to my Master of Teaching Research paper, which is a requirement towards completion of my degree.

I would like you to know that all information said here either by me or by you will be kept confidential and I will be the only one with access to it. We are going to talk about how technology can support English Language Learners (ELLs). I am basically interested in knowing the methods or strategies you use in your classroom to support ELLs as well as the technological tools you use to support them as well. I will use all your responses to analyze my research question and support my thesis. I want you to feel comfortable. At any time if you have a question please let me know so I can give you a proper answer. In addition, I want you to know that there are no right or wrong answers. If you don't feel comfortable answering a specific question, please feel free to let me know and we will go to the next question. If you need clarification at any point I will happily do it. The interview will be recorded; do you agree with it? If so, I would ask you to please speak clearly and slowly so it is easier for me to go through your responses later on. I have a set of 15 questions that I would like to ask you and the interview will take approximately 30 minutes to one hour. Before we start do you have any questions for me?

1. How many years have you been teaching?
2. What grades have you taught?
3. What is your teaching philosophy?
4. How many years have you been teaching English as a Second Language?
5. What is your teaching philosophy in regards to ELLs?
6. Do you use a specific program designed for ELLs?
7. What methods or strategies do you have in place to help your ELLs?
8. What strategies do you use to include ELLs in the regular classroom?
9. What type of technology do you use in the classroom to support your ELLs?
10. In a typical day, how often do you use technology with your ELLs?
11. What is the reaction of your ELL's towards using technology during their learning process?
12. What challenges do you have in using technology in your classroom with your ELLs?
13. What feedback, if any, have you had from parents when you use technology during their learning process?

14. What other strategies and/or tools do you think might be beneficial to use with your ELLs?
15. How do you think technology would help in a regular classroom with 20-30 students and a few ELLs?
16. Do you think it is a good tool to keep your ELLs engaged while working independently? Please explain.
17. What advice do you have for using technology with the ELLs?

Appendix B: 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 researching The Use of Technology with ELLs for the purposes of a graduate 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 process this year is Dr. Susan Schwartz. My research supervisor was originally Dr. Kim MacKinnon, and is currently Dr. Susan Schwartz. The purpose of this requirement is to allow us to become familiar with a variety of ways to do research. My 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 assignment, which will include a final paper, as well as informal presentations to my classmates and/or potentially at a 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: Maria Andrade
 Phone number, email: lourdes.andrade@mail.utoronto.ca

Instructor/Research Supervisor's Name: Dr. Susan Schwartz
 Email: Susan.schwartz@utoronto.ca



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: _____