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Finding the Right Fit: Exploring ESL Teachers and Students' Perceptions of iLit ELL, a Technology-based Literacy Program's Use with High School English Language Learners

By

Sara Shahbazi

A Dissertation
Submitted to the Faculty of Graduate Studies
through the Faculty of Education
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy
at the University of Windsor

Windsor, Ontario, Canada

2019

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Finding the Right Fit: Exploring ESL Teachers and Students' Perceptions of iLit ELL, a Technology-based Literacy Program's Use with High School English Language Learners

by

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DECLARATION OF ORIGINALITY

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ABSTRACT

The purpose of this interpretative phenomenological study was to explore the lived experiences ESL secondary teachers and their perceptions towards the use, effects and integration of iLit ELL, a technology-based language program designed for English Language Learners, as well as, the perceived effects the program had on students' motivation and attitudes towards learning English. Data were collected using teacher interviews, student focus groups and final reflections, as well as my observations and field notes. The collected data were analyzed through the steps of Interpretive Phenomenological Analysis (IPA) to broaden the breadth and depth of the content and complexity of each narrative independently. Data were then compared across individual experiences and interpreted in a dynamic and active process, that involved double hermeneutics, which focuses on two interpretations: first, the participants' interpretations of their own experience, followed by the researcher's interpretation of the participants' interpretations (Smith, Flowers & Larkin, 2009).

Based on the data collected over the course of the study, major findings indicated that technology integration is affected by teachers' adaptability to change; teacher mindset effects teachers' acceptance, integration and effective use of technology; when applied purposefully, technology and differentiated instruction increases student motivation and teachers' efficiency; and, technology with embedded scaffolds can enhance student autonomy and motivate student learning. From the emerging themes, the following recommendations are suggested for stakeholders and future research: differentiated professional development for teachers; applying consistent school and system-wide supports and beliefs on technology; adopting a universal designs method to teaching; further exploring teacher perceived efficacy and actual performance of technology integration; and a comparative study exploring best instructional models.

DEDICATION

To my parents, husband, and Geri, thank you.

"In your light I learn how to love. In your beauty, how to make poems. You dance inside my chest where no-one sees you, but sometimes I do, and that sight becomes this art." - Rumi

ACKNOWLEDGEMENTS

To **Dr. Salinitri,** you are my mentor, my driving force, and the flame that lights my path. Thank you for always believing in me, for seeing me in ways I have never seen myself, and for guiding me from the very beginning.

"The best kind of people are the ones who come into your life and make you see the sun where you once saw clouds. The people that believe in you so much, you start to believe in you too. The people that love you, simply for being you. The once in a lifetime kind of people." – Kate Lettey

To **Dr. Smith, Dr. Gallagher, and Dr. Rossini**, thank you for guiding me passionately through this process and for never letting me lose myself.

"The delicate balance of mentoring someone is not creating them in your own image,but giving them the opportunity to create themselves."- Steven Spielberg

To **my students, past and present**, thank you for sharing your stories, for continuously inspiring me, and for being the reasons why I love what I do.

"Put your hand on your heart, the old man said. Inside you, there is power, there are ideas and thoughts that no one has ever thought of, there is the strength to love purely and intensely, and to have someone love you back, there is power to make people happy, and to make people laugh, and to fall in love, to change lives and futures – don't' forget that power, and don't ever give up on it." – Atticus

To **my family**, thank you for your endless support and love. I love you.

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LIST OF ABBREVIATIONS

Term	Key Content	Sources
I Inspire Literacy ELL (iLit ELL)	• A digital application-based program designed by Pearson for English language learners. • Created and built to engage and enhance students' language, reading, writing, listening and speaking • Equipped with embedded lessons, units, teacher scripts, assessments, student scaffolded supports and immediate feedback	Pearson (2019)
English Language Learner (ELL)	• Students in English-language schools • First language is not English or is a variety that differs significantly from the variety used in Ontario's schools • May initially require educational interventions to attain proficiency, possess a variety of needs • Canadian born, newly arrived, international or students with limited to no prior schooling • Diverse backgrounds and school experience	Ontario Ministry of Education (2007)
English Literacy Development (ELD)	• Students with limited to no prior schooling • Significant gaps in education • Limited age-appropriate literacy skills in first language	Ontario Ministry of Education (2007)
English as a Second Language (ESL)	• Originally referred to non-native speakers who were learning the English language in an English language schooling environment • Often used to refer to the acquisition of English as a non-native language • Term is broadly and widely used, internationally	Ontario Ministry of Education (2007)
Sheltered Instruction Observation Protocol (SIOP)	• A research-based instructional model for English language learners • Built on eight components: lesson preparation, building background, comprehensive input, strategies, interaction, practice/application, lesson delivery, review and assessment • Designed to meet the academic and language needs of students	Echevarria,Vogt & Short (2018)

CHAPTER 1
INTRODUCTION

The purpose of this research was to explore secondary teachers' perceptions of iLit ELL, a technological resource and program designed for English Language Learners (ELL), as well as the perceived effects the application had on students' motivation and attitudes towards learning English. As one of the fastest-growing populations in the Canadian education system, English Language Learners face challenges in receiving language instruction that is specific to their learning needs and individual interests (Martinez, 2011). Many of these challenges are related to the increasing gap between the students' ages and proficiency stage in the English as a Second Language classroom, as well as teachers' concerns regarding limited supports and access to developmentally appropriate and culturally responsive resources (Markham, Green, & Ross, 1996; Tellez & Manthey, 2015; Wang, Many, & Krumenaker, 2008).

Currently, the *English Language Learners/ESL and ELD Programs and Services* (2007), state that Ontario school boards are responsible for designing programs and services that are flexible and reflective of the English Language Learners' needs. Although there are short-term literacy intervention programs available for elementary students, such as Lexia and Leveled Language Intervention, these programs are specific to the development of native English speakers' reading and writing skills. Consequently, there are no specialized ELL literacy programs or content material that are commonly used or mandated within the secondary system in Ontario (GECDSB, personal communication, November 15, 2018).

English Second Language teachers who work at the secondary level must search for supplemental readings and materials that are academically, socially, culturally, and developmentally appropriate, as they work towards meeting the curriculum requirements. As an

English Second Language Coach, I have observed and experienced the challenges faced by educators and adolescent students regarding meaningful, relevant, and age-appropriate programming, resources, and content. Researchers have also noted that instructional gaps related to learner specific programs, content, and materials lower ELLs' motivation and attitudes towards learning the target language (Pawan & Craig, 2011). As a result, students create meaning from these favourable or unfavourable experiences, which can either positively or negatively affect their attitude and motivation to learn (Sayadian & Lashkarian, 2015).

Implementing effective supports that build, enhance, and maintain student achievement and motivation towards learning is critical. Researchers have indicated that ELLs have a higher dropout rate in high school and attend post-secondary education in fewer numbers than their native-English speaking peers (Corak, 2012; Ladner & Lips, 2009; Subedi & Howard, 2013). Within Canada, high school dropout rates among immigrant students increase by 1.2% for each year that a male arrives in the country after the age of eight, and by 1.5% each year for females after the age of seven (Corak, 2012). Sadly, the severity of this matter is met with a stark reality, as the 2016 Canadian Census indicated more than 38% (2.5 million) of immigrants who entered Canada were between the ages of 5 to 24 (Statistics Canada, 2017).

As a result, teachers are at the core of implementing effective programs and learning environments that motivate, engage and support ELLs with the necessary tools and strategies to close the achievement gap (Turkan & Buzick, 2016). Engagement is among the most significant elements that sustain and inspires students to focus, make connections, and continue to develop language and content knowledge (Hattie, 2008; Reinders & Wattana, 2015). To help reduce the achievement gap, researchers suggest the integration of technology (Richards, 2015; Toohey, Dagenais, Fodor, Hof, Nunez, Singh, & Schulze, 2015). The purposeful integration of

technology in the classroom, specifically, devices and applications that address and produce individualized learning and feedback, can increase student attitudes and provide opportunities for learning that meet students' interests and developmental stage (Hattie, 2008; Keengwe & Hussein, 2014; van Olphen, Hofer, & Harris, 2012).

Personal Grounding

In 2016, I began working as an English Second Language Coach. It was during my work as an ESL Coach that I noticed the challenges faced by educators regarding programming, resources, and content for intermediate students. There was an abundance of existing resources to be used by primary and junior ELL students; however, these same resources were expected to be used with thirteen and fourteen-year-olds.

Although these young teens had limited experiences with schooling, their life experiences before coming to Canada had exceeded their native-born peers. My students worked, put food on the table for their families, drove vehicles, and watched a war unfold in front of them all before the age of twelve. Now, they were placed in a classroom learning to read using a book with large font, and animated pictures of a boy named Jack and his dog, Ben.

During my Directed Study course, I was motivated by the lack of adequate, standardized resources for English Language Learners in Ontario; I searched for programs that would meet the cultural, individual, and academic needs of the student population and provide a comprehensive program that teachers could use with students at all levels. Unable to find an existing application in the Canadian market that related to the districts' population and my understanding of ELL student and teacher demands, I expanded my search beyond Canada and found iLit ELL, an interactive literacy program, specifically designed to support ELLs' language development, academic discourse, and independent reading comprehension.

iLit ELL, which is accessed using a tablet or computer, has proven to be successful in the United States but had yet to be tested in Canada (Pearson, 2015). The iLit ELL program incorporates the Sheltered Instruction Observation Protocol (SIOP) model. The SIOP model is an instructional tool designed to build meaning and understanding for English language learners across all content areas and aligned to English Language Development Standards (Echevarria, Short, & Vogt, 2018). It exposes ELLs to new material and concepts that are comprehensible and relatable while building on their academic language, reading, writing, and listening skills (Kareva & Echevarria, 2013).

The model used in iLit ELL also incorporates explicit instruction and builds upon students' prior knowledge. Research has indicated that explicit instruction, as well as scaffolding, improves ELLs' frequency of new words, mainly when learned within a meaningful context (Beck, McKeowen, & Kucan, 2002; Carlo, August, McLaughlin, Snow, Dressler, & Lipman, 2004). Explicit instruction has also been found to be effective for learners with little exposure to learning strategies (Ardasheva & Tretter, 2012). Moreover, the use of scaffolding allows ELLs to master and continuously build upon skills (Kareva & Echevarria, 2013). This form of support exposes students to a gradual release of responsibility and enhances their independent learning skills and attitude towards learning (Nguyen & Watanabe, 2013).

After researching the success of the program and discussing its functions with other ELL educators, I contacted Pearson United States and proposed piloting iLit ELL in Canada. The configuration process lasted over several months, where I remained in constant contact via email and telephone with the lead representative. In time, I was granted iLit ELL licensing for over 200 students and became the first to implement the program in Canada.

As part of my Directed Study, I completed a multiple case study and explored iLit ELL's effects on student language proficiency and language development in English Second Language classrooms, from the perspective of teachers. The study took place across three elementary schools in Southwestern, Ontario. The participants of the study included four elementary teachers and sixty-three elementary students. Most students were identified as English Language Development (ELD) learners. English Language Development students have gaps in their education and limited literacy skills in their first language.

Data were collected using multiple sources, including grades from a diagnostic, teacher documentation, teacher focus groups, and direct student observation. Each month students were administered an online diagnostic test. In total, there were five tests delivered: a beginning of year diagnostic assessment; three progress monitors; and an end-of-year diagnostic. Each assessment produced scores for the students' overall language proficiency, as well as individual marks for listening, speaking, reading, and writing. The teachers in the focus group prioritized the strengths, challenges, and experiences with iLit ELL while observing students as they navigated through the language intervention program.

During analysis, qualitative data was completed inductively, while quantitative results were analyzed using SPSS. Overall, the teachers who participated in the study shared mixed reviews of the intervention program. Although the teachers saw the benefits the program offered (e.g., increased motivation towards independent reading, building work independence and initiative), many of the teachers struggled to incorporate the program into their daily lessons in ways that met their student populations' needs. When modifications were successfully applied, the teachers witnessed the positive effects (e.g., increase in student engagement, interest in learning the English language, work independence, and an increase in focus). Although the

participants recognized the success that was associated with adapting the content, taking the time to modify iLit ELL to meet the teacher's existing program and goals was a drawback for most.

Despite the successes shared in the focus group, the results from the diagnostic indicated that the intervention program had no statistically significant impact over traditional ELL teaching. Limitations were considered, particularly with the diagnostic, including technical difficulties, interferences, inability to have the questions repeated, as well as assessing students on content that had not been taught during the intervention program. In all, the teacher participants believed that the program had the potential to thrive if it were placed in an environment with ELLs with higher English proficiency and greater exposure to formal education, particularly within the secondary system.

Once completed, I reflected on my pilot study and realized the necessary direction of my current research. From the feedback, I decided not to use the online diagnostic system as it placed much stress on teachers and students and did not measure student achievement in relation to what they were learning in the program. Additionally, the intervention program did not meet the learning needs of the population group. The content, assignments, and reading levels were beyond their abilities, making it difficult for teachers to use the program without modifications. These challenges, as well as the teachers' recommendations, drove my decision to use the program at the secondary level, with students with greater exposure to formal education.

Significance of the Study

Although iLit ELL has proven to be successful in the United States as a platform for English language learning in secondary schools, researchers warn that teachers' beliefs and attitudes towards implementing new technology and programs, as well as their level of commitment, can impede on the program's success, use and sustainability (Ertmer, Ottenbreit-

Leftwich, Sadik, Sendurur, & Sendurur, 2012; Lee, Longhurst, & Campbell, 2017; Pearson, 2015). While I understand the weight of teacher receptiveness in implementing change and technology, my experience with educators, as well as the findings from my Directed Study, echo similar concerns in research regarding teacher stress and discomfort in the limited availability of supports and resources for ELL students (Barr, Eslami, Joshi, Slattery, & Hammer, 2016; Okhee, Llosa, Jiang, Haas, O'Connor, & Van Booven, 2016).

As a result, I explored ESL teachers' perceptions and use of iLit ELL in two school districts within the Southwestern Ontario region, as well as the perceived effects the application had on student motivation and attitudes towards learning English. I hope that the data provided by the study will aid school districts in addressing teachers' and students' resource concerns and further develop an understanding of the supports needed to see new initiatives succeed and resources utilized in ESL classrooms. Additionally, the results of the study may assist districts with configuring budgeting concerns, particularly with professional development, and the purchasing of technology, applications and program licenses.

Theoretical Lens

I have approached my research using a social constructivist lens, as it aligns with my value in, and recognition of, multiple realities (Vygotsky, 1978). The social constructivist framework honours the multiple, varied, and complex meanings of a participant's experiences. As Sultan (2018) explains, such implications are socially, internally, and culturally constructed by the participant and revealed through the researcher's broad and open-ended questions.

More importantly, the social constructivist worldview emphasizes the significance of the researcher's positionality and how it affects the interpretation of the data. Meaning is then created from the researcher's interpretation of the participant's shared experiences, coupled with

their interactions in and with the world. The emphasis on interpretation in social constructivism is why I have grounded my methodology in Interpretive Phenomenological Analysis (IPA). IPA is concerned with the exploration of the personal lived experiences, where both the participant and researcher engage in an interpretive process. More importantly, Eatough and Smith (2008) emphasize IPA as a framework with an "explicit commitment to understanding the phenomenon of interest from a first-person perspective and its belief in the value of subjective knowledge for psychological understanding" (p.1).

Thereby, I have used my personal and professional experience as an ESL coach for intermediate English Language Learners to explore, interpret and understand how prior experiences with, and attitudes towards change and the use of technology, may affect the use and integration of the iLit ELL program, as well as students' motivation towards learning English.

Research Questions

Smith, Flowers, and Larkin (2009) describe IPA as an appropriate method when "one is trying to find out how individuals are perceiving the particular situation they are facing, how they are making sense of their personal and social world" (p.54), specifically within novel or complex situations. To understand how participants create meaning from their experiences, researchers must reject the notion of a hypothesis, and instead, construct broad and open questions that are designed to explore the phenomenon (Pietkiewicz & Smith, 2014).

Research questions may also develop from previous pilot studies, allowing the researcher to narrow the direction and questions to discover. Blessing and Chakrabarti (2009) explain that the goal of a pilot study is to uncover the potential problems that affect the quality and validity of the data while informing the researcher of the necessary changes needed to improve the efficiency and effectiveness of the study. The knowledge I attained in my pilot study broadened

my understanding of how teachers' attitudes and experiences with technology can hinder or promote the full implementation and success of a program.

As a result, the pilot study I conducted during my Directed Study, as well as my professional experiences, has granted me preliminary results to formulate my final research questions:

1. What are teachers' perceptions of iLit ELL as a technological resource and program for ELL students?
2. How do teachers perceive iLit ELL to effect students' motivation and attitudes towards learning English?
3. What are teachers' perceived level of comfort in introducing new technology in their classroom programming?
4. How do students perceive iLit ELL as a tool for learning English?

CHAPTER 2

REVIEW OF LITERATURE

The purpose of this research was to explore secondary ESL teachers' perceptions of iLit ELL, a technological application-based resource, and the perceived effects the program had on students' motivation and attitudes towards learning English. The following chapter provides a review of literature categorizes into themes related to the purpose of this study: teachers and technology integration; technology models and English Language Learners; and learners' attitudes and motivation.

Teachers and Technology Integration

Technology integration. Technology integration is defined as the fusion between the curriculum and the use of technology, where technology acts as an instrument to optimize student learning of content (Labbo, Place, & Soares, 2010). Recent studies emphasize the need for effective and quality-rich technology integration with ELLs, describing it as an approach to prepare 21st-century learners for the technology-driven world and an opportunity for educators to close the achievement gap among learners (Brown, 2016; Jacobs, 2010; Keengwe & Hussein, 2012). As a result, the teacher plays a critical role in facilitating effective and meaningful integration of technology, which mirrors the curriculum and learning needs of the students (Debele & Plevyak, 2012; Dunbar, 2016).

While technology integration has been found to affect student learning positively, factors continue to hinder teachers' effective implementation. Hew and Brush (2007) examined the barriers of technology integration by analyzing empirical research findings from 1995 to 2006 in K-12 schools. Based on their results, six main challenges emerged: access to technology resources, and the availability of time and technical support; teacher knowledge and skills

related to technology, pedagogy and classroom management; institutional barriers of leadership, scheduling and limited school-wide planning with technology; teacher attitudes and beliefs of technology; pressures of assessment impeding on technology integration; and hesitancy to disrupt subject and teaching norms.

The barriers identified by Hew and Brush (2007) are predictors of the effectiveness and application of technology integration. However, to overcome the barriers associated with technology integration, Hew and Brush (2007) suggest a series of strategies for teachers and schools to adopt. The recommended strategies are categorized to facilitate the effective implementation of technology into the curriculum. The first proposed strategy is the incorporation of a school-wide vision and plan for integrating technology. The purpose of devising a vision and plan is to overcome leadership barriers, increase communication across staff, and collaboratively build connections across curriculum content and technology. To address concerns of limited resources and technical support, Hew and Brush (2007) recommend dispersing technological resources across the school to increase access and to train students to fix simple technical errors. Thirdly, it is recommended that schools provide professional development to enhance teachers' attitudes and beliefs towards technology and to prepare them with the knowledge and skill to integrate and sustain the use of technology in the classroom. Lastly, teachers are advised to take the time to consider the purpose and connections between the selected technology and curriculum demands to facilitate meaningful assessment.

Change and Technology Integration. Teachers 'attitudes towards change are central to the integration of technology. Ertmer and Ottenbreit-Leftwich (2010) argue that technology integration requires a degree of change from teachers towards their beliefs, attitudes or pedagogy, content knowledge, strategies and methods, and new or adapted resources, or

materials. As teachers undergo this shift with technology integration, they are advised to understand and accept their role and identity as the agents of change, rather than the mobile application or the technological device (Blachowicz & Fisher, 2006). The emphasis on recognizing teachers as agents of change is critical with implementing technology, as it supports instruction and is not a replacement (Brown, 2016; Keengwe & Hussein, 2014).

Unlike curriculum, technology continuously evolves and undergoes constant change. Although teachers are typically hesitant to adopt curricular or instructional nuances, their acceptance of technology is met with even more considerable apprehension (Ponticell, 2003; Straub, 2009). Teachers' trepidations regarding the acceptance and integration of technology are heavily influenced by the teachers' knowledge, self-efficacy and existing beliefs (Ertmer, 2005; Hew & Brush, 2007; Lawlesss & Pellegrino, 2007).

The integration of technology is a process of change, but to experience integration, teachers must know about technology (Lawless & Pellegrino, 2007). Knowledge of technology is understanding and knowing how to access, present and use technology in the classroom; however, effective technological integration moves beyond knowing how to apply technology and includes developing teachers' existing knowledge of pedagogy, planning, implementation and assessment to meet curriculum and the learners' needs (Coppola, 2004). To attain effective integration of technology, teachers are advised to select and identify technological tools that align with the program and learning goals, encourage their students to apply the appropriate technology in all aspects of learning and to engage in opportunities to build self-efficacy (Cennamo, Ross, & Ertmer, 2010).

Self-efficacy is an individual's belief in his or her capacity to perform or achieve a task or outcome (Bandura, 1977). Within education, self-efficacy is often studied in the context of

teachers' accomplishments, experiences, and performances (Howardson & Behrend, 2015; Pan & Franklin, 2011). When implementing technology, researchers have found a significant correlation between teacher self-efficacy and the integration of tech (Li, Worch, Zhou, & Aguiton, 2015). To enhance teacher self-efficacy, researchers suggest immersing teachers in meaningful and successful personal experiences, vicarious experiences that showcase the benefits of integration, collaboration with colleagues, and participation in relevant professional development (Cole, Simkins, & Penuel, 2002; Mueller, Wood, Willoughby, Ross, & Specht, 2008). However, self-efficacy alone does not secure the integration of technology; it requires teachers to value the device or application as an instructional tool (Wozney, Venkatesh, & Abrami, 2006).

Teachers' beliefs about technology effects the frequency and effectiveness of technology integration (Angers & Machtmes, 2005; Hermans, Tondeur, van Braak, & Valcke, 2008). Researchers have indicated teachers with traditional beliefs are more likely to integrate simple technology on a sporadic or inconsistent basis, whereas teachers with constructivist beliefs, utilize and regularly integrate more advanced and student-centered forms of technology (Judson, 2006; Roehrig, Kruse, & Kern, 2007). Moreover, teachers' beliefs regarding the value of the technological tool equally affect its integration. Value beliefs are influenced by teachers' perceptions and views of the instructional tool and its effect on reaching instructional, curriculum, and student learning goals. Thus, the higher the perceived value, the more likely the teacher is to integrate technology within their existing practice (Watson, 2006).

Teacher professional development in technology. To effectively implement technology in English language classrooms, Murray (2005) suggests that teachers continuously extend their learning and application through professional development. Ongoing professional

development enhances teacher understanding of technology, but also exposes teachers to new avenues that promote student interaction, enhance curriculum, and improve the quality of students' educational experiences (Hoffman & Johnson, 2005).

Teachers' effective use of technology is also enhanced when they can observe the benefits of using technology as a teaching tool (Chen, 2008). Teachers who partake in professional development, which incorporates observational periods, are more likely to apply and incorporate the approaches they observed into their classrooms (Chen, 2008). Exposure and participation in professional development allow teachers to maximize the use of technology (Yunus, 2007; Fook, 2011). Additionally, such engagements provide teachers with new experiences to reflect on and motivate them to monitor their teaching (Pollard, 2002).

Coleman, Gibson, Cotton, Howell-Moroney, and Stringer (2016) looked at the relationship between computer-integration, internal barriers, and professional development. Findings from the study indicated that intensive computer program training had a positive effect on computer integration. However, the researchers also noted that teachers' who attended professional development sessions in the summer were more prepared to integrate technology than their in-school serviced colleagues. The observed difference was affected by time, as teachers who received in-service programming had to simultaneously balance the stressors and responsibilities of work, whereas, the teachers in the summer program did not.

Teacher professional development also enhances self-efficacy. Teachers' self-efficacy regarding technology is linked to their confidence and attitude towards using such tools in the classroom. Yuen and Ma (2008) stress the importance of raising teachers' levels of confidence in applying and using technology. However, at the same time, teachers should also be given opportunities to see the potential of technology and the useful purposes it can serve (Hayward &

Tuzi, 2003). In developing their self-efficacy, teachers can begin to see themselves as operators and leaders of technology. Meskill (2007) argues that instead of feeling unskilled or second-to technology, teachers "should feel empowered by the fact that...without mediation by smart teachers, the machine's role is very limited" (p. 430).

In addition to receiving training, teachers are encouraged to consider the significance of implementing technology in a meaningful and effective manner. Emphasis on understanding how programs can be applied is related to the common misconception that computer-assisted technology is a replacement for teacher tools, resources, and instruction (Bax, 2003). This misunderstanding often leads teachers who have technology at their disposal to neglect the critical factors of teacher training and pedagogical fluidity when incorporating technology into their program. To mitigate these common oversights, researchers recommend that teachers understand their role in implementation; plan and determine how the technology will be used; assess its effectiveness with students; and, evaluate its developmental appropriateness (Cullen, 2002; Hew & Brush, 2007). Additionally, teachers are advised to be reflective in their practice and to consider their attitudes and perspectives towards the use of technology before its implementation (Bax, 2003).

Teacher attitudes and views on technology in the classroom. Researchers have indicated that teacher's attitudes or concerns towards technology influence the success and rate of technology integration into the classroom (Liu, Theodore & Lavelle, 2004). The success of technology integration is often related to the teachers' level of confidence, which can either hinder or promote its implementation into daily lessons and activities (Atkins & Vasu, 2000). Thus, teachers who possess positive attitudes and high levels of confidence in technology integration have been found to improve student achievement (Casey & Rakes, 2002).

Ertmer et al. (2012) explored the relationship between teachers' technology practice and personal beliefs. Results from the study indicated that the most significant indicators of technology integration and success were teachers' personal beliefs and attitudes. Teacher competency was linked to internal factors, such as a passion for technology and adopting a problem-solving approach, as well as colleague and administrative support and training. Teachers' greatest obstacle in incorporating and utilizing technology was their current attitudes and beliefs, paired with, their degree of knowledge and skill.

More specifically, other studies have noted that various external, environmental or teacher-related factors have a strong correlation to whether Computer Assisted Language Learning programs are used effectively in language classrooms (Atkins & Vasu, 2000; Egbert, Paulus, & Nakamichi, 2002; Shin & Son, 2007). Such factors include teacher pedagogical beliefs and attitudes, limited teacher training, school board financial constraints with tech, support, resources, and time, as well as having minimal numbers of available technology.

An additional factor that affects teachers' attitudes and views of the use of technology is their level of familiarity with using technology in their practice. Smith (2009) argues that familiarity with technology is often a result of being a "digital immigrant" in the twenty-first century. A digital immigrant is defined as "someone not born in the digital age, not weaned on the multimodalities of computers, video games, and mp3 players" (Smith, 2009, p.75). Such educators often struggle to understand the purpose, application, and integration of technology in their programming. When teachers do not take a proactive approach to enhance their learning and understanding, they hinder students' exposure to effective information technologies, but more importantly, they model an attitude that separates technology from education (Smith, 2009).

Cummins, Brown, and Sayers (2007) argued that teachers often fail to recognize the educational possibilities of technology due to the pedagogy of the classroom. When a classroom is managed in a structured and rigid environment, then teachers' use of technology becomes reflective of that practice. Additionally, teachers' perceptions of ESL students' capabilities with technology also affect the incorporation of technology in the classroom. Cummins et al., (2007) explain this further stating,

> ...Consequently, the potential power of technology is only rarely and minimally harnessed in these school contexts...the ways in which technology is likely to be used in any school context are intimately connected to the pedagogical orientations operating in the school and the associated image of the student that is constructed in these pedagogical interactions. (p. 91)

As a result, the implementation of technology is highly dependent on the teachers' beliefs, practice and views of the curriculum, program and their students, which affects teachers' willingness to integrate technology to enrich the educational experience.

Teachers' challenges with technology. A complex feature of education is the challenge of creating and implementing classroom strategies and activities' that promote, motivate, and sustain engaged learners (Hadfield & Dörnyei, 2013). To address the effects of attitude and motivation, researchers recommend that educators and curriculum developers consider incorporating up-to-date materials and supplementary resources that are relevant and of interest to the student learners, as well as implementing a curriculum that is meaningful and relatable (Abidin, Pour-Mohammadi, & Alzwari, 201**2**). Incorporating such materials provides students with the opportunity to develop the more profound meaning of the English language, mainly

when instruction is presented in ways that are related to the student's cultural context (Rhodes, Ochoa & Oritzs, 2005).

Additionally, Baecher, Artigliere, Patterson, and Spatzer (2012) suggest that educators become aware of their students' English language strengths and challenges; make learning achievable; provide choice; encourage students to experience the same content objective with differentiated language objectives; and, be aware of students' cognitive complexity and its relationship with language proficiency. In providing language instruction that is explicit to a specific area of language development and differentiated to meet the learners' needs, educators can promote the enhancement of ELLs' language proficiency, application, and awareness.

Teacher application of technology. An additional factor that aids the instruction of ELLs is consistency among programs. Boards or districts which adopt similar software or technology provide consistency and allow students to build their confidence as they transition into new classrooms, grades, and schools (Calderon, Sanchez, & Salvin, 2011). Calderon et al. (2011) argued that continuity in program software is possible through teacher professional development across departments. Successful professional development would discuss and consider the planning process and how technology would be incorporated in the classroom. Additionally, in creating school-wide and board-wide cohesion, districts can raise teachers' awareness of new programs, applications, and effective software that supports the instruction and learning of ELLs (Calderon et al., 2011).

Nonetheless, even if boards and schools are consistent with technology training and software, the personal values and beliefs of teachers may regulate the frequency and effective use of the programs in place (Hur, Shannon, & Wolf, 2016). Factors that affect teachers' perceptions of the value and functionality of implemented software include teachers' levels of

comfort with technology, professional development opportunities, and exposure to exploring and extending their knowledge and understanding (Calderon et al., 2011). As a result, teacher uncertainty of software and technology use and the potential of its effectiveness can prompt teachers to turn to other instructional methods and resources (Thomas, Reyes & Blumling, 2014). Such actions can have considerable effects on ELLs as they engage in learning, which could be reinforced with the integration of technology (Foulger & Jimenez-Silva, 2007; Richards, 2015).

Teachers' receptiveness to incorporating technology into an existing program has been linked to the Technology Acceptance Model (TAM) (Thomas, Reyes, & Blumling, 2014). The TAM refers to how users come to accept and apply technology concerning the users' perception of the use and ease of the program (Thomas et al., 2014). To increase teachers' acceptance of technology, Jacobs (2010) suggests embedding technology that is reflective of the curriculum, as this often an area of familiarity for teachers.

Meaningful integration of technology can provide significant benefits for students in the classroom when it is incorporated with purpose and focused on student success (Dunbar, 2016; Jacobs, 2010). Vanatta and Fordham (2004) found that teachers who took the time to explore and become familiar with technology were more successful at effectively integrating technology into the classroom. Other factors which encourage successful integration include teachers' prior knowledge, professional development, and time to reflect and explore technology in the learning space (Blanchard, LePreovst, Dell Tolin, & Gutierrez, 2016).

Technology Models and English Language Learners

Preparing ELLs as they move forward in their language acquisition is a priority that is linked to instructional strategies (Calderon et al., 2011; Kanno & Kangas, 2014). More

specifically, quality instruction paired with the integration of technology deepens the language learning experience through non-linguistic features and interactive elements (Castro, 2015; Richards, 2015). In a recent study, Brown (2016) recognized the importance of incorporating technology with student learning, as it allows students to prepare for a world that is and continues to be, driven by technological advances. However, despite acknowledging the need and use for technology in the English Language classroom, Brown (2016) did not discredit the necessity of human interaction and credits the combination of both to increase performance and enhance student engagement.

Student engagement has been linked to improving achievement levels in all students, but even more so in ELLs when interactive learning merges with technology (Chuang, 2014; Richards, 2015; Traore & Kyei-Blankson, 2011). The interactive element of technology encourages learning through engaging and tailored activities (Padron & Waxman, 1996). Students' focus is additionally enhanced with the use of images and sounds, which helps to develop students' ability to recall and retain information (Clements & Sarama, 2003).

In addition to optimizing student engagement and learning, technology has also been found to close the achievement gap between ELLs and their native English-speaking peers (Keengwe & Hussein, 2014). Researchers, Keengwe, and Hussein (2014) investigated the achievement gap between two charter schools. The participants included ELLs instructed through traditional classroom instruction and ELL students using Computer Assisted Instruction (CAI), also known as Computer-Assisted Language Learning (CALL). CALL has been used to promote and support English language learners reading and language proficiency, as well as the use of interactive systems, such as text, video, graphics, animation, and audio (Al-Awidi & Ismail, 2014; Chen & Hsu, 2008). Used independently or in a group, CALL acts as a scaffold

that engages students in meaningful and individualized activities (Kung & Chuo, 2002). The material is presented and accessed non-linearly, which differs from the linear fashion of traditional paper texts (Klapper, 2003). This provides students with the opportunity to select material that best fits their interests and language needs (Klapper, 2003).

Results of the study indicated that the students using CAI/CALL produced higher scores in reading and math and were closer to reducing the achievement gap than the students who received traditional models of teaching (Keengwe & Hussein, 2014). However, once again, the emphasis was placed on incorporating technology in a meaningful and purposeful manner, where technology did not replace but instead supported the quality of instruction provided by the teacher (Brown, 2016; Keengwe & Hussein, 2014).

Selecting software. Technology-based teaching models also enhance educators' ability to differentiate their instruction with greater ease, increase student motivation and reduce levels of anxiety associated with learning a new language (Chen & Hsu, 2008; Reynolds, Arnone, & Marshall, 2009). Thus, technology extends beyond print-based learning by enhancing how information is presented, manipulated, and attained (Black, 2009). When used effectively as an extension of the learning environment, technology enables rich, comprehensive input and enriches language proficiency through meaningful and exciting learning tasks (Bahrani & Tam, 2012).

Purposefully selecting software is a necessary step in providing effective programs and in fostering language acquisition among English language learners (Lacina, 2004). In selecting the technology and software to be utilized, it is necessary to align them with curriculum expectations and address various learning styles (Jacobs, 2010). According to Lowdermilk, Fielding, Mendoza, De Alba, and Simpson (2012), educators should consider three components when

selecting English language acquisition technology (ELAT): know the difference between acquisition technology and translation software; recognize the benefits of the program; and select technology with powerful features. Lowdermilk et al. (2012) point out that translation software and ELAT are two distinct tools. Translation software is designed for the identification of equivalent words, whereas ELAT is a corrective tool used to target learners' language deficits and to provide instruction of new skills (Lowdermilk et al., 2012). Subsequently, the benefits of ELAT rest in the flexibility and customized options of technology software, and the reduction of code-switching, the change of language within a conversation. Instead, ELAT programs use distinguished boundaries that indicate when it is appropriate to use the learner's first language.

Lastly, when selecting ELAT software, Lowdermilk et al. (2012) recommend that educators should ensure that the program is built on a practical instructional foundation that extends students' prior knowledge. Effective instructional foundations are characterized by the program's ability to: monitor the time spent on the application; identify the supports accessed and used; identify student error and master patterns; deliver suggestions to improve the learners' challenges; and, track students' scores (Lowdermilk et al., 2012; Tondeur, Van Braak & Valcke, 2007). Furthermore, ELAT programs, which build upon prior knowledge, create windows for students to access and utilize the function of the program from multiple entry points (Lowdermilk et al., 2012). Moreover, for learners to gain a deeper meaning of the English language, language instruction should be presented in ways that are related to the student's cultural context (Rhodes, Ochoa & Oritz, 2005).

Multiliteracies. The departure from traditional approaches to teaching is reflective of the growth in multimodalities. Multimodality is described as "the use of several semiotic modes (ways meaning is created) in the design of a semiotic product or event" (Kress & van Leeuwen,

2001, p.20). It begins with the extension of social interpretation of language and meaning, that derives from one's cultural context (Jewitt, 2009). From the lens of multimodality, language cannot create meaning in isolation; instead, it requires many semiotic resources (Jewitt, 2009; Kress, 2010).

Multiliteracies, specifically, describes an approach and pedagogy to literacy that reflects the social environment experienced by students and educators (New London Group, 1996). It acknowledges the growth and advancements in communication channels by overcoming traditional approaches through a pedagogy that negotiates the multiple linguistic and cultural distinctions. Leading researchers (New London Group, 1996) in multiliteracies have described it as a process of crafting emergent meaning and transforming knowledge "by producing new constructions and representations of reality" (p.76). In this sense, the learner transforms, rather than reproduces knowledge. The multiliteracies' framework suggests the application of four pedagogical angles when teaching. These angles include situated practice (experiencing), explicit instruction (conceptualizing), critical framing (analyzing), and transformed practice (applying) (Cope & Kalantzis, 2000). Although the angles are not to be prescribed in any fixed order, they are, however, viewed as major frameworks in language learning and acquisition (Cope & Kalantzis, 2000).

Technology is a tool for multimodal instruction. Daniel, Shin, Harrison and Aoki (2014) describe technology as a scaffold for ELL instruction by using "multiple roads to learning through its capacity to assure multi-modal instruction for language use in inputs and outputs of all four domains of language: listening, speaking, reading, and writing" (p.36). Students are then able to enhance and acquire language using visual and audio aids that link to the students' prior knowledge (Hur & Suh, 2012). By providing opportunities to create and engage in multimodal

texts using technology, teachers can promote student expression that moves beyond oral communication (Ntelioglou, Fannin, Montanera, & Cummins, 2014).

Sheltered Instruction Observation Protocol. The traditional models of instruction for ELLs used an authoritative approach, which was teacher-centered and linear in fashion. One of the most common models applied was Presentation, Practice, and Production (PPP) (Harmer, 1991). In the PPP model, the teacher presents language and students then practice reproducing the language through repetition, choral chanting, and individual testing, followed by a communication task to produce the language taught (Harmer, 1991). However, research has contradicted the effectiveness of the model, categorizing it as operational and inadequate due to the rigid, restricted, and teacher-focused approach (Klapper, 2003).

Supporting and instructing ELLs has evolved from PPP into an interactive, meaningful, and engaging experience where students learn language through exploration. This has led to an increase in ELL performance, which has been reflected explicitly in the implementation and use of the SIOP Model (Echevarria et al., 2013). According to Echevarria et al., (2013), the SIOP Model is an instructional tool designed to build meaning and understanding for second language learners, across all content areas. It exposes new material and concepts to ELLs in ways that are comprehensible to the learner and which build upon their academic language, as well as reading, writing, listening and speaking skills (Kareva & Echevarria, 2013).

The SIOP model is divided into eight components which include lesson preparation, building context, comprehensible input, strategies, interaction, practice and application, lesson implementation and review and assessment. Each element is purposefully selected and founded on effective research-based teaching and learning methods for ELLs (Echevarria et al., 2013). The features enable high-quality instruction through purposeful teaching focused on curriculum

content and language objectives, introducing, reviewing, and teaching essential vocabulary, differentiated instruction and assessing established goals (Echevarria et al., 2013).

The model incorporates explicit instruction and builds upon students' prior knowledge. Research has indicated that explicit instruction, as well as scaffolding, improves ELLs' frequency of new words, particularly when learned within a meaningful context (Beck et al., 2002; Carlo et al., 2004). Explicit instruction has also been found to be effective for learners with little exposure to learning strategies (Ardasheva & Tetter, 2012). Moreover, the use of scaffolded support allows ELLs to master and continuously build upon skills (Kareva & Echevarria, 2013). This form of support exposes students to a gradual release of responsibility and enhances their independent learning skills (Nguyen & Watanabe, 2013).

Literacy Intervention and Differentiated Instruction. The success of literacy intervention for ELLs is linked to its concentration on explicit oral and written support, where instruction nurtures active learning and builds connections that are meaningful and relevant to the student (August & Shanahan, 2006; Gibbons, 2008; Hammond & Gibbons, 2005). Other research suggests that intervention programs, which promote and practice higher-order thinking and problem-solving skills, contribute to students' comprehension ability (Oritz, Wilkinson, Robinson-Courtney, & Kushner, 2006).

Subsequently, the implementation of intervention literacy, specifically on ELLs, has shown to enhance students' language performance and awareness (Shanahan & Beck, 2006; Taguchi, 1997). Silverman (2007) compared the effects of a vocabulary intervention program on a class of ELLs and native English speakers. During the 14 weeks, the students received 30 to 45 minutes of read-aloud instruction, three days a week. Results indicated growth in language development for both groups, but an increase in ELLs' vocabulary by almost half of their native

English-speaking counterparts. Silverman's (2007) findings lend to other reports which have noted the significance of explicit instruction on ELLs' language acquisition (Carlo et al., 2004; Vadasy & Sanders, 2012).

The weight of intervention literacy is enhanced when educators provide explicit instruction using differentiated instructional practices. Differentiated instruction, also known as the tiered approach, is designed for a narrow group, rather than the entire class, where the educator creates and offers variations to the activities in the main lesson (Martinez, 2011). In creating a central focus on language development for ELLs, differentiated instruction is most effective when educators consider the students' language skills when planning (Watkins & Lindahl, 2010). According to Tomlinson (2001), the framework for differentiation is based on educators' content, process, and student product, allowing activities to be modified towards the needs of the learner.

To achieve effective differentiated instruction for ELLs, Baecher et al., (2012), suggest that educators become aware of their students' English language strengths and challenges, make learning achievable, provide choice, encourage students to experience the same content objective with differentiated language objective and to be aware of students' cognitive complexity and its relationship with language proficiency. In providing language instruction that is explicit to a specific area of language development and differentiated to meet the learners' needs, educators can promote the enhancement of ELLs' language proficiency, application, and awareness.

Learners' Attitude and Motivation

Attitude is a construct that explains the direction and persistence of human behaviour. Allport (1935) defined attitude as a "mental or neutral state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all

objects and situations with which it is related" (p.8). Attitude is also described as a characteristic which evokes favourable or unfavourable approaches towards events, objects, or people. More specifically, attitude within the language learning context has been defined as a learner's persistence towards achieving a goal (Gardner & Lambert, 1972). This definition relates to Allport's (1935) general definition of attitude, as it continues to consider positive or negative attitudes towards a particular language.

Although the term motivation holds multiple meanings, Dörnyei (2007) has found that most researchers describe the term within the domains of direction and magnitude of human behaviour, which is often comprised of choice, persistence, and effort. However, the term's definition is more focused on the context of language learners. Gardner and Lampert (1972) have set precedence by defining motivation as the language learner's overall goal. The language learner's goal requires three critical aspects: effort, desire, and favourable attitudes. In this regard, the goal becomes the role of orientation and acts as a stimulus.

The purpose of the goal is to arouse motivation to achieve the desired outcome. Gardner and Lampert (1972) have identified two specific orientations in which a goal is set in language learning: integrative and instrumental. Integrative motivation is the intrinsic or internal desire held by the student, such as having positive attitudes/feelings towards the language or receptiveness to adopting characteristics of the cultural/linguistic group (Gardner & Lambert, 1972). Instrumental goals are categorized by the individuals' practical desire, such as economic and social gains (Gardner & Lambert, 1972). However, these findings were later extended to include a pivotal factor in motivation: the language classroom and learning space (Guilloteaux & Dörnyei, 2008).

In relation to reading, motivation can significantly affect the readers' ability to overcome reading challenges. Guilloteaux and Dörnyei (2008) explain,

> Motivation provides the primary impetus to initiate second or foreign language learning and later the driving force to sustain the long and often tedious learning process. Without sufficient motivation, individuals with the most remarkable abilities cannot accomplish long term goals. Also, appropriate curricula and good teaching are not enough on their own to ensure student achievement. (pp. 55-56)

Researchers suggest that motivation arises from various factors which contribute to building student autonomy and reinforcing initiative, such as culturally, developmentally, and age-appropriate reading texts (Castillo & Bonilla, 2014).

Learner motivation and technology. Researchers have indicated that language learner's motivation and engagement towards learning English increases when technology effectively integrates into instruction (Hattie, 2008). More specifically, the concept of grounded technology emphasizes the significance and relationship between purposeful instructional planning and the use of technology (van Olphen, Hofer, & Harris, 2012). The relationship between technology and curriculum drives students' increase in engagement and motivation. When teachers foster an explicit connection between the content and the medium, students' learning experiences are enhanced (Coppola, 2004; van Olphen et al., 2012). The importance of purposefully connecting technology to curriculum is emphasized by Dickerson, Williams, and Browning (2009),

> It is critical to engage students in a discussion before giving hands-on opportunities. This prompts students to search for answers to their questions when they begin working with the technology. Based on this discussion, students will develop personal beliefs and ideas about technology. These beliefs and thoughts will trigger internal motivation during the

> hands-on activities as they attempt to find evidence that confirms or rejects their beliefs, notions, and ideas. (p. 17)

Moreover, there remains a relationship between students' motivation towards learning and technology and its effect on student product. Sessions, Kang, and Womack (2016) explored the impact of an iPad application on student writing using control and experimental groups. When compared to students who used traditional paper and pencil methods to complete the assignments, the students who utilized the iPad demonstrated greater creativity in their writing, increased motivation to complete the task, and improved confidence. However, it is not just the product, but the writing process itself that is enhanced through technology and teacher-facilitated instruction (Foulger & Jimenez-Silva, 2007). The improvement of student process, product, and motivation while using technology has been linked to its ability to provide immediate feedback, whether it is the application itself, or a response by the teacher (Hermsen, Frost, Renes, & Kerkhof, 2015). Additionally, when technology is integrated and adapted in relevance to the developmental, language, and learning needs of the student, student impact is optimized (van Olphen et al., 2012). The safety-net of technology optimizes the students' work since technology provides students with opportunities to build their confidence while decreasing the learners' level of anxiety (Reinders & Wattana, 2015).

Summary of Literature

The literature review was explored using themes related to the purpose of this study: teachers and technology integration; technological resources and English Language Learners; and learners' attitudes and motivation. Key research findings indicate that effective technology integration can have positive effects on student attitude and motivation towards learning when the multimodal tool or program aligns with the curriculum expectations and provides space for

differentiated tasks. Additionally, technology integration is enhanced by the teachers' positive attitudes, program investment, and ongoing meaningful professional development. However, many of the studies reviewed were conducted at the elementary level, resulting in a need for further studies regarding technology integration and ELLs at the secondary level. Therefore, this study explores secondary ESL teachers' perceptions of iLit ELL, a technological application-based resource, and the perceived effects the program had on students' motivation and attitudes towards learning English.

CHAPTER 3

THEORETICAL FRAMEWORK

The purpose of this study was to explore the lived experiences of ESL secondary teachers who integrated iLit ELL, an application-based resource, in their English Second Language classrooms, as well as the perceived effects the program had on student motivation and attitudes towards learning English. To explore, interpret, and understand the experiences of the participants in relation to my research aims, I have grounded my study in the theoretical frameworks of Davis' (1989) technology acceptance model (TAM), Bandura's (1977, 1994) self efficacy theory, Deci, Connell and Ryan (1989) self-determination theory, and Krashen's (1982) input and affective filter hypothesis (Figure 1).

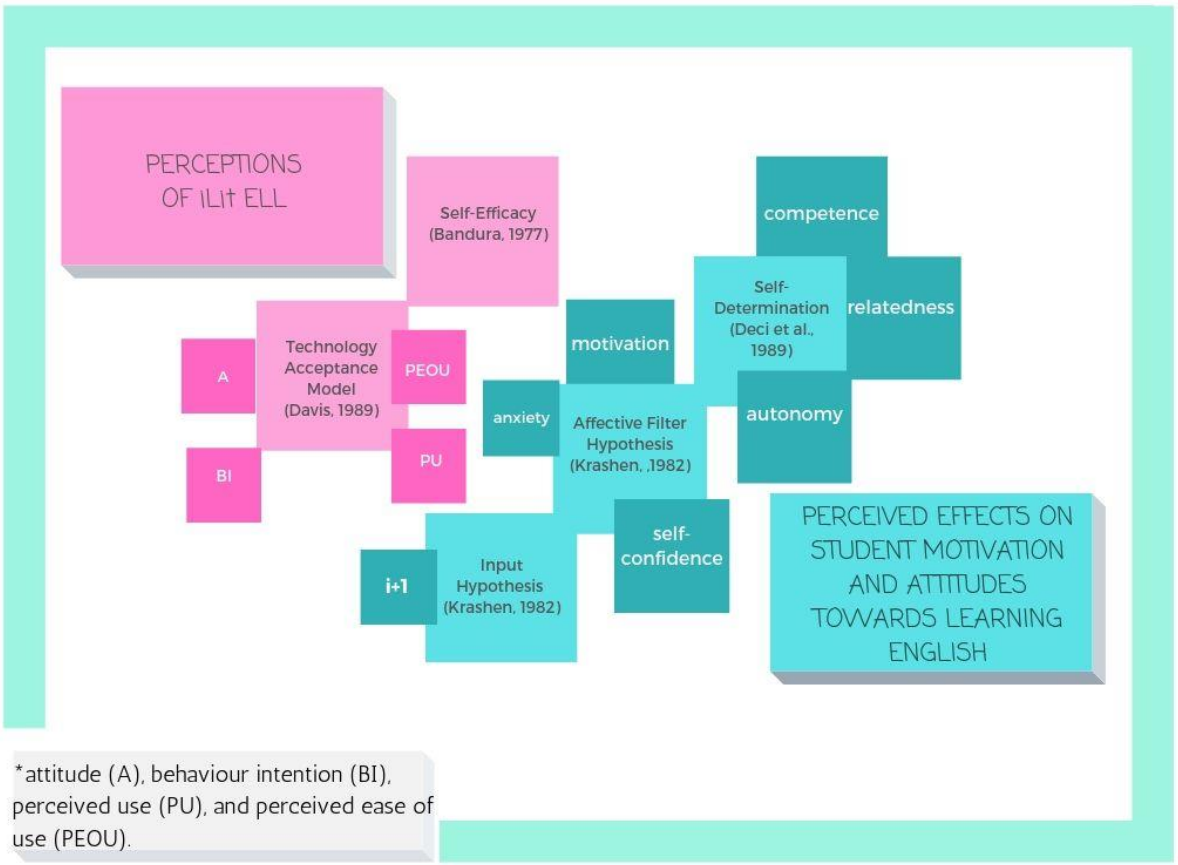

Figure 1. Theoretical Framework.

Technology Acceptance Model

The technology acceptance model (TAM) is a result of Davis' (1986) review of the literature regarding attitudes towards using technology in organizational environments. In his model, Davis (1989) suggests that attitudes towards technological systems are dependent on the individual's perception of the system's usefulness and perceived ease of use (Figure 2). Perceived usefulness (PU) looks at the relationship between job performance and system use. Individuals with a positive PU, believe the system will increase job performance, resulting in Behaviour Intention (BI), which is the users' increase in motivation to implement and engage with the program. Additionally, the user's Perceived Ease of Use (PEOU), relates to the user's belief that "using a particular system would be free of effort" (Davis, 1989, p.320).

Both PU and PEOU are connected to the individual's attitude associated with using the implemented system. The two beliefs are grounded in the individual's response to external factors, as well as to the environment. Thus, TAM suggests that usage is dependent on behaviour intention, linked to the individual's attitude (A) and perceived usefulness. The intention to use a system is then created when users believe that the program will increase job performance, regardless of their personal attitudes (A). As a result, Davis' (1989) factors associated with the Technology Acceptance Model have been used to explore and analyze teachers' perceptions and integration of iLit ELL as a tool for secondary English Language Learners.

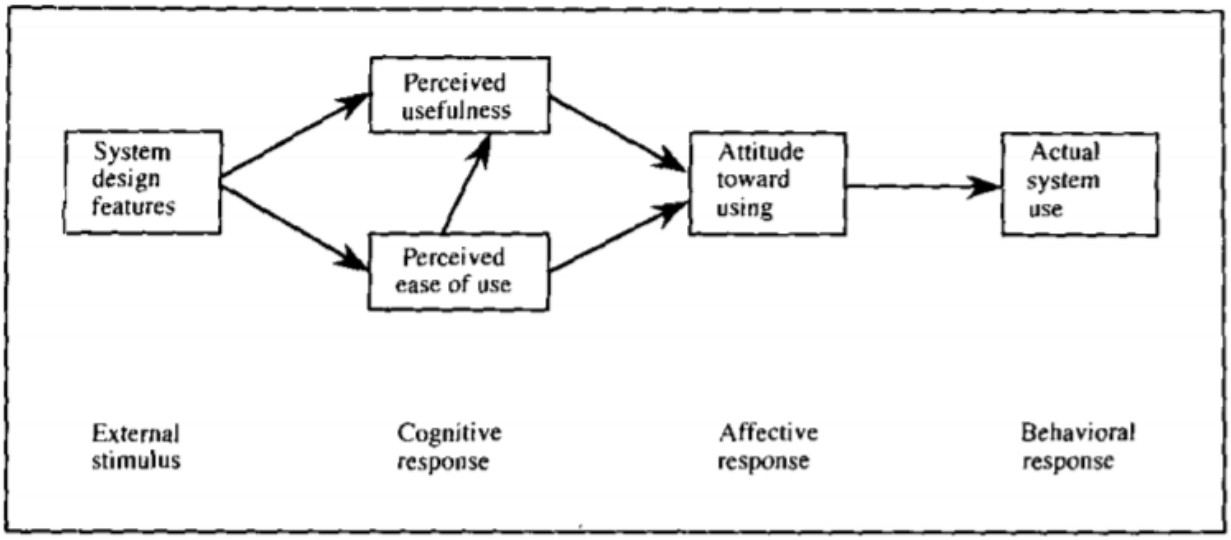

Figure 2. Technology Acceptance Model framework (Davis, 1993, p. 476).

Self Efficacy Theory

Bandura's (1977, 1994) self-efficacy theory argues that peoples' perceptions and beliefs of their abilities can dictate the success of their actions. In this sense, perceived self-efficacy drives how people think, feel, motivate themselves, and act. Such beliefs have grave effects on the cognitive, motivational, affective, and self-regulated processes, which are heavily influenced by four major sources (1994). The four sources include mastery experiences (self-recognized success), vicarious experiences (confidence through observation), social persuasion (praise), and reduction of stress (1994).

Bandura's self-efficacy theory allowed me to explore the teacher participants' experiences integrating iLit ELL, as well as their perceived confidence, attitudes, and level of comfort. Ertmer and Ottenbreit-Leftwich (2010), describe the influence of teachers' self-efficacy on technology integration, particularly between teachers' knowledge and their belief in themselves, by explaining "although knowledge of technology is necessary, it is not enough if teachers do not feel confident using that knowledge to facilitate student learning" (p.261). As a

result, I have approached my research using Bandura's (1977) self-efficacy theory to guide and develop my understanding of the teachers' use and integration of the iLit program, as well as their perceptions towards change and applying a new technological program.

Self-Determination Theory

Deci et al., (1989) self-determination theory (SDT) is described as a "means to experience a sense of choice in initiating and regulating one's own actions" (p. 580). As an influential theory in language learning motivation, the self-determination theory emphasizes the learner's autonomy through two forms of motivation: intrinsic and extrinsic. Intrinsic motivation refers to the learner's drive to perform a task due to internal rewards such as feelings of satisfaction, joy, curiosity and gaining new knowledge, whereas extrinsic motivation is prompted by external factors of grade improvement and positive recognition.

The self-determination theory reconceptualizes motivation in language learning by placing focus on the innate characteristics' learners require to motivate themselves. The innate characteristics that learners inherently possess include competence, relatedness, and autonomy. To foster opportunities that promote students' intrinsic motivation, teachers must maintain an influential role by providing autonomy-supportive practices through student choice and voice (Black & Deci, 2000; Niemiec & Ryan, 2009). By doing so, students are inclined to engage in the learning process actively, are more self-determined, and demonstrate a greater desire and action towards higher achievement (Dincer, 2014). Thus, I have chosen to use the SDT to explore students' motivation towards learning with iLit ELL, as the theory relates to the program's focus and aim to provide a gradual release approach through scaffolded support and choice.

Input Hypothesis and Affective Filter Hypothesis

Krashen (1982) developed the Second Language Acquisition Theory, which describes the acquisition of language in five distinct, and interconnected parts. However, I have chosen to apply two components of his theory in the analysis of my study as they relate to the effects of scaffolding on learning, as well as the relationship between student attitude and motivation in acquiring language. The applied theories are the Input Hypothesis and the Affective Filter Hypothesis.

Krashen's (1982) input hypothesis is used to explain how learners develop a second language. This theory focuses on the acquisition of the acquired system of language. Based on the hypothesis, language learners improve and progress when they receive second language input that is one step above their linguistic competence. This theory is known as "i+1", where "i" represents the learner's current stage and "1" is the next level. The next level (+1) provides language the learner can understand but not yet produce. Thus, when learners receive successful communication, and the input is understood, then, i+1 is achieved.

The positive effects of technology on English language learning has been linked with Krashen's (1982) affective filter hypothesis, which indicates that affective variables impact the process of second language acquisition. Krashen (1982) identifies three categories, which represent affective variables: motivation, self-confidence, and anxiety. Learners with high motivation, self-confidence, and low anxiety typically perform better in second language acquisition. This performance criterion provides optimal attitudes associated with learners whose negative affective filters (boredom, anxiety) are decreased. The use of technology as a teaching tool reduces the level of negative affective filters and increases students' motivation and attitude towards learning.

CHAPTER 4

METHODOLOGY

The study aimed to explore the lived experiences of ESL high-school educators who chose to implement and incorporate iLit ELL, a technology-based instructional tool, into their English language program. Along with these teachers, I captured the voices and reflections of the students exposed to the iLit ELL program. The research questions were designed to uncover the perceived experience of the participants and their process of meaning-making, resulting in a qualitative approach. In using the qualitative method of Interpretive Phenomenological Analysis (IPA), I hoped to understand "how people make sense of their major life experiences" (Smith, Flowers & Larkin, 2009, p.1).

The following chapter sheds light on my journey of selecting a key methodology to unlock, explore, and analyze my research questions from the perspective of both participants and their students (Figure 3). I have chosen to ground my research process using the "idea" character from the book, *What do you do with an idea?* by Kobi Yamada (2014), which represents the ideas that have stemmed from my personal, professional, and academic experiences. Yamada (2014), writes about a child who discovers an idea, and at first, is hesitant, but later learns to welcome it, commit to it, love it and give it the necessary time and care to help it grow. The idea brings joy to the child and teaches him how inspiring moments can change the way we think, act, and feel. As a result, this chapter will begin with a figure (Figure 3) of my research process, followed by my rationale for selecting a qualitative approach, an introduction to Interpretative Phenomenological Analysis (IPA), and a discussion of how this methodology has guided my method and analysis toward addressing my research questions.

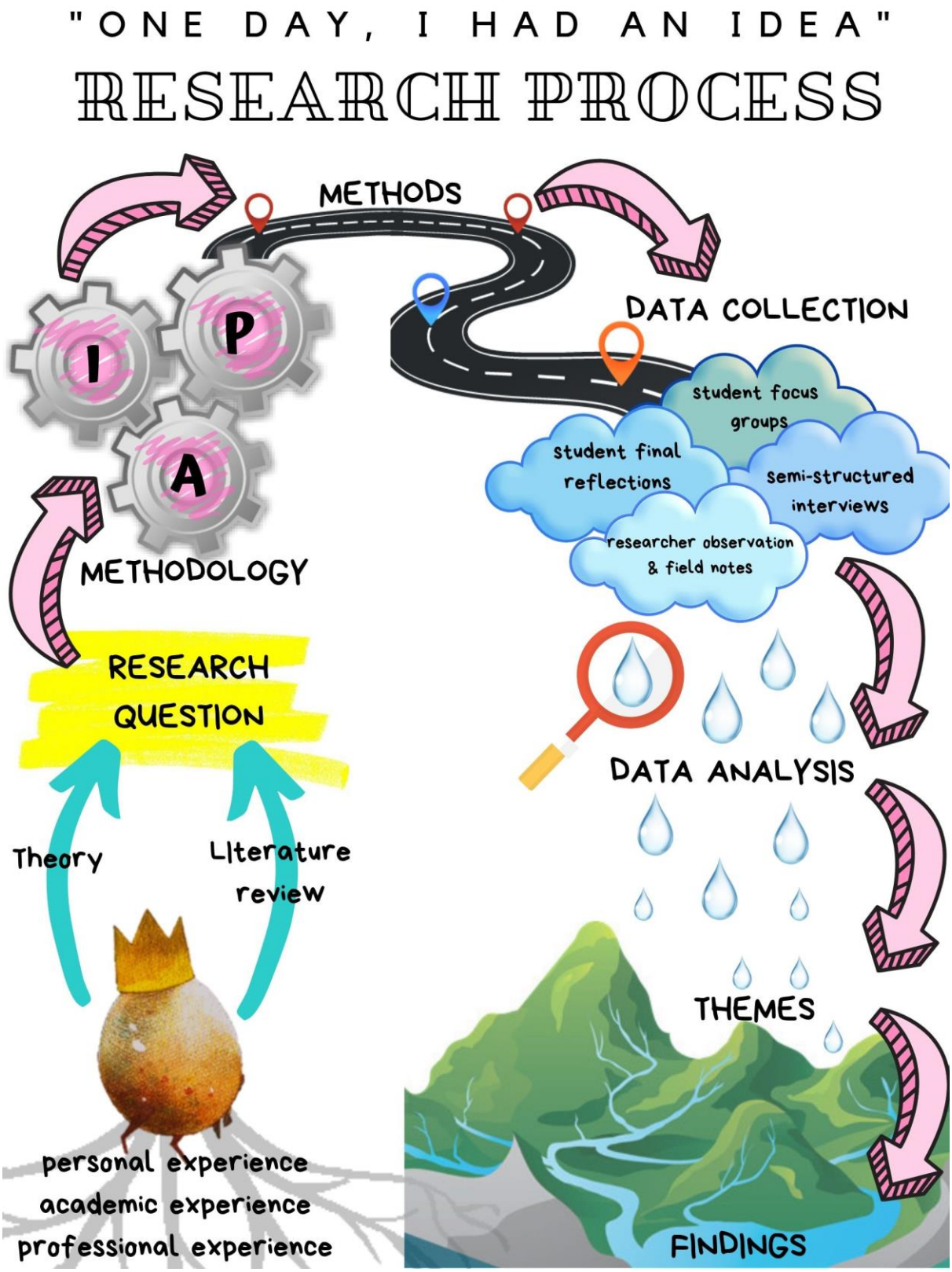

Figure 3. Research process. Character adapted from Yamada (2014).

Qualitative Approach

Qualitative research is often an approach used to explore opinions, thoughts, problems, a group or population, or to share stories of how others understand their world (Creswell, 2013; Denzin & Lincoln, 2011). Specifically, in IPA research, a qualitative approach is essential to understanding the human experience (Smith, 2009). Due to its focus on uncovering meaning, this type of qualitative research provides the flexibility to describe and interpret participants' understanding of a phenomenon (Willig, 2013).

Moreover, qualitative research has moved beyond activities within anthropology and sociology and has become a staple in educational research since the early 1980s (Cooley, 2013). Sherman and Webb (1988) support the significance of qualitative studies in education, describing it as "an important role in educational research by assisting us in raising new questions, leading us to question assumptions, by cultivating an appreciation for complexity, and finally, by expanding our frames of reference" (p.99). It is through this process of discovery that qualitative researchers can move from a nomothetic stance toward an ideographic approach.

Interpretive Phenomenological Analysis

Within the plethora of methodologies and methods which exist, I needed to select a methodology and approach that aligned with my worldview and aided me in the process of describing and interpreting the layers of the phenomenon studied. As a result, I have chosen to explore this study using Interpretive Phenomenological Analysis (IPA).

IPA is an experiential and inductive qualitative approach to research that is used to explore how individuals make sense of their personal and social realities. The meaning that participants attribute to such experiences is regarded as the "main currency" to IPA research (Smith, 2008). The insider perspective of the lived experience develops through a process of

interpretation, where "the participants are trying to make sense of their world; and the researcher is trying to make sense of the participants trying to make sense of their world" (Smith & Osborn, 2007, p.53). The researcher's journey through the IPA process is rooted in the central theoretical underpinnings of phenomenology (the study of human experience and consciousness), hermeneutics (interpretation) and idiography (the study of the particular).

Smith and Osborn (2008) describe phenomenology as a "detailed examination of the participant's lifeworld," where the researcher explores the layers and develops an understanding of how participants attach meaning to human experience (p.53). The leading theorist of phenomenology, Husserl (1970), developed this eidetic method to distinguish the critical and exclusive elements of a phenomenon. To do so, phenomenologists explore experiences through the participant's consciousness and view the participant as an experiential expert. The researcher then becomes the instrument that explores and interprets the phenomenon, creating a shift from a descriptive to an interpretive account of the participant's experiences (Smith, Flowers & Larkin, 2013).

Completing an interpretive account requires the researcher to bracket his or her preconceived notions and personal experiences during data collection. The researcher acknowledges and sets aside his or her biases to recognize, describe, and understand the participants' reality and engagement with the phenomenon. This process allows the researcher to place himself or herself at the lens of the participants, creating a more in-depth approach in sharing their story.

Ideas surrounding phenomenology were later extended by Heidegger (1962), who explored the second framework of IPA: hermeneutics. Hermeneutics (to interpret), requires the researcher to explore how participants mediate their experiences by placing themselves within

the participants' shoes. Similarly, within the context of social constructivism, is the belief that knowledge is built from the relationships we share with the participants we research (Sultan, 2018). In this sense, how we come to know what we know is co-constructed and shaped by both the researcher and participants' experiences (Creswell, 2013).

The co-creation of knowledge is representative of the fundamental belief that learning is social (Vygotsky, 1978). As a result, hermeneutics is a dynamic and active process and requires the researcher to apply double hermeneutics. IPA's double hermeneutic method focuses on two interpretations: first, the participants' interpretations of their own experience, followed by the researcher's interpretation of the participants' interpretations (Smith, Flowers & Larkin, 2009). The relationship between IPA and social constructivism continues to extend as reality is created through the interpretation of personal and shared experiences, resulting in multiple, rather than single realities (Lincoln, Lynham, & Guba, 2011).

The final theoretical approach to IPA is idiography. Idiography moves away from a generalized account of the participants, towards a "commitment to the particular" (Smith, Flowers & Larkin, 2009, p.29). The researcher fosters a particular account through a two-step process. First, there is an in-depth analysis of each participant's perspective. This process requires the researcher to explore the data sets separately before forming generalized statements, allowing for a more focused, rather than universal look into the phenomenon. Secondly, the researcher seeks to understand how the participants have understood the particular phenomenon.

Researcher Reflexivity

Etherington (2004) calls on the need for doctoral candidates to see and use themselves as an essential tool in their research, explaining "they need to process their experiences of doing research, their relationships with participants and what they are discovering about their topic…"

(p.162). To understand myself as an instrument to my research, it was necessary that I focused on my self-awareness (Mann, 2016). Fook (2002) explains this through the process of reflexivity, where the researcher takes "a stance of being able to locate oneself in the picture" and acknowledges how one's subjectivity influences both choices and actions" (p.43).

Thus, reflexivity differs from reflection in that, reflection is a practice within the mind or in writing, where the researcher thinks about, deliberates, and assesses his/her experience (Mann, 2016). In contrast, reflexivity is a technique, which motivates the researcher to be present with the research and awareness of personal biases. Bolton (2009) explains reflexivity in detail, stating,

> Reflexivity is finding strategies to question our attitudes, thought processes, values, assumptions, prejudices, and habitual actions, to strive to understand our complex roles concerning others. To be [reflexive] is to examine, for example, how we – seemingly unwittingly – are involved in creating social or professional structures counter to our own values…it is becoming aware of the limits of our knowledge, of how our own behaviour plays into organisational practices…it is understanding how we relate with others, and between us shape realities' shared practices and ways of talking. Thus, we recognize we are active in shaping our surroundings, and begin critically to take circumstances and relationships into consideration rather than merely reacting to them and help review and revise ethical ways of being and relating. (pp.13-14)

Through continual self-evaluation and journaling, I informed myself of how my positionality influenced my research and monitored how I asked questions, analyzed data, and presented research (Lincoln, Lynham, & Guba, 2011; Orange, 2016).

Site

The setting of the study took place within two school districts, located in Southwestern, Ontario. I chose to conduct the study within the Southwestern area, as almost one-quarter of the population's native-tongue is a language other than English (Statistics Canada, 2017). Three high schools from the districts were selected as sites for the study. The schools were suggested and chosen by the Superintendent from each school board based on the offering of English Second Language classes. The ESL classes are sheltered language programs for ELL students who are developing their English language proficiency. Students in these classes have not yet acquired the literacy skills needed for mainstream English classrooms; therefore, ELLs' receive instruction from a qualified ESL teacher.

Participants

In following an IPA approach, I explored three educators' perceptions and use of iLit ELL over the course of two terms. IPA sample sizes are generally small; due to the level of detail for each case analysis; however, there are no standard procedures to follow (Pietkiewicz & Smith, 2014). Pietkiewicz and Smith (2014) recommend that the number of participants can be determined based on the depth of analysis regarding a single case; the depth of individual cases; the researcher's choice to compare or contrast cases; and the pragmatic restrictions, such as time and availability of participants. Pseudonyms have been provided for each participant to ensure confidentiality.

The exploration of the three teacher participants was based on their acceptance to continue to use the program for two semesters. The program was initially introduced to thirteen secondary educators across three secondary schools. All thirteen teachers agreed to participate in the research and expressed an interest in utilizing the resource. To support them in the

integration of iLit ELL, the teachers received three training sessions prior to the start of the semester. Once the semester for implantation began, only three secondary educators continued to partake in the study. The remaining ten participants withdrew from the study within the first month of the semester. When discussing their reasoning for withdrawal, many expressed feeling uncomfortable with technology, not knowing where to begin with the program, and feeling overwhelmed with time and their existing responsibilities. Such feelings prevented the ten teachers from even starting the program in their classrooms. As a result, three teachers persisted with the use of iLit ELL over the course of two academic semesters.

Additionally, I have included the voices of the students through focus groups and reflections, as their experience in using, applying and navigating the program is pivotal to understanding the successes and challenges the program poses, as well as its perceived effect on their attitudes and motivations towards learning English.

Teacher Participants

Aya. Aya, which means "bird," is a creative, warm and caring educator who earned her Bachelor of Education in 2009 and received her contract in 2012. She completed her basic qualifications in Intermediate and Senior division English, as well as, Junior and Intermediate History. Between 2010 and 2016, Aya attained her Teaching English Language Learners Specialist. Aya's choice in career does not surprise me; she often spoke about her love for helping others and assisting her siblings with school work, but most of all she discussed how her own experience as an ELL left a deep imprint on her pedagogy,

> I was an ESL student and, as an ELL, school was really negative for me, and I carried a lot of self-doubt, which I think was connected to not being academically at the same level as others. I didn't fit in, and I internalized that about myself. As I got older, I reflected

> and realized that it wasn't all me, but my schooling. So, I wanted to make a difference and take my understanding of how difficult it is to be a newcomer and to learn English and turn my success into someone who could finish high school with high marks, English with honours and take these experiences into the classroom.

As I listened attentively to her experiences, I found myself engulfed in her courageous ability to share such deep personal setbacks yet remain so positive. She truly embodied the Malcolm X poster that hung on the front of her classroom door. I remember staring at the poster as I waited for our first meeting; it read, "there is no better than adversity. Every defeat, every heartbreak, every loss, contains its own seed its own lesson on how to improve your performance the next time." Little did I know that this woman would spread her wings and bring these words to life.

The more we discussed her experience with the program, the deeper into the reflection she went. She would explain what she did, how it affected her students, and what she would do differently next time. Her responses never appeared calculated, but instead natural and effortless; she spoke from the heart. In her reflective responses, Aya also shared her love and quest for new learning. She identified herself as a "nerd," spending countless hours reading and educating herself on current worldly and educational affairs. However, the core of her learning poured into her classroom, as she expressed taking each learning curve of this program and turning it into something applicable, meaningful, and relevant to her students.

Angus. Angus, meaning "one," is an assured and driven educator who pursued a different career path for twelve years before receiving his Bachelor of Education in 2006. In that same year, he earned his English qualifications for Junior, Intermediate and Senior divisions, and between 2006 and 2016 he received his Teaching English Language Learners Specialist. Angus

has been working as a contract teacher since 2008. Angus expressed his love for literature and language studies, coupled with his experience as having newcomer parents, as motivating him to pursue his career in teaching. It was evident that his upbringing shaped his appreciation for his students, as well as his love for language,

> I've always enjoyed working with this population. I can empathize with them to a point, and that's why I am an ESL teacher. I stuck with being an ESL teacher because I think I'm good at it. I think I understand language; I have a very good understanding of language development. I like the students; I appreciate their histories, their backgrounds, their stories. At the end of the day, it's about stories; it's about people's lives. I like ESL.

Throughout our time together, Angus always emphasized the importance of social interaction for language growth, particularly for his ELL students. During one of our conversations, he explained, "I think kids want to be challenged to talk to each other, and to be socially interactive and I think part of our job is to get that out of them. Just getting them to talk to each other is invaluable." His appreciation for social interaction came to me by surprise, as he appeared rather reserved and more introverted than his colleagues at the table.

I believe part of my assumption rests on how I observed him in our group settings. He sat in such an inquisitive position, resting his pen near his mouth, and then drawing to his paper to write down his thoughts and questions. He always arrived at our meetings prepared and appeared to have thought deeply about his comments and questions, as he consistently supported his ideas with evidence. His degree of confidence in his profession and himself did not go unnoticed.

Aelina. Aelina, meaning "bright, shining light," graduated from the Bachelor of Education program in 2013 and received her contract in 2015. She earned her Intermediate and Senior qualifications in English, as well as her Primary/Junior qualifications. She also holds

additional qualifications in Teaching English Language Learners, Special Education, and Kindergarten. Like Aya and Angus, Aelina discussed how her family experience shaped her practice and approach in ESL,

> My mom is an immigrant, and she would always tell me stories about her life from Italy and how her confidence went down in speaking and the challenges she went through. I think having this understanding allowed me to offer students care and empathy and understanding on their level.

The more she spoke, the more she revealed her empathetic and compassionate approach. It was evident that her heart drove her practice as she discussed her concerns for her students, and the endless strategies she would take to ensure they experienced academic growth and feelings of belonging. Her body language equally showcased her sincerity; bright and wide-eyed, leaning in, and gazing away when reflecting on her time in the classroom.

In addition to her level of compassion, Aelina also showed a more youthful, or, "primary" side to herself, by emphasizing the importance of experimenting and providing hands-on experiences for her students,

> I think they need a lot more hands-on because I feel like by doing something you actually grasp a deeper understanding of the concepts. The application piece, bringing it further than the memorization piece. To be more interactive. I taught English in Italy, and it taught me that the students needed to do what you were teaching them in order to apply it.

Taking into consideration her educational background, I was not taken back by her play-based approach to learning. This playful side was evident in my encounters with her, as she always appeared cheerful, smiling, and ready to get her feet wet.

Students. There were approximately 65 English Language Learners using the iLit program during the first semester and 19 during the second semester of implementation. The participants were between 16 to 18 years of age, including both males and females. The secondary school participants follow the *Ontario Curriculum Grades 9-12: English as a Second Language and English Literacy Development* (MOE, 2007). Students enrolled in the program were identified as Level ESLDO and ESLEO (MOE, 2007). These students are at the highest step in the language program before they enter a mainstream English class. However, the students enrolled in either an English second language (ESL) or English language development (ELD) program (MOE, 2015). English Second Language (ESL) programs are designed for learners who have experienced consistent formal education and first-language literacy skills that are representative of their age development (MOE, 2015). Students who enroll in English Language Development (ELD) programs are individuals who have not yet developed the language and literacy skills in their home language due to limited prior schooling (MOE, 2015). Although there was a range among students' first languages, the most predominant first languages were Arabic and Chinese.

At the end of each semester, the students were asked to respond to a final reflection. To gather additional data through focus groups, teachers selected four student participants from each school. Student participants had been exposed to the iLit program for at least one semester, by the discretion of their teacher.

Consent to Program Implementation

Program information. iLit ELL is a tablet/computer-based program that is downloaded and accessed using iPads, Windows 8 and above, Android devices, or a computer browser. Each student and the teacher are required to have a device. A television, smartboard, and or projector

are recommended for projecting the lessons and reviewing material with the students. Teachers are required to create a roster for their classes, which includes the students' first and last names, usernames, and passwords. To relieve the stress of inputting and creating accounts, I had teachers send me their class lists, and I performed the task manually. Teachers were then required to select the working grade level of their class, which guided the content and assessment within the program.

The program is designed to support English Language Learners and recommended for small group instruction, core classes and sheltered language classes comprised of ELLs. iLit ELL incorporates the research-based Sheltered Instruction Observation Protocol (SIOP) model, which is designed to meet the academic needs of ELLs through a series of interrelated elements (lesson preparation, building background, comprehensible input, strategies, interaction, practice/application, lesson delivery, review and assessment) (Echevarria et al., 2013). The instruction and material in iLit ELL focus on building ELLs' language acquisition, but also provides opportunities to strengthen students' speaking and language production. The program's lessons and routines are created to support students through a gradual release of instruction, which is backed by a high-interest library, immediate instructional support, and embedded coaching.

iLit also offers assessments and diagnostics which are used to build and focus student instruction and to support teachers in delivering instruction that aligns with the learners' academic needs. The assessments include Group Reading Assessment and Diagnostic Evaluation (GRADE), a diagnostic assessment used to measure independent reading growth. Teachers are to administer GRADE as a baseline assessment. The scoring from GRADE places students at an appropriate reading level which guides their assignments and reading selection. Teachers can

also assign whole-class assessments that inform teachers on students' prior knowledge and understanding of the content taught in the iLit lessons.

The program's instructional model, divided into two teaching blocks, work in collaboration with each other to enhance student achievement. Each teaching block, comprised of daily lessons, are distributed between two 45-minute teaching blocks. Block 1 exposes students to Time to Read, Vocabulary, Whole Group, and Work Time segments. During the second instructional day, students engage in Block 2, which focuses on Vocabulary, Read Aloud/Think Aloud, Classroom Conversation, and Work Time.

Time to Read provides time for students to engage in self-directed reading. Students are exposed to over 1,600 age-appropriate, high-interest and leveled texts, including visual readers. All texts are accompanied by a picture dictionary and translation in 44 languages. During Time to Read, students have the opportunity to engage in writing and text responses using journal writing prompts. Writing prompts are scaffolded to include sentence frames for learners; the frames are leveled and vary from simple to complex. Teachers can also assign or recommend books to students, and students can view statistics regarding the number of books, pages, and words they have read.

Time to Read is followed by Read Aloud/Think Aloud, a teacher lead lesson, where teachers model reading strategies using a grade-level text. Teachers then engage students in Vocabulary, where they work on improving conversational fluency, oral language production, academic vocabulary, work with related words, or transitional and prepositional words. Students have the opportunity to focus on common weekly errors. Furthermore, teachers can use Knowledge Check, which is a delivered assessment that tracks students' understanding of new words.

During daily Classroom Conversations, students discuss the Read Aloud/Think Aloud text. To ensure multiple entry points into conversation, iLit ELL offers simple and complex conversation starters. Routine cards are also included to assist teachers as they engage students in academic discussions and to provide opportunities for differentiation. This segment is followed by Whole-Group-focused instruction in reading, writing, grammar, vocabulary, or language development. Students study skills and concepts that are related to those modeled during the Read Aloud/Think Aloud.

Lastly, students receive Work Time. This lesson segment can be facilitated through small group or independently. If students are working independently, they will work from their Interactive Readers. To ensure students understand the Interactive Reader segment, questions related to the reading are asked throughout the text, and immediate adaptive feedback is given to students for guidance. At the end of the Interactive Reader, students write a summary related to the text, which will be scored by the program. The students' score determines if students will move up or down in Lexile levels. Students' use of the Interactive Reader is dependent on their scores from the initial GRADE assessment. Students who scored below grade level are assigned phonics and phonological awareness lessons during Work Time. During Work Time, students have opportunities to increase their oral fluency, language production, speaking and listening skills, and can be assigned personalized instruction focused on their grammar and spelling needs.

Moreover, to support teachers through successful program implementation, iLit ELL offers embedded professional development, as well as lesson scripts and scaffolded support. The scaffolded support provides a variety of suggestions to reach various learners, including students who have identified learning difficulties, or who are visually or hearing impaired. Teachers can also receive immediate differentiated tasks that align with the students' language proficiency

level and can sign up to a free professional development network and can access supplemental resources that align with the lessons, ask questions, and share experiences with other teachers integrating iLit ELL.

Board and school approval. Before seeking teacher participant consent to implement the program, I received approval from the University of Windsor Research Ethics Board, along with the district school boards' research board to implement the iLit program among teachers who were interested in using the program in their classrooms. Each board was sent an email, where I introduced myself, provided a proposal of my research, as well as a copy of REB approval (Appendix A). I then met and discussed the procedures and context in further detail with both districts. All information was communicated with board superintendents, where the selection of participating schools was designated by the superintendents. The selection of the schools was based on the number of available ESL classes and the need for additional resources.

Once three schools of interests were determined by the boards' superintendents, I contacted the principals and sent a copy of a brief research proposal. All three schools responded with interest in integrating the iLit program. A follow-up email was sent to arrange a meeting time to introduce the program for administrators and the ESL teachers at each school. I led the initial meetings in the schools' conference rooms, where I discussed my professional background, pilot study, and introduced the iLit ELL program. From the initial meetings, all thirteen secondary teachers, across the three schools, demonstrated an interest in being in-serviced on the use of iLit ELL for their ESL classes.

Teacher Training

Between November 2017 and January 2018, all thirteen teachers who expressed their interest in partaking in the study and in applying iLit ELL received three half-day workshops.

The workshops were provided prior to implementation to advance teacher comfort and familiarity, as well as their knowledge, skills, and application of the program (Borko, 2004; Vescio, Ross, & Adams, 2008). The half-day workshops took place in the teachers' schools and were led by a lead representative from iLit ELL through video conference calls and facilitated through my continued support and presence. The first workshop was an introduction to the program and its features; the second workshop focused on the specific learning blocks and how they could be applied; and, the third workshop was teacher-directed and based on the teacher's questions, concerns and experiences while exploring the program on their own time. By February 2018 (start of iLit ELL implementation) teachers entered the start of a new semester, at which point, teachers received either a set of classroom iPads or Chromebooks from the University of Windsor and the school districts.

Throughout this time, teachers were reminded that the implementation of iLit ELL was at their discretion. They had full control over how they utilized and applied the program and its features during the two semesters. I chose to encourage iLit ELL as an open resource because it resembles how administrators and boards often introduce resources within my district.

Throughout the study, I continued to mentor and provide support and resources both at the location and virtually to the teacher participants. Over a hundred hours of classroom-time support was provided to this group of teachers by the iLit support team and me. Within one month of the study, ten teachers withdrew from the use of the program. Follow-up emails indicated that the teachers had chosen not to begin the program due to a lack of comfort with the technology, feeling overwhelmed with existing responsibilities and lack of commitment to implementing, what they considered an overwhelmingly, complex program.

Teachers consent to participate in the research study. Teacher consent was sought out in November 2017 at the end of each initial meeting. Consent was attained after school hours, in each of the participating schools' conference room; it ran for an hour and a half. During the first hour, we discussed their concerns with classroom resources, the pilot study and I introduced iLit ELL and its main features. In the last half hour of the meeting, I explained my current study and details within the consent form. Sources of data collection were also discussed, along with their right to withdraw from the study, explicitly stated to ensure clarity and understanding. Teachers were told of their right to withdraw before the completion of the data analysis by contacting me via phone or email. However, in the case of withdrawal, any data collected prior to the withdrawal date would remain in use, unless indicated otherwise by the participant. Teachers were also encouraged to ask questions and seek clarification during this meeting.

The teacher participants who agreed to take part in the interviews (end of semester one and end of semester two), were reminded of the consent protocol prior to the start of each interview. Participants were able to respond to the questions voluntarily, or end the interview at any time; however, they were made aware that information stated and collected could be used unless indicated otherwise by the participant.

Student consent to participate in the research study. Student consent was introduced and secured prior to the focus groups. An email was sent to the teacher participants, requesting them to select four students who used iLit ELL over the course of the study, preferably students who would be interested and comfortable in partaking in a focus group discussion. Attached in the email was a copy of the consent forms, which would be discussed with student participants before starting the focus group. Since all the students who were selected to participate in the focus group were 16 and over, parental consent was not required. Thus, at the start of the focus group, students were given a copy of the consent form to sign and date. As with the teachers, the students were reminded of the consent protocol and their right to voluntarily respond to questions or withdraw from the focus group at any time; however, they were informed that any information that had been stated and collected would be used unless indicated otherwise by the participant.

Data Collection

Smith, Flowers, and Larkin (2009) argue that IPA methods fit best when researchers hope to "invite participants to offer a rich, detailed, first-person account of experiences" (p.56). To achieve great depth, IPA researchers suggest the use of semi-structured interviews. Semi-structured interviews are among the primary sources of data collection in IPA research. Pietkiewicz and Smith (2014) support the use of semi-structured interviews, as they allow the researcher to engage in real-time dialogue while providing flexibility to explore unexpected issues. In addition to semi-structured interviews, focus groups and reflections can also be included in the data collection process. Focus groups provide a window for multiple voices and interactions to occur (Smith, Flowers & Larkin, 2009).

Semi-structured interviews. I explored teacher perceptions of the program, qualitatively, through semi-structured interviews. Semi-structured interview questions are designed to provoke a detailed description of the participants' account through questions that engage their personal, emotional, and attitudinal feelings towards the experience (Polio, Henley & Thompson, 1997). Participants were asked a set of open-ended questions that related to their experience prior and during the iLit program implementation at the end of semester one and at the end of semester two (Appendix B).

Galetta (2013) describes semi-structured interviews as a valuable approach to research, as it promotes full engagement in the topic studied through a combination of open-ended and theoretically influenced questions. Semi-structured interviews are an interactional learning event that provides participants with the opportunity to express their beliefs, attitudes, and experiences, and for researchers to create meaning and understanding based on the interactions (Edwards & Holland, 2013). Interactions occur because semi-structured interviews allow space for dialogue, and for researchers to follow the direction of interest and voice of the participants interviewed (Leavy, 2014). Additionally, it provides participants with the opportunity to develop their questions and understanding of the experience (Brinkman & Kvale, 2008).

Teacher participants were invited via email to partake in an interview at the end of each semester. Separate interviews were held for each teacher. Interviews took place after school hours and in the participant's school conference room. Interviews lasted between an hour and an hour-and-a-half and were recorded using a digital recorder. I transcribed all audio recordings and anonymized the data using pseudonyms. As a token of appreciation, a $25.00 Starbucks gift card was given to each participant at the end of the second interview.

Focus Groups. When conducting focus groups in IPA studies, Smith Flowers and Larkin (2009), suggest groups consist of no more than four to five members per group. Limiting the number of focus group participants is based on manageability and the number of facilitators present. The student focus groups consisted of 12 students (4 from each school), which allowed me to engage and interact with each member in greater depth. Students were signed out of class to partake in the focus groups, held in the schools' conference room.

Students were selected by the teacher participants. Each teacher was invited to choose four students between semesters one and two for the focus group session. Student selection was based on their use of iLit ELL; therefore, students had to have used the program at least one of the two semesters. Based on the teacher's integration of iLit ELL, two students from each semester of Aelina's classes were selected, four students from Aya's first-semester class, and four students from Angus' first-semester class.

Each focus group was held separately and on school grounds. The focus groups lasted approximately one hour. At the start of the focus groups, the consent forms were distributed and discussed; students were encouraged to ask questions and to seek clarification as needed. Once consent was attained, students were asked a series of open-ended questions to explore their experience with the program. The focus groups were flexible in nature. For the most part, their discussions remained in relation to the questions; however, when other experiences were shared, we discussed them as well.

Final Reflection. Less common to IPA research, but still used, reflections allow researchers to engage with and interpret texts (Willig, 2013). Students who used the program were encouraged to respond to a series of questions related to their experience and use of iLit (Appendix D). I asked for the secondary use of the data from the participating teachers. The

students' final reflections were reviewed to explore their use and perceptions of iLit ELL (Creswell, 2013).

Risks

Audio recording of interviews and focus groups. Participants may have experienced emotional or psychological risks as a consequence of being recorded during the interview. Such risks could be the result of disclosing personal and professional information about themselves or the sharing of personal feelings and attitudes. Participants were made aware of these potential risks prior to consenting to participate in the study. As the researcher and surveyor, I remained mindful of the participants' independence of self-disclosure, as well as the potential risks.

Confidentiality and Handling of Data

Only teachers were assigned pseudonyms due to the nature of the interviews. Data was only accessed by myself and my faculty supervisor, Dr. Geri Salinitri. I transcribed all audio data and maintained custodianship of the transcriptions, reflections, and observations. All data were stored in an electronic file on my personal computer, which is secured, and password protected. The participants retained the right to request to review their audio and transcribed recordings at any time. Master lists, emails, observations, original audio files, and electronic files associated with the participants will be kept secured upon completion of my final defense (Fall, 2019). The results of the research may be disseminated in the form of a presentation and research paper.

Data Analysis

IPA research is described as "an attempt to unravel the meaning contained in... accounts through a process of interpretive engagement with the texts and transcripts" (Smith, 1997, p.189). The idiographic process of unraveling does not require the researcher to follow a prescriptive methodology; instead, it provides a space for flexible guidelines that can be adapted

accordingly and creatively (Pietkiewicz & Smith, 2014; Smith, Flowers & Larkin, 2009). However, Smith, Flowers, and Larkin (2009), and Willig (2013) suggest that flexibility can also be incorporated while following a set of standard and frequently used steps:

1. Close re-reading of the text.
2. Identifying and labeling emergent themes.
3. Analysis of themes in relation to each account.
4. Creating a summary table of themes and quotations.

The steps provided by Smith, Flowers, and Larkin (2009), and Willig (2013) were used as the foundation for my data analysis process. In the following section, I describe each step further in detail and explain its relation to my study.

Stage 1. During the first stage of analysis, the researcher reads over the transcripts several times, using close reading strategies. Close reading is a technique that I frequently use with my students. It requires the reader to re-read the passage to foster a thoughtful and critical analysis of the text by first reading generally, then more closely with each subsequent visit, while annotating what is observed, questioned or thought. This stage of the analysis process does not require a standard procedure; however, I chose to number each line and use the right margin space to comment my initial thoughts while encountering the text (Appendix D). Writing my initial thoughts reflects Husserl's (1970) rule of description in phenomenological research. However, I extended my description to also incorporate my interpretations, summaries, conceptual observations, and connections (Smith, Flowers & Larkin, 2009; Willig, 2013).

The first stage applied the "rule of epoche," where the researcher brackets their biases and experience and holds an awareness of their conceptual perspective towards the phenomenon studied. Developing mindfulness towards my conceptual perspective required me to have an

implicit and explicit understanding of my personal experiences, as well as the theoretical and professional knowledge that exists within my field. Having this understanding, I embraced each piece of data with an open mind, while remaining attentive to the data and tentative to my conceptualizations.

Stage 2. During the second stage of analysis, I labeled and identified the emergent themes that were written throughout the first stage. I used a separate document to list similar anecdotes and then recorded theme titles that represented and captured the text. While working in this stage, I remained mindful of what Willig (2013) noted, "phenomenological research is interested in the nature, quality and meaning of experience, and therefore theme labels ought to capture the experiential quality of what is being described" (p. 88). Once I sorted through the themes, I went back to my document and used the left margin to write them in accordingly.

It is important to note that while identifying and labeling emergent themes, I remained aware and cognizant of the phenomenological rule of horizontalization (Moustakas, 1994). The rule of horizontalization places emphasis on treating each element in the descriptive process as equal in value. By continuing to bracket my assumptions, I reduced my probability of establishing a hierarchy with what I annotated (Adams, 2001). Additionally, Adams (2001) suggests that if we begin to think about the participant in a particular way, then we have stopped applying the rule of horizontalization.

Stage 3. In the third stage of data analysis, I placed the emergent themes from stage two in relation to one another. Willig (2013) suggests that some themes are related through hierarchical relationships, and others will naturally cluster based on references or meanings. Smith, Flowers, and Larkin (2009) also provide insight to connecting themes, such as abstraction (pair similar emergent themes), numeration (frequency of emergent themes), subsumption

(themes can be incorporated with other emerging themes) and function. When working in the third stage, I negotiated back and forth between the themes I constructed; this allowed me to remain true to the original intent and meaning of the participants' data (Willig, 2013).

Moreover, since I worked with transcripts from more than one individual, I repeated stages one through three, separately, for each participant and student focus group. However, I used the emerging themes from the first transcript to guide me in analyzing the remainder. Using the first transcript to inform my analysis granted me the opportunity to recognize similarities and differences among the experiences (Smith, Flowers & Larkin, 2009).

Stage 4. At the final stage of data analysis, I created a summary table of the structured themes, aligned with the relevant and supporting quotations/keywords, as well as the line and page number according to the transcripts. The structured themes represented the participants' experience with the phenomenon and were created by narrowing the themes from Stage 2. Willig (2013) explains that researchers typically decide the structured themes through an inclusion and exclusion process that is influenced by the researcher's interest and preference.

CHAPTER 5

FINDINGS

In this study, I explored the lived experiences of three ESL high-school educators and their perceptions of integrating iLit ELL, a technology-based instructional tool, within their English Second Language program, as well as, its perceived effects on students' attitudes and motivation towards learning English. Data were collected qualitatively using semi-structured interviews with teacher participants, student focus groups, student reflections, and my observations recorded across two academic semesters.

iLit ELL was accessed at the discretion of the teacher. Teachers were given free rein with the program and were encouraged to utilize and apply its features as they fit necessary into their existing programming. I choose to implement the program in this open manner as it mimics how administrators and boards often introduce new resources within my district. Over the course of two semesters, Aelina used the program daily, as did Aya. However, Aya did not use the program in the second semester due to technical difficulties and the inability to access the program through her class devices. Angus approached implementation with the intent to use iLit ELL once a week; however, he did so sparingly, and by the end of the first quarter of the second semester, he ended his use of the program.

Students who participated in the focus groups and final reflections had been exposed to and used iLit ELL in their classrooms. Due to the teachers' experiences with technical difficulties and personal choices, only the students who used the program for at least one semester were selected to partake in the focus groups. Four students from each school were selected: two students from each semester of Aelina's classes; four students from Aya's first-

semester class; and four students from Angus' first-semester class. Final reflections were submitted at the end of each semester by the students using iLit ELL.

Data were analyzed using Interpretive Phenomenological Analysis (Smith, Flowers, & Larkin, 2009). IPA is a methodological approach that applies a microanalysis of the individual's experience through a balanced relationship of describing and interpreting. Through interpretation, the researcher broadens the breadth and depth of the content and complexity of each narrative (Smith & Osborn, 2008). It is a process that moves "from the particular to the shared, and from the descriptive to the interpretive…" (Smith, Flowers, & Larkin, 2009, p. 79). Based on the data collected over the course of two semesters, the following themes emerged:

1. Relationship between teacher attitude, program perceptions and degree of implementation;
2. Relationship between time, meaningful planning and program use;
3. Relationship between flexibility and adaptability when confronted with change;
4. Bridging the gap across diverse learners;
5. iLit ELL as a second voice in the classroom: enhanced skills and concepts, confidence, motivation, and independence;
6. Gap in culturally responsive and student interest-based text;
7. Effects of teacher-scripted text, program volume and technical difficulties on implementing technology in the classroom;
8. iLit ELL as a universal design for literacy.

Relationship Between Teacher Attitude, Program Perceptions, and Degree of Implementation

Initial perceptions. Researchers have argued the importance of teachers' existing attitudes and their effects on implementing change (Liu, Theodore & Lavelle, 2004; Casey & Rakes, 2002). When first introduced to the program, the participants expressed a level of interest and openness to exploring iLit ELL further, as well as incorporating it into their existing program. Their sense of enthusiasm was conveyed during our initial meetings, where they shared their current struggle with resources, particularly, flexible resources that met the various learning needs of their students. Aya explained,

> I didn't have material and a lot of stuff to pull from for this course, there wasn't a set precedent for me to fall back to, so this provided me with material and resources; and, I knew that this could be what my students needed so that they could work on their literacy skills. And even realistically, how much photocopying could I get through? I couldn't keep up with what my students needed and truly differentiate through pen and paper because I didn't have the resources, I didn't have a great textbook, a set of short stories to pull from, I didn't have enough material to pull for this course.

The more I got to know Aya, the more I realized that her initial level of enthusiasm to pursue the program as a result of her existing barriers that hindered her growth as an educator, as well as the academic growth of her students. Her desire to pursue the program was weighted by her current search for resources endeavors to differentiate.

Aelina also expressed feelings of optimism. Her level of interest was linked to the technology component of iLit ELL, which she related to previous experience,

> I believe technology allows more flexibility to tailor lessons and assessments to meet the learner profile of students and it allows English teachers to provide immediate descriptive feedback and perform live edits on students' assessments that are in progress.

Through our discussion, it became evident that her prior experiences with technology influenced Aelina's attitude stepping into the program. As she delved deeper into her response, she began to describe technology as an alternative to the standard practice, "…I definitely like to incorporate it because I feel that it gives kids this break that they feel they're getting, even though they're learning the same strategy or topic." Aelina's acceptance of integrating technology in the classroom relates to the work of Chen (2008), who argued that teachers' acceptance toward technology increases when there is a favourable prior experience.

Angus also demonstrated initial feelings of interest, although I observed him as being more reserved about the program than the others. His sense of reservation came through during our initial training sessions, where he always came prepared with relevant questions related to the curriculum and formal protocols and procedures. Despite his speculative stance, his willingness to pursue the program was driven by the vast range of resources offered within the iLit ELL, which includes, assessment tools, student library, student notebook, lessons, interactive readers, assignments and differentiated tasks. He went on to explain, "I was pretty excited because it looked like it was this rich resource of material, and so I was very motivated."

However, feelings of optimism were also met with hesitation from all three participants. Aya, Aelina, and Angus all expressed some level of doubt, whether it was self-doubt or program-doubt when initially introduced to iLit ELL.

Aelina's hesitancy was prompted by her unfamiliarity with the program and the prospects of an increase in workload, "I didn't really know if I understood what the program would offer,

the purpose, and I thought it would be more work to incorporate then to not have it all." Aya, who shared similar feelings echoed Aelina's skepticism,

> I was really nervous beforehand when I sat with you guys and talked about it. So, I already had the year rolling and an idea of what my class would be, and then I was told about this program and the opportunity. And being the structured person I am, I had to change around my program and the way I had planned it and I was worried it was something that I wouldn't be able to do because it was so new, and the crunch for time made me nervous because I was teaching and trying to learn the program at the same time. I was worried that I wouldn't be able to explain it to the students; to guide them.

Aelina and Aya's initial thoughts of doubt are not uncommon. Researchers have linked internal and external factors, such as teacher competency, passion, and training, as well as work and environmental constraints among the greatest obstacles in initiating the use and application of technology in the classroom (Atkins & Vasu, 2000; Ertmer et al., 2012).

Along with Aelina and Aya, Angus, also communicated his feelings of uncertainty, despite his motivation to utilize the new resource,

> I wasn't so motivated knowing that it was only a temporary project, that, I didn't appreciate too much. But my motivation was there because I was keen to actually use it as a real tool that could actually help the students.

However, unlike Aelina and Aya, Angus' apprehension was derived from the program's timeline. He never once discussed his abilities, or fear of not knowing, as a barrier to the program and its integration. Although he was aware that the program was secured for two academic semesters, its temporary status stewed a degree of hesitation. Angus' attitude reflected the common external factors that infringe teachers' incorporation of technology, such as time

and school-board support (Atkins & Vasu, 2000; Egbert et al., 2002; Shin & Son, 2007). Overall, the participants shared an initial desire to implement the program, followed by underlying feelings of skepticism.

Ongoing perceptions. While analyzing the data individually and then across participants, I observed consistency between the participants' initial feelings and attitudes and their subsequent feelings throughout the semester. The attitudes which emerged at the beginning of the semester, during the initial stages of implementation, were a defining factor in the frequency and use of iLit ELL.

> During our semi-structured interview, Aya explained how her initial feelings evolved, I was highly motivated, to be honest at first because it was something that was presented to me as something to use, so my first motivation was that I was told it was a good program. But as I started to see similarities to what I wanted to do and what the program had, I was really motivated because I realized that this is what I was looking for. I was nervous, but it was fine.

Aya's connection between iLit ELL and her existing program was a motivating factor in influencing her attitude and use of the program. She also recognized her feelings of uncertainty, admitting that she was nervous at the beginning. She later went on to describe this as a learning process in her career, "it was a steep learning curve; I am not going to lie. I had to look at the plans I had for my class, and how it fit into this new program and understand where everything was." Aya's attitude toward the program reflects a proactive approach to addressing change and the incorporation of technology (Smith, 2009). Additionally, her success with the program and those of her students motivated her to continue for a second semester.

Similar to Aya, Aelina's attitude and feelings towards the use of iLit ELL transformed. Through her navigation and integration of the program, Aelina started to make connections between the program and the Ontario Curriculum expectations. She explained,

> I saw the benefits of it. This was the biggest thing. And I saw how it connected to the curriculum expectations. If I didn't see connections, I wouldn't have used it because I wouldn't' have been able to integrate it. But now students can practice and demonstrate the expectations.

While bridging expectations across the program and the curriculum, Aelina also experienced a lighter work-load, and additional time and ease while conferencing with students, which she attributed to her continued use of the program,

> I used it and saw the benefits of it, then the second term, it reduced some work, because it gave them feedback and they produced higher quality work, and now I could clearly understand what the student was trying to express in their writing, and when I did one to one conference, I could work on increasing their fluency, or ideas, rather than having them try to orally explain what they were trying to express, and then go into the conventions of writing and then assess the piece.

Parallel to Aya and Aelina, Angus' experience with iLit ELL affected his attitude towards the program; however, in Angus' case, it curbed his motivation and desire to implement. Angus' subsequent encounters with iLit ELL gave way to his early feelings of uncertainty. He explained,

> I don't know if I am willing to commit to understanding the program. I have much more faith in what I know than what the program is telling me… and it depends on whether a school board or principal supports it or if there is a long-term investment in the program

> because it is so cumbersome that there is very little value in putting in so much effort when it only will have a lifespan of a year…The first semester I used it primarily, no, not primarily, I used it with the intention of incorporating all the elements discovered in it, but I soon found out it was too cumbersome, too big, too inaccessible, too didactic.

Angus' limited commitment seems to be rooted in his comfort level. Although he does not disclose feeling challenged, it appears that iLit ELL elicits unsettling feelings related to relinquishing power and shaking up the norm. The attitude that he exhibits represents a fixed mindset, which Dweck (2006) explains, "…creates the feelings that you can *really* know the permanent truth about yourself", however, Dweck warns that this can disadvantage people, by "undermining your chances of success in the second area by assuming that your talent alone will take you there" (p.50).

Despite Angus' challenges with the program, he chose to continue to use the program for the second semester. His drive to continue was related to his desire to utilize specific resources within the iLit ELL program and to "provide a bit more variety than me just talking." However, Angus' second semester proved to be just as dissatisfying as the first, if not, more,

> The second semester that I used it I was going to refine my use of it, but I had a class that was really low functioning, so they had a very difficult time managing and accessing the program and navigating it to the point where it was a detriment. I didn't see any point in continuing, there was very little benefit from it for the students, and I also found another digital resource which was much easier to handle and to instruct with... And so I've abandoned it, and for those reasons, I gave it up.

While triangulating the data, I found that Angus' perception of his students as "low functioning," was also noted in the student focus group. During the interview, a student reflected on the infrequent use of the program, explaining,

> Yeah, I wish we still use it from last year… I liked it all, to be honest. It is all good and all helpful for us…I think maybe he was worried that we not going to understand the story like we not going to understand anything about it. But even if you are low level, you can understand.

Agnus' choice to override the use of iLit ELL with another, self-selected, digital resource seems to reflect his uncertainty towards the use and possible effectiveness of iLit ELL. When educators experience feelings of ambiguity with a new program, it often drives them to search for and utilize other instructional methods and resources (Thomas et al., 2014). The search for a new resource is also enabled when educators perceive their students to be incapable or to have difficulty incorporating technology (Cummins et al., 2007). Despite his awareness and ability to alter the level and complexity of iLit ELL, the size of the program, as well as the personal time it required, motivated Angus to seek out another tool to meet his students' needs. In all of this, Angus missed the mark on his students' interpretation of the program.

Overall, each teacher exemplified and shared a set of attitudes, beliefs, and feelings coming into the pilot study. The teachers preconceived notions, as well as their initial experiences with the program set precedence over the use and integration of the technological resource. Additionally, the teachers' mindset also played a critical role in determining their perceptions. Those who demonstrated characteristics of a growth mindset were not deterred by the time and effort involved and portrayed greater optimism and openness to integrating a new technological resource. As a result, the findings align with current research that suggests teacher

perceptions, attitude, as well as, the perceived degree of effort implicate technology integration in the classroom (Harrell & Bynum, 2018; Inan & Lowther, 2010).

Relationship Between Time, Meaningful Planning and Program Use

A common theme among all three participants was the relationship between time, planning, and iLit ELL program use. In analyzing the data, the theme of time held three meanings. The term time was first defined as the participant's personal use of time to understand the program; secondly, to demonstrate program and lesson preparation; and thirdly, frequency of use. Subsequently, those who utilized all aspects of time also revealed intentional and meaningful planning as part of their lesson preparation. Teachers who invested time and planned accordingly were noted to implement and incorporate iLit ELL into their program consistently.

The theme of time came up organically in my discussions with the participants. It was never asked as a specific question, but rather, it was a part of their journey that they shared. Aya explained,

> I put a lot of time into it in the beginning, like I would devote my whole weekend for a few weeks, I felt that I had to look at every story and see what kinds of questions they were asking. It was weekends of just me planning, many weekends of just planning because the course I am teaching has overall expectations, that include: reading for meaning; understanding form; reading with fluency; reflecting on reading skills and strategies; and writing expectations of developing and organizing concepts; using knowledge of form and style; applying knowledge of conventions; and reflection on writing skills and strategies. To me, these were really mirrored in what iLit was doing. Since I knew my course had to work on allowing students to develop their literacy skills, I was able to easily use units and stories in the program to meet the curriculum.

During my discussion with Aya, it was apparent that she was aware of her goals as an educator and her students' needs. This informed her practice and allowed her to see how iLit ELL fit into what she was doing and how she could manipulate the program to engage the various learning levels within her class. Aya's approach aligns with the recommendations set by researchers who emphasize the relationship between technology effectiveness and teacher planning (van Olphen et al., 2012).

Aelina also discussed spending her free time navigating through the program. Based on our discussion, it became evident that her commitment to exploring the program was rooted in her self-awareness, as she discussed the need to feel comfortable with the resource before she could implement it,

> But I make sure that I know so much in the program first and then see how I can bring it into my already built lessons. And then you sat down with us and showed us how it was used as well. So, the first thing I did was press on everything to see how everything worked, reading through it and making my own connections of how I can incorporate it into what I had already built.

With her understanding of iLit ELL and her own goals for students, Aelina was able to construct a program that fit her vision, timetable, and expectations. She explained her program in two parts, where the first half of the class focused on her instruction and learning goals, and the second half as the consolidation to the lesson, where students were required to apply what they learned using iLit ELL,

> The routine was based around iLit. My favourite time was to get it for the second half of the period. The first half was an add-on that linked to whatever it is we would be doing in iLit that afternoon...I used it during the second half of the day as the

> formative/consolidation part of the lesson. I used it for teaching descriptive paragraphs, narratives, persuasive writing and grammar.

Aelina used the program consistently, utilizing it daily for the second half of the day. Just as Aelina, Aya also planned her program with iLit in mind. She incorporated the program in her planning, expectations, and grading,

> Students had to complete 70% course work; units one and two was teacher-led, and then unit three was iLit. Out of 70%, units one and two were weighed the same as unit three. The final 30% was their FSE (final summative evaluation). So iLit really was a big part of their marks. So, I really used the program heavily towards the middle of the semester and I did that purposely. I wanted to give the students some basic reading strategies and vocab and grammar that would serve as a review for those who already knew it and a basis for those who did not, so that they could step into the program with more skill. I think this worked well because it built their confidence in the program. They were able to write an opinion paragraph and know what simple sentences and complex sentences were etc. This made the program less daunting for them.

As a result, Aya planned out how she would incorporate iLit ELL into her existing literacy program while keeping in mind the need to prepare her students with the necessary skills for success.

Angus also discussed his intentions and plan to incorporate iLit ELL into his daily routine and program, explaining how he wanted to use it weekly for independent reading sessions,

> I believe over the course of two terms I tried to use it once a week, at least that was my goal. I believe I may have reached 80% of that goal first semester, not necessarily

> successfully because it was too cumbersome and not too productive…I integrated as part of my structure into the teaching. I was hoping to have the students read independently or the semi-independently with some guidance perhaps once or twice a week. So that was the intention, or at least I followed some of that over the course of the two semesters…and with the second semester, I think after about a month I abandoned because I realized my class level was too low but more because of the program itself was too gigantic.

In contrast to Aelina and Aya, Angus implemented the program sparingly, using it once a week, but not consistently. His inconsistent use was a result of the barriers he experienced when navigating the program, particularly its size. As mentioned earlier, iLit ELL is designed in units, and within each are lessons. The sections are created in a fluid manner, allowing teachers to select which units and lessons they would like to implement, based on their goals and the needs of their students. However, the openness of the program appeared to overwhelm Angus and inevitably shaped how often the program and its features were used.

The challenges Angus experienced were unknown to me until the end of the first semester; however, it did not come as a surprise. The minimal communication was something I had become used to from the previous eight teachers who chose not to implement the program for a second semester. These teachers did not reach out to me or respond to my inquiries; it was only through my assumptions and final debrief to find out they were no longer interested in the program. Angus, however, did share his original feelings of dissatisfaction during our first interview, but declined my offer of assistance, and did not seek guidance or support. By the second semester, history seemed to repeat itself, and it was not until I requested a time and date for a follow-up interview that I learned the program was no longer utilized.

Towards the middle of the second semester, Aya also experienced difficulties with iLit ELL; however, unlike Angus, her challenges were a result of technical barriers. When the challenge first occurred, she sent me a detailed email explaining the situation and the attempts she made to resolve the matter. For about a month, Aya and I conversed back and forth weekly, met in person and opened a claim with the technical support team at Pearson. Despite investing time and searching for answers, the technical problems persisted, which resulted in an unstructured and chaotic environment,

> This term, students had a hard time logging in, and I would be sitting at my desk trying to figure things out, and I wouldn't necessarily have other work ready for them on the spot since I planned to use it. It would be chaotic, kids on their phone, etc. and then I made the choice to move on. It is nerve-racking for me to be in a class that is chaotic, and I felt more panicked because every day we weren't getting work done I was disadvantaging them. Then I would spend periods trying to figure it out with them so I made the choice to move on so that I could better support my students.

Aya's struggle to manage the program and class simultaneously coincides with research that suggests classroom management issues and technical errors contribute to the underuse of technology in the classroom (Brooks-Young, 2007). However, even when challenges with the program arose, Aya continued to utilize her time and resources to overcome the obstacles she was experiencing. She persisted in trying to get the program to run as effectively and smoothly as it had in the previous semester. Once again, her decisions were based on and justified by, her efforts, goals for her class, and the learning needs of her students.

As a result, teachers who perceived iLit ELL as a useful tool and resource took the time to explore and understand the program, built connections between iLit ELL content and the

established program, and implemented the resource intentionally and consistently to meet existing learning goals. Educators who engaged in a meaningful planning process with the iLit program also appeared to do so even when the program was not in place. Additionally, those who discussed intentional planning shared how lessons were designed and driven by the students' current learning needs and course expectations (Calderon et al., 2011; Coppola, 2004; Watkins & Lindahl, 2010).

Relationship Between Flexibility and Adaptability when Confronted with Change

The ability to adapt is critical in enabling success in changing circumstances (Collie & Martin, 2016). Collie and Martin (2016) explain the relevance of adaptability in the teaching profession, indicating, "…teacher work involves responding to and managing constant change" (p.4). Other researchers have also highlighted the significance of teachers' flexibility in the profession, noting its importance in meeting students' social, emotional and learning needs, building teacher resiliency, and enhancing teachers' level of commitment (Collie & Martin, 2016; Corno, 2008; Mansfield, Beltman, Price, & McConney, 2012).

When reflecting on her implementation of iLit, Aya expressed her acute awareness of the discomfort that arrives with change and a new technological resource but sees these as opportunities for growth. She does not claim that she is confident, but rather, discusses how her confidence is growing. The more she openly engaged with the program, the more comfortable she became with it,

> I am becoming more confident. I typically don't feel comfortable with technology and am normally really nervous. When I was first proposed the iLit program I was really afraid of using it because I didn't feel good with tech, but when I sat down and saw that it was user-friendly, my confidence rose. In the beginning, I felt very unsure of using tech

> in the classroom that was other than PowerPoint, etc., but when I looked through it, navigated it and felt the successes of it from the first year. I feel pretty confident now. So, it went from low to high.

Aya also highlighted how the novelty of the program could cause feelings of hesitation across educators traditionally accustomed to pen and paperwork in a literacy class. She recognized that the change and shift towards the use of technology could be difficult to overcome, but welcoming new avenues and appreciating them, can make it easier to see how it connects and aligns with current practices and curriculum. She described this connection as she reflected on her practice, noting that the iLit program aims to achieve what most educators plan and do already. She went on to explain,

> In my opinion, the formatting is different to what we're used to. I am coming from a pen and paper perspective, most of what I am expected to do is pen and paper and not mandated electronic works that we do with the students, so trying to do something like this is different and having an appreciation of this would help make it work. So, it is different from the style that I am used to but valuing the computer as much as the pen and paper would come if they can see how easily it connects to their curriculum and how it is essentially asking the same from the students. Reading a story online and the questions that get them to stop and think, is what we do regularly, it is just being displayed in a different format through the iLit program.

A critical element that Aya drew on was the importance of appreciating and valuing technology, equally to traditional methods. Her awareness of acknowledging and incorporating both elements reflects her adaptability, which Collie and Martin (2016) remark are essential, especially when "integrating new knowledge into their teaching practice" (p. 5).

Like Aya, Aelina also felt overwhelmed at the introduction of iLit ELL. The stressors of already having a new course to teach and being introduced to a new tech-based program became a burden. But by approaching the program with a clear lens, taking the time to explore the program and reflect on their goals, both women expressed their satisfaction with the iLit ELL program, despite their initial feelings of hesitation, Aelina explains,

> I was a little nervous because that was my first-time teaching ESL, and I was trying to cover curriculum expectations and didn't know the iLit well. I thought it was going to be more work to incorporate iLit, and I had in my mind what I wanted to do and saw it as a burden. But then I realized that I enhanced my lesson with the program.

Aya and Aelina's feelings of hesitation were rooted in their discomfort with applying a new technological resource, particularly, a resource that was unknown to them before our very first meeting. Angus, however, did not consider technology to be a barrier when confronted with change, he expressed,

> I would say I'm pretty confident that I am largely using the tech resources out there that are effective for our students… So, if there is a tool out there, a tech tool that I think will help our students, so it doesn't take very long for me to learn it and so I don't consider that a real barrier to my pedagogy.

Angus was the only participant to explicitly state his degree of confidence when introduced to a new tech-based resource. Surprisingly, he experienced the least amount of satisfaction and success in implementing iLit ELL. His ability to confront change appears to be rooted in his pre-existing attitudes and preconceived notions regarding iLit ELL, as he went on to explain that his acceptance is determined by his judgment and the program's alignment to his pedagogy (Liu, Theodore & Lavelle, 2004).

Additionally, all three participants discussed the feelings that arose with change. For Aya and Aelina, fear and the unknown were motivating factors that encouraged them to challenge their existing beliefs and habits. To adapt to the change that they experienced, both women had an approach to tackling the situation. They were each mindful in creating a meaningful plan that fits their learning and comfort level. Aya explained,

> It obviously had a learning curve in the beginning...My first thing is to see things in blocks and units. So, I write down the parts of the curriculum I want to focus on, and then I build units around it. I try to break down into steps, so when I have the focus, I can take what is in the program to fit the focus. I look at what I want to accomplish and whatever new item I have to implement and see what portions I can fit into what places.

Aelina also discussed her approach by giving weight to the importance of preparing in advance,

> Depending on how well I know that piece of technology, fear with technology deters me. We always have to have a plan B because if the internet is not working or there is a glitch, I have to be prepared to go into a paper copy of it or have boards and papers ready. So sometimes I think the fear of technology is that you have to prepare for plan B if it doesn't work.

Aya and Aelina's approach to handing change coincides with the literature. Both women recognized the significance of tying technology to the curriculum, but also the importance of planning, and having a purpose and direction in each lesson, especially in times that require flexibility (Cennamo, Ross, & Ertmer, 2010; Coppola, 2004).

Angus' demonstrated a different approach to dealing with change when compared to Aya and Aelina. His attitude appeared more rigid and less flexible; additionally, his judgment heavily influenced his acceptance of a new model, idea, or approach,

> I look at the resource; I determine whether it is valuable based on my own experience. I consider whether it can be practically used, how much time it will take to actually incorporate it. I consider whether it will fit the curriculum. I consider which part of the curriculum it would address… I know what the kids need to know and what their expectations are. But with this iLit system, I am not as familiar. So, I am more confident in my own judgment because I know what is expected of the students now and in the future.

Angus' method of evaluating a new resource relates to the literature, which supports the purposeful selection of curriculum-aligned software in fostering language acquisition among ELLs (Jacobs, 2010; Lacina, 2004). Once again, Angus demonstrated how his attitude and pre-existing experiences influence his judgment. Although he did not overtly express that iLit ELL did not align with his pedagogy, his use and attitude towards iLit ELL relate to the work of Cummins et al., (2007), who argued that predetermined attitudes and pedagogy could impede the optimal integration of technology in the classroom.

Adapting technology to programming. Rather than solely adapting their existing program to align with iLit ELL, Aya, and Aelina both explained the various ways they adapted the technology to fit their program. Aya begins by acknowledging the program's flexibility and openness as an ideal starting point,

> I think using this program in conjunction with what I was already teaching is really perfect because I can decide how much or little of the program to use. It gives a lot of space; I could use it just as a grammar resource. What is great about this program is that you can go through different assignments without finishing the units, you can still move onto other units. So as a teacher, it is such an open resource that you really can't go

> wrong, you can use it as a small reader, or you can use every unit. You can go as deep as you want, and this is what you need in a dynamic class with such different students. So, this program makes it so that it can grow with your class, which is so important. I've tried using some step programs, and this doesn't work, but an open resource, to me, makes a lot of sense.

Aya demonstrates awareness of her students' learning strengths and challenges while recognizing the complexity and need to support each learner as they succeed, advance, and face new learning curves. When educators understand students' prior knowledge, daily progress and effort, they are more likely to provide students with the necessary supports and exercise a growth mindset that praises effort, and not intelligence (Dweck, 2006).

As a result, Aya's awareness of herself and her students, steered her practice as she manipulated iLit ELL to meet her program and learning goals. Additionally, iLit ELL was recognized as a step and process she took with her students, which demonstrated the diversity of her role as a facilitator and co-learner,

> I had few of them follow through on the parameters set by the iLit program, because they were working on paragraph writing, but I liked the topic and explanation that the program provided, so I took a handful of students to write a series of paragraphs expressing an opinion and got them to write on a sheet of paper. So, this was my differentiation, and iLit made it a lot easier for me. So, everyone is working on the same kind of assignment, but the parameters are different, but it meets everyone's' needs. And I loved iLit because it gave me a starting point that I could tweak to meet the needs of the students at my discretion, and I was able to do this with them.

Similarly, Aelina took the time to look through the available lessons within the program and used the content to create her worksheets,

> I reviewed the lessons and applied it to my worksheets that I had to bring in the hook into the lesson…I took lessons from the program, in spelling and grammar and turned them into worksheets as well.

In addition to manipulating the lessons to create worksheets, Aelina also adapted the existing rubrics in iLit to fit with the students' expectations and learning goals. She explained how some sections of the iLit program provided immediate feedback to the students, using a leveled rubric; however, the assessment goals did not align with her own. Still wanting to use the given assignments in iLit ELL, Aelina created her rubrics or utilized rubrics provided by the iLit professional development resource bank,

> Sometimes the assessment was not to what I would mark like the student maybe was off-topic. This is why I used the rubrics you provided to help students compare their work. A lot of the sections were out of 4, and as soon as they did two areas that needed improvement, it would mark them as 2 out of 4, marking them at 50%, but I wouldn't have marked them at 50%.

In the end, the teacher participants expressed varied feelings when confronted with change. Teachers who appeared less confident entering the pilot study experienced the most success in implementing iLit ELL. The success of the implementation was linked to the teachers' drive and motivation for growth when challenged by an alternative practice. Additionally, teachers who utilized the program consistently demonstrated an acute awareness of their intentions, goals, and students' learning needs, which appeared to inform their practice and decision to adapt the program accordingly.

Bridging the Gap Across Diverse Learners

Interventions programs that are designed to address specific learning needs have been credited for promoting and contributing to students' comprehension ability and active learning (August & Shanahan, 2006; Gibbons, 2008; Hammond & Gibbons, 2005). More specifically, literacy interventions designed for ELLs have shown to be most effective when accompanied by differentiated instructional practices that are built on the learners' strengths and areas of need (Martinez, 2011; Baecher et al., 2012).

As a program built on differentiated learning, iLit ELL, provides students with opportunities for success while targeting the specific learning essentials of each student. Aya expressed an appreciation for the learner-centered program, as she attributed its personalized and flexible features to enhance the quality of her role, as well as students' success and interest,

> So, this program was very perfect for me because in the moment I was in the classroom with students who needed me to differentiate, and there was only so much I could do. Students were frustrated and refusing the work, and others were bored and yawning, and I couldn't differentiate fast enough to meet the needs of the class that was fundamentally different then what I expected it to be. So, I think that was the push to want to use the program. It was true differentiation; the objective is for me to provide assignments that meet their needs and with this program I could actually do that; because the night before I could decide what the students needed and I didn't have to photocopy 30 different lessons, it gave me materials in place to pull from…it allowed me to do my role efficiently and effectively.

The struggles that Aya refers to have become the norm. Although students may be classified at the same ESL level, it does not necessarily suggest that they are all at the same place in their

learning, as some students may be just entering the course, while others may be on their way out. For me, this has been one of the greatest obstacles I have observed among educators teaching in both mainstream and ESL classes. However, Aya used this hurdle to drive her use of iLit, which guided her lessons and time to personalize instruction,

> With varying classes, it is difficult to have a whole class lesson so the iLit program provided me an opportunity to create a lesson that was generally the same but then each kid could find reading material at their level, and they could take as long as they needed. Stronger students could have other assignments sent to them because the program let me do that, but it also made it so that their friend next to them, who is at different learning level, to still work and not feel left behind. So I did manipulate the program to my needs sometimes when I wanted to change the parameters they set. But to me, they still did all the work on iLit but writing on the paper, and that worked really well for me.

As I listened to Aya, I made a note of her keen sense of attention to the needs of her students, not just academically, but also socially. Aya recognized the importance of social acceptance and inclusion between peers. She strategically utilized iLit ELL to close the academic and social gap between her students to create a confident and safe community of learners. Additionally, her students also referred to feeling included among their peers in her class, but, discussed their lack of confidence and limited social experiences within other courses. The social and academic discrepancy that the students experienced in and out of Aya's class relates to the work of Pappamihiel (2002), who found that ELLs experience an increase in social and academic anxiety in classrooms with their mainstream peers.

Moreover, as an educator, it can be difficult, if not, near impossible, to reach every student during a 76-minute period. The student participants seemed aware of this matter, as one

student explained how iLit created a space to complete tasks independently and to conference with teachers, “It gives me what parts I need to practice. This program is good for students and for teachers because students always forget their papers and what to do, and it is also good for teachers because it is easy to correct.” Aelina also noted that the program was another outlet for students to receive guided support, highlighting how it “allows an interactive practice of the material, rather than just a teacher bringing them through it.” She also remarked on the success she observed in students’ clarity of writing, expression of thoughts, and editing skills. She ascribed this success to the targeted and learner-specific features offered in iLit ELL,

> Their ideas were expressed more clearly. This helped me to understand their ideas that they were trying to express. This is the biggest challenge, students know what they want to say but are not always able to clearly express it, and together you have to fix it. Where here, with iLit, the immediate feedback allowed them to go back in to self-edit, produce higher quality work that was more fluent and allowed me to go back and look over it with a deeper understanding.

Students also recognized improvements in their writing, one student shared,

> The iLit course program helps me to do more practices of reading and writing. Also, it lets me know what level of reader and writer I am in. I think the most helpful part of the program is essay practice because the program can feedback before I submit it to the teacher. Also, it gives me lots of advices that how to write a better essay, and it shows me my spelling, and grammar problems. I’m getting better.

For Aelina, the tailored feedback allowed students to have their strengths and areas for improvement personally recognized while providing them the independence to navigate clarity. One student explained, “students can get feedback easily to fix their writing. When I write

something then get feedback, I can see how did I do during writing to decide whether I need to fix or not." Another student added, "The iLit course program had help me a lot, specifically the feedback tools. After you finish the essay, the program would give you an overall marks and the breakdown of each line: introduction, body paragraph, and conclusion. Then I know what to do next."

Additionally, the differentiated tasks also created greater mobility for students' thoughts by giving them a personalized platform to stretch their thinking and build connections,

> I liked how the lessons were set up and how it encouraged them to make connections; the program broke down the strategies we were trying to teach kids in an easier form... It forced them to think more critically how to use the strategy.

Further, as educators, we are taught to practice a pedagogy that stems from our students' learner profiles and to use this information to inform our practice, lessons, and assessments. Aya used the information she gathered from iLit ELL to meet her students where they were at in their learning, and once again, to create an inclusive and student-centered environment,

> They did the GRADE assessment. I really liked it because it had vocab, it had interactive multiple choice with what is happening in an image, and it let me know who is picking up on their listening. I would have them do this, and I used it a lot to determine how far I wanted them to go. If they struggled, then I would have them do more assignments from unit 1 and 2, which were very basic and focused on grammar and reading points, some students were not there yet so I would move some at this level, and other students who were more advanced to different assignments through other units. But as whole group, I had an endpoint of what we would do as a class.

Similarly, Aelina also utilized the initial diagnostic to inform her practice and program planning,

> I really liked the initial test; it was such a great diagnostic for me because I thought students were in one area and then I saw their scores and areas they were struggling in. We did that at the beginning and then at the end, which showed growth in the students. I know that we see this, but something about seeing it digitalized was more demonstrated for me. I really liked this feature, and I feel that it saves that time of the two weeks of initial diagnostic, and the only thing separate that I would add in was the oral component.

The scores from the initial diagnostic assured Aelina of what she was witnessing in the classroom. Additionally, the initial diagnostic saved her time by contributing to her understanding of where the students were at academically and provided her an overview of each students' strengths and areas of need (Cheng & Fox, 2017).

Ultimately, teachers who adapted, explored, and utilized iLit ELL to fit and enhance their existing program, experienced relief of meeting the diverse learning needs of their students. iLit ELL aided these teachers in their journey and struggle to differentiate by providing personalized feedback, tasks, and diagnostics that produced data to inform their practice and develop a deeper understanding of each learner. Additionally, teachers who applied iLit ELL found that it leveled the social playing field in the classroom, allowing students to work alongside peers confidently, within alternative parameters.

iLit ELL as a Second Voice in the Classroom: Enhanced Skills and Concepts, Confidence, Motivation, and Independence

An overarching theme among teachers and students was the idea of iLit ELL as personalized support in the classroom. Teachers explained how the program offered

opportunities for students to enhance the skills and concepts taught in class, which in return increased students' confidence, motivation, and independence in learning.

Enhanced skills and concepts. Teachers and students well-regarded iLit ELL's descriptive feedback feature. For those who accessed the tool, the adaptive feedback provided personalized and constructive input to assist and strengthen students' literacy skills, while highlighting areas and concepts in need of attention. Aelina explained how the descriptive feedback guided her students through the writing process, by giving them a different take on the lesson and context,

> I feel like they got more out of iLit by using it for the descriptive feedback, it highlighted where they needed to correct their work. It is almost like they had one-to-one on teacher conferencing, without waiting for the teacher to come to them. It was like iLit was the teacher. It really broke stuff down, so making inferences, details from the text and prior knowledge, then it would give an example. I also liked how I can send the assessment back to the student after they have received feedback. This allows the student to apply the descriptive feedback right away, instead of having to wait for the next opportunity.

For Aelina, the descriptive feedback acted as a second teacher in the classroom because it illuminated students' strengths and next steps while providing just enough scaffolds to support and accelerate ELL's language acquisition. Aelina also noticed that students utilized and applied the feedback because it was immediate, relevant, and understandable. Similarly, researchers have noted that when students engage in positive interaction and reaction to teacher and electronic scaffolds, they experience greater motivation in their learning (Khalsa, Maloney-Krichmar, & Peyton, 2007). Many students shared the perceived benefits of iLit ELL; one

student went on to explain how the feedback enhanced her writing and prompted her to become cognizant of grammatical errors,

> The most helpful part to me is that I can get feedback when I write something. I can see which part I did well and which part I need to improve on. It can help me to check mistakes of my grammar and spelling. I can get some advice to make article better. It's so helpful.

Furthermore, the tailored tasks, personalized feedback, and application of concepts solidified the material and skills taught by the program and teacher. During the focus group, Angus' student shared his experience with iLit. Although he only used the program for a short time and on an inconsistent basis, the student felt that the program contributed to his learning, specifically, with thinking critically about the text,

> I liked it, of course, yeah. I liked it because we feel comfortable and when we read, it is like an easier story that we can practice for getting to a higher level. And I liked the stories… It taught us to be familiar with like reading, and when you are doing a test. It is easier for you if you have done it before. I wish I was still using it from last year, like it in the class…I think it helped not just the English but the strategy, the way you read, the way you answer. I like the grammar from our teacher, but I like the way I learn to answer questions and read from the program.

The interactive reader was among the favourable features of iLit ELL because it required students to stop and make connections before continuing the story. However, the student also pointed out the importance of balance by recognizing the benefits of receiving teacher-led instruction. The balance between teacher-led and technology-based teaching relates to the work

of Brown (2016), who emphasized the importance of human interaction in enhancing student performance and engagement.

Other students also experienced academic improvement and a greater grasp of literacy concepts. When completing the final reflection, students wrote about the program and the growth they saw in themselves. One student emphasized the strength he observed in his reading, writing and comprehension abilities,

> For me, iLit was way helpful towards my reading and writing. iLit course was all about reading and writing. This course helped me read more new vocabulary. I learned a lot of different new words. iLit was helpful to summarize the story that I read, with the comprehension questions that was asked made me understand the story more, and the short texts with questions improved reading skills.

Another student shared how iLit ELL's lessons, assignments, and tests expanded her vocabulary and spelling,

> The iLit course program helped me on different ways. It made me know more new words and lead me to practice reading articles and writing essay. This program is very helpful, but I think the most helpful part in this program is the spelling test because this part let me know many synonyms and some difficult words. It greatly improved my vocabulary communication.

The students' feedback describes the array of features that promoted, engaged, and strengthened their learning. The lessons and assignments narrowed in on specific literacy skills, while the feedback provided students with a starting point to enhance their comprehension of the texts and writing. In addition to supporting students, iLit ELL also appeared to relieve teachers' stress and stretch for time.

Confidence. While engaging in iLit ELL, students not only enhanced their understanding of the skills and concepts delivered in class but also increased their confidence and resiliency to challenge themselves. The relationship between the integration of iLit ELL and students' confidence relates to the work of Sessions, Kang, and Womack (2016), who found that students who engaged with technology during writing tasks, produced more creative and descriptive work, and greater confidence in their writing abilities. During our discussions, Aya always referred to the growth she observed in her students' attitudes, motivation, and self-confidence. For her, iLit provided a platform where students felt safe and confident in taking risks in their learning,

> They had a positive reaction, they were all very into technology and would bring their laptops and iPads themselves; so, they enjoyed using it. And I think the program reinforced a lot of the strategies and literacy points that I was teaching them in class and I think it built their confidence, to make them want to try and go outside and expand on their ideas and write with more depth because they moved at their own pace, and I think this calmed their nerves, which in turn helped them create more meaningful work.

The tailored lessons and feedback, as well as Aya's approach and use of the program, allowed students to work independently and at their own pace. Aelina's observations of her students echoed the excitement Aya witnessed. While using iLit ELL, Aelina noticed an increase in student confidence and motivation when feedback was given from the program,

> They were always excited, and on the days off they would ask to use it. It boosts their confidence that they were getting feedback, especially from something other than a teacher. Additionally, the self-editing tool iLit provides for paragraph, and essay writing increased students' ability to self and peer edit, which allowed students to understand

better what their next steps look like. This helped students to set individual SMART (specific, measurable, attainable, relevant, and timely) goals.

The increase in student confidence was linked to the personalized support the program provided. More specifically, the students in Aelina's class utilized and applied constructive feedback to improve their work and to pursue meaningful learning objectives. Aelina also noted observing students being more open and receptive when they received feedback from the program. Aelina's observations coincide with the findings from Tuzi (2004), who found electronic feedback to be a positive stimulus in generating ideas and next steps for ELL students.

Students also noticed growth in themselves and their literacy skills. During the focus groups, many spoke with confidence and showed a sense of pride as they discussed the advancement they believed they made, "I feel like my English get more and more higher. I think it got higher from reading, practicing and making more paragraphs." Similarly, another student also felt the program helped develop his understanding. Speaking with great confidence, the student explained how he is now advancing out of ESL, "I really understand more, and now I can understand more and I know I get better English. Like now I go to grade 11 College, and that's why I like it so much."

The advancements teachers witnessed, as well as the growth students' personally experienced, contributed to enhancing students' confidence. Based on teacher and student feedback, the increase in students' confidence was linked to the use of iLit ELL, which provided students with alternative opportunities to exercise the English language and literacy concepts taught in class.

Motivation. In addition to increasing student confidence, students were also more motivated to complete the work to the highest degree. The students' level of motivation appears

to be linked to having the time and support to master the task while remaining engaged in the process of producing work. Aya explained the change she observed in her students' desire to revise their work. The revision process was guided by the feedback students received from the program, as well as their drive to master a concept or lesson,

> One thing I noticed was there were a few assignments to resend, and the students really took advantage of this. If they did bad, they would want to do it again and were almost too eager to redo the assignment, but they started to realize that they played a role in their marks. Now they would ask to do assignments again, and or ask to do assignments that were similar or another reading task, and they felt that it was a shot at redemption. So, they really felt the motivation to work harder, and this is what I wanted them to feel. The strong ones and the ones who really wanted to do well took advantage of this.

The motivation piece is what Aya seemed to strive for her students. Her original battle to engage and sustain student interest and motivation was now alleviated by iLit ELL's resources, assignments, and openness. She now had the time and space to differentiate tasks, provide individualized support, and appeal to the various learning needs, interests, and styles of her students. More importantly, some students now appeared more interested and invested in learning and demonstrated a greater sense of responsibility to complete assignments and daily work to the best of their ability.

Additionally, Aya went on to discuss the re-send feature of iLit ELL as a motivating factor for many of her students. Embedded in the iLit ELL program is the teacher's option to withdraw, send, or re-send assignments. For Aya, the re-send button provided her students with the opportunity to re-do, or make-up missed work, which in turn appeared to reduce student anxiety, and pressure, while opening the floor for students to immerse themselves in the learning

process. She discussed in detail how the option to repeat the assignments seemed to motivate even the most withdrawn students,

> Two girls had a hard time getting motivated, and they just didn't care to participate, they didn't get their assignments done. When it was paperwork, there was a barrier, but when they got a chance to have a choice on what they were working on and what pace, it was a really positive turn for them. I was really worried they weren't going to do well and the iLit saved their mark because they were able to get a decent mark out of the class.

It appears that the students' increase in motivation is not only linked to self-improvement, but the incorporation of technology, as researchers have indicated that student motivation, language development, and emergent literacy skills are enhanced, when effective technology and literacy programs are joined (Adescope, Lavin, Thompson, & Ungerleirder, 2011; Al-Awidi & Ismail, 2014; Jeong, Cho, & Hwang, 2012; Traore & Kyei-Blankson, 2011). Additionally, Aelina also noticed a surge in students' quality of work, explaining, "essentially, in comparison to a written handout, the students produced higher quality work on iLit."

The observations made by the teachers align with the work of Kroll's (2001), process approach in writing. Kroll (2001) describes the process approach as a term where,

> student writers engage in their writing tasks through a cyclical approach rather than a single-shot approach. They are not expected to produce and submit complete and polished responses to their writing assignments without going through stages of drafting and receiving feedback on their drafts, be it from peers or the teacher, followed by revision of their evolving texts. (pp. 220-221)

The process approach motivates students to become engaged in the work and activities because it removes the constraints of time, and focuses on making connections, producing multiple

drafts, collaborating with peers and utilizing the text to produce higher quality work (Hasan & Akhand, 2010). The characteristics of the process approach align with the features of iLit ELL, as well as Aya and Aelina's pedagogy.

In addition to motivating students to complete the work, the students also noted how the program spurred a sense of healthy competition, both internally and externally with peers. One student explained,

> It really help my writing skills. When I try writing, after I finish writing my essay it gives me feedback before I hand it in to the teacher, so then I can get a higher mark. So I can change my grammar problems and spelling, so then I can fix it before I hand it in, so it really helps.

Another student added, "for me, I like it in the class because you have more pressure on you, and it gets graded, and you can make competitions with your friends." The increase in student motivation was observed by teachers and recognized by students. It appears that students were both intrinsically and extrinsically motivated to complete the tasks. Intrinsically, because they felt they were progressing in their reading, writing and comprehension, and extrinsically through higher marks, and peer competition.

Independence. Independence was another characteristic that emerged from the students as they engaged with iLit ELL. The degree of independence varied, however, as all three teacher participants observed it. Aelina was the first to comment on the increase in student independence, which she said was ignited by the student library. She explained how the students enjoyed the independence of selecting their text because they aligned with their interests and reading level. As a result, reading became a leisure activity that students would engage in without prompting,

> I caught some of them that really liked the library and going to find different stories to read for their own pleasure. This was cool, the library, of not having it attached to the lesson, and then watching them take part in extra reading on their own time. We now motivated them on their own to go and read.

Angus also observed his students being drawn to the embedded library, which aligned to their reading level,

> The students were immersed in their independent reading because they could choose it; that was evident. I feel there is a lot of merit to the independent reading and in the kids finding their own material that they enjoy reading. I think it's important because once they begin to understand that reading is not a chore or a task, then they are halfway there. Were they more immersed than a course text? Possibly, but that depends on how the course text is taught. We did a novel study, and because of that a lot of kids were looking up civil rights readings. So, they made connections between what we were reading in class and what they were reading independently because they could understand the context. They were more motivated to read independently, but other than that, I don't think their motivation changed... I think the Lexile level and genre selection made it easier for students to select books, for sure.

Although Angus does not full-heartedly give weight to the value of the iLit ELL program, he does acknowledge that it sustained the students' motivation to read independently. But once again, there appears to be a power struggle between his pedagogy and the program, as he alludes to his own practice and professional judgment to have a greater effect on students' interest and motivation towards learning.

Moreover, the personalization of iLit ELL met the needs of all students in the class, particularly those who preferred to work independently and wanted to avoid lectures and instructions. For these students and others, iLit provided an outlet and base to build autonomy. Aya noted,

> They were very motivated to use the program. We had a few behavioural students who were disruptive and who typically took up a lot of my time, which slowed the class down, and the days I provided instruction, it was frustrating for them. This program made it so they could put their headphones on and work, and allowed me to work closely with the disruptive students, while others could go about and start their work. I had two misplaced students who should not be in my class and were very disruptive, but when we started using this program, the kids were more focused and had a handful of kids who would also act out in class because they felt that was ok for them to do it and this program made it so that I could redirect to their work, and they were motivated to get a good mark.

For Aya, iLit relieved the tensions and distractions associated with disengaged students. It provided her with the necessary tools and resources to differentiate while giving students a choice and the ability to lead their learning. In doing so, Aya was able to focus her attention on students who required personal support and engage others in the material and content delivered in class.

As a result, iLit provided teachers and students the basis for personalizing instruction and feedback, which enhanced student understanding, confidence, motivation, and independence. When growth was observed in students, teachers continued to utilize and incorporate features of the program. The continued use of iLit aligns with the work of Guskey (2002) who stated, “when

teachers gain this evidence and see that a new program or innovation works well in their classrooms, change in their attitudes and beliefs can and will follow" (p.388).

Gap in Culturally Responsive and Student Interest-Based Text

As an educator for ELLs, I have always experienced challenges in finding meaningful and developmentally appropriate resources for my students. My difficulty with discovering high interest, low-leveled readers was a driving force in initiating this study and piloting iLit ELL. While iLit ELL is designed for English language learners, there remains a disconnect among students' experiences and cultural background and the readings provided in the program. Although the need for culturally responsive and student-interest text was not highlighted among all teacher participants in this study, Aelina and multiple students across the three schools noted the absence of relatable and diversified texts. Aelina was the first to bring the matter to light as she reflected on her experience as a facilitator and observer of the program,

> Some stories were not culturally diverse, but the lesson was broken down nicely. I would question how the students saw themselves in the stories. Culturally, it didn't hit everything, particularly with FNMI (First Nations, Metis, Inuit), or stories about immigrants or their challenges. There was only fiction and not non-fiction texts in the lessons.

Aelina's remarks regarding the relevance of the program's text to the student's lives were also mentioned during my pilot of iLit ELL at the elementary level. Educators during the first pilot study also questioned the texts' degree of relatability to the students' diverse experiences. A student also acknowledged this divide during our focus group, explaining, "they have like Chinese stories in it, but they are not good. The story is too old." Although the program does include various cultural texts, the stories remain dated and of little interest to the reader.

The cultural divide between the text and the student experience could be rooted in the program's origin. iLit ELL is an American-based program, designed for the American newcomer demographic. In the United States, the immigrant language is dominated by Spanish speakers, who represent up to four million of the population, and more than six times the number of Telugu, Arabic and Hindi speakers (Center for Immigration Studies, 2017). However, according to the 2016 Canadian Census, over 7,000,000 of Canada's top largest cities' populations were closely represented by Mandarin, Punjabi, and Arabic speaking people (Statistics Canada, 2017). The American and Canadian divide in immigrant languages speaks volumes to the content represented in iLit ELL. Being that iLit ELL is as a commercial, educational program, it makes the most sense that they would target its leading language group.

In addition to the cultural divide, students also commented on the limited versatility in the program's text options. Though there are over 1,600 leveled stories to chose from, students in Aya's and Aelina's class expressed some dissatisfaction with the genres and types of text. One student shared,

> I think the program also needs improvement because I would like to read interesting books, but they didn't have it, like newspapers and magazines about the world. Maybe even put like CBC news on there, I think this would improve the program by putting in news that happens in the world and in magazines. I didn't just want to read stories; I wanted something like for history too.

Many of the students from Aya's class were interested in gaining a global picture of the world. Their desire for historical and current news seems to reflect their cultural reading norms. According to an e-commerce survey, which looked at the preferences and habits of Chinese readers, women sought out books focused on hobbies, while men preferred texts focused on

career planning and knowledge acquisition. Additionally, original literature and study-related texts were most popular among Millennials (Guo, 2016).

In addition to the cultural void, Aelina's class added suggestions to improve the program's reading selection, one stated, "if I have a chance to change this program I would change the reading to provide some long story or novels, not just the short stories." The student's proposed idea was expanded further by a student in Aya's class, who wrote that the program aided them in their learning experience, although, would still prefer to have a selection of popular, well-known texts,

> The book is a little bit boring for me because I don't know who the author are, they are not famous, so I don't really know who they are. But the program help me to focus on the work and on the book, so that's good.

The shared experiences of the students, as well as the teacher's observation, emphasize the need to include various styles, and lengths of relevant and popular reading selections to promote and build students' capacity and interest in reading. Although overall, the participants expressed enjoying choice and developmentally appropriate texts that aligned with the students' Lexile level, there remains a gap in meeting the students' interests and experiences.

Effects of Teacher-Scripted Text, Program Volume and Technical Difficulties on Implementing Technology in the Classroom

Researchers have argued that limited technological support, equipment, and program understanding are among the most prevalent obstacles for integrating technology in the classroom (Ertmer et al., 2010; Liu, 2012). Additionally, the constraints of time also impede on technology integration, as educators are typically required to introduce the program while maintaining the responsibility of lesson planning (Lim & Khline, 2006; Liu, 2012; Tsai & Chai,

2012). It is with no surprise that the participants in this study communicated tangles in their journey while integrating a new technological resource; however, no educator shared the same challenges; each expressed a unique situation and hurdle when accessing the program.

Angus was the first to express his frustration with the program, which he shared with me during our first interview in June of 2018.

> It's too big. It's hard to find out what's involved in a unit. Spell it out in an easier way so we can see what the kids are learning. I want to know what I am doing. I feel I don't know what I am doing. Trust teachers more, we don't need you to tell us what to say. Don't give teachers so much, give them the raw materials and let them practice pedagogy. Give me what they need to do because I want to be able to just give them the work and not read about it.

For Angus, a setback of iLit ELL was its degree of scriptedness. Like any teacher guide, iLit ELL is prepared with teacher scripted text to help guide the educator in facilitating the instruction. The text is not mandated, or required; rather, it is a prompt used at the teacher's discretion. In Angus' case, the script seemed to restrict and overstep his role as the classroom teacher. The feeling he experienced while incorporating a new resource is common among educators, yet, researchers warn that technology is not a replacement for the educator but support to enhance the quality of instruction (Brown & Militello, 2016; Keengwe & Hussein, 2014).

In contrast, Aelina explained how she benefited from the scripted text,

> It would tell the teacher what to say too. It would give me a different way to deliver the information. My own vocabulary as an English teacher may be too high leveled, so I may not always be delivering it orally to their level, so the feedback for teacher to say, broke it down further for the students.

Aelina's taking to the scripted text could be rooted in the fact that she is considered a "newer" teacher; however, her justification seems to show otherwise. Aelina explained how the scripted text provided her a different lens and approach to introducing material to the ELL students. More importantly, she reflected on her language delivery and the receptiveness of her students. Aelina's actions coincide with the work of Dweck (2010), who argued a teacher's awareness of how language is used and structured can increase student motivation and effort.

Subsequently, teacher scripted text deterred Angus' level of comfort and confidence with the program along with the program's size,

> The other weakness is that it is difficult to seek out grammar points in each unit. It's just hard to navigate in general. It is not as efficient as I think I am…I feel like at the end of the day it has merit, but because it is so cumbersome it is almost not worth the effort, and because of that it has limitations…It's too cumbersome to find the jewel in the program or in that day's lesson. I can do it much quicker myself.

It appears the scope of the program did not justify Angus' time, causing him to feel less efficient in his role. Being that iLit ELL was a new resource with many units and lessons, Angus had to explore the program. Exploration, however, is not typically a structured task, but one that involves getting your feet wet and expecting the unexpected (Dweck, 2006). In contrast, when we are habituated in our routine and practice, our search for something new becomes specific and less broad. Thus, a rigid approach appears to create feelings of success, security, and stability, which heavily contrasted Angus' experience with navigating iLit ELL.

In the end, Angus officially discontinued his use of the program after the first month of the second semester. His confidence in his ability superseded the material and resources provided in iLit ELL. Although he chose not to pursue the program further, his reasoning aligns

with the top deterring factors, such as program understanding and time, along with Davis' (1986) Technology Acceptance Model, which indicates that the acceptance of new technology is contingent on the user's attitude towards the system's usefulness and perceived ease of use (Banas, 2010; Ertmer et al., 2010; Liu, 2012).

Similarly, Aya also abandoned the program by the second semester; however, her approach and reasoning differed from Angus',

> It was honestly wonderful before they changed the update. The second time had a lot of technical issues; I couldn't get students logged in, some students would see the assignments sent, others would not. One day I had students create journal entries, some days it would save and others it would not. The semester is so short that I had to make my best decision for my students and so I had to make a choice from there and step away from it and use the little time I had with them at the maximum.

During the second semester, iLit ELL introduced an update to the system. When the update was implemented, Aya immediately noted the continuous occurrence of technical difficulties in the classroom. Although she experienced delays in her programming, she was keen to utilize the program and overcome the challenges; however, the constraints persisted. As the matter continued to impede on the structure and productivity of her class, she explained how she reflected on her journey and the needs of her students to make the ultimate decision to end the use of iLit ELL.

The technical difficulties experienced by Aya are not uncommon, as researchers have found inaccessible, impaired, out-of-date, and updated technology equipment to be a significant concern and barrier for educators in practice (Brzycki & Dudt, 2005; Finley & Hartman, 2004,

Liu, 2012). Moreover, when such obstacles occur, it adds to the tensions and demanding responsibilities of the teacher's workload (Harris, Mishra, & Koehler, 2009).

Despite Aya's technical challenges, new challenges emerged when iLit ELL was omitted from her program,

> I think if I wasn't so stressed for time, I would have been able to figure it out, but the students had needs, I had a student teacher, so I wasn't able to do that, but it made me sad to not use it. Now I have to do and create and search on my own because I do not have any resources assigned to my class and I am creating my resources and this program took that stress away and allowing me to actually sit and work with the students rather than spend that time creating material.

The removal of iLit ELL brought on additional stressors that were eliminated during her initial use of the program. In the first semester, iLit relieved the tension of creating and reinventing new resources. Additionally, she had the flexibility to manipulate and differentiate the material in ways that aligned with her existing practice and goals for her course and students. Without the program in place, Aya now had to search for material to use.

Unlike Angus and Aya, Aelina's challenges did not impede or affect her use of iLit ELL in the classroom. The challenges that Aelina experienced were both technical and building-related,

> An area that was challenging was the sign-ins. Sometimes they didn't work, or we would have to switch usernames or contact you. This made it a bit challenging…Glitches regarding the voice recording and listening and headphones. Pronunciation could have been a barrier. Maybe they had to be a certain level reader for the program to hear what they were saying. Or maybe the different iPads were hearing different students talking.

The internet in the school is also not working well; sometimes we would have to move around the room.

Like Aya, Aelina also experienced challenges signing into the program after its recent update; however, the matter occurred sporadically and did not impose on any other features or tools. Additionally, the program was interrupted by the inconsistent wi-fi connection within her building. The staggered internet connection could be a result of the building's poor infrastructure, which can often limit the access and use of technological devices (Harell & Bynum, 2018).

Overall, the teachers who facilitated iLit ELL experienced multifaceted challenges that ranged from user accessibility to technical difficulties. The way in which the teachers approached and managed each situation seemed to reflect their initial attitudes, mindset, and degree of adaptability when confronted with change and a new technological resource (Inan & Lowther, 2010) However, the working condition of the application remained out of the teachers' control, and heavily effected the preparation time and workload demands (Brooks-Young, 2007; Hariss, Mishra, & Koehler, 2009). As a result, the teachers' attitude and iLit ELL itself was the largest obstacles in hindering the program's use.

iLit ELL as a Universal Design for Literacy

The mention of iLit ELL being a transferable resource for all learners was a common theme among teachers and students. Although the program is specifically designed for English Language Learners, iLit ELL offers embedded professional development for teachers, which include suggestions and scaffolds for diverse learners, such as students with identified learning needs, as well as, students with visual and hearing impairments. These features were never accessed by the teacher participants; however, the core of the program seemed to provide

enough prompts, scaffolds, and support to reach almost every student in and out of the classroom.

Aelina explained how she saw the benefits of the program in her room but could envision it being used by other language and literacy educators, both mainstream and ELL,

> I would recommend the use of the iLit program to other secondary teachers who are teaching ESL or not… I would use this program even with grade nines, so it would benefit in schools who do not have ESL programs but does have ESL students and non-ESL students. It looks at inferences, predictions, descriptive paragraphs, essays, character analysis, persuasive paragraphs, etc. and touched on all the assessments we do anyways.

As an educator in ESL and mainstream English courses, Aelina made a note of the connections she observed between her courses and the skills and content taught within iLit ELL, indicating the content could be easily transferable across all learners. She credits the fluidity of the program to its content and focus on enhancing students' academic literacy, which she says is at the core of all language courses.

Aya equally noted the program's versatility, stating, "This shouldn't be exclusive to ELLs but accessible to any students who need to strengthen their literacy skills. I would love to use it again in that context, to see it as a literacy source." For Aya, having a go-to resource alleviated her original stressors of differentiating and having to search for material, while the seamlessness of the program provided her with the content and space to guide all learners.

The teachers were not the only ones who commented on iLit ELL's flexible use. Students also noted the program's adaptability in their final reflection,

> If I was a teacher of literacy skills, I would recommend this iLit program to students because the program is so helpful and it will improve students' skills. Because I know

> how much this program was helpful to me for the writing and reading. Students who actually want to improve their literacy skills this program should be recommended for them.

The student's views were echoed by another, who also wrote the program enhanced his literacy skills,

> I would recommend the iLit program to other students to improve on their reading and writing skills since the iLit program has massive book choices for student to read. When you come across on new vocabulary, students can highlight the word and use the translate tool that's built into the program. The feedback too can also improve student's writing skills because it tell student where's their weakness and strength, therefore the student can work on their weakness, such as the introduction, and finally, cause students to improve their writing skills.

Overall, many of the students during the focus group, and in the final reflection, shared how the features of iLit ELL not only provided them the opportunity for success and growth but had the potential to do the same for English native speakers. The versatility of the program was also commented on, as one student explained, "it work on the basis of students' levels to give them different level program."

The teachers' and students' views of iLit ELL mirror the features of the Universal Design of Learning (UDL) framework. The UDL framework is a guide based on three core principles (multiple means of representation, multiple means of expression, multiple means of engagement) that guide the effective and inclusive instruction for all learners (Rose & Gravel, 2010). It is described as the alternative to modifying and accommodating; "rather than needing to "retrofit"

instruction to address individual students' differing needs, accessibility of instruction is built into the design of the learning experiences" (Dalton, 2017, p. 20).

More than just being described as a flexible and fluid program across all learners, Aya also noted how well the program aligned with her school's current demographics and learning goals,

> I would recommend the program because our school, in particular, has a large influx of ELLs and this program will allow us to differentiate and meet their needs in a way that still works with the parameters of the curriculum. So our school environment would really allow this program to work and alleviate stress for teachers and students who are struggling and need modifications, accommodations, so they would be able to use this program as such.

As mentioned earlier, Aya's ESL classes are mainly comprised of Chinese exchange students. When discussing the program with Angus, he also shared that iLit ELL would be most effective with an international demographic,

> I think this would probably work well with international students, particularly from China, where the reading can fill a lot of the gaps. So for the international kids, it is definitely a good tool because so many times over the years I have encouraged reading because I know they need more exposure to language and it was always difficult to find reading material at their level. I also think the readers can cater to the needs of the different students, so it can reach a more diverse immigrant population because there are so many interests and independent reading choices to choose from.

As I reflected on Angus' quote, I found myself drawn to his comment regarding the possible success of the program for international and diverse immigrant populations. Once again, his

perspective aligns with Cummins et al., (2007) argument regarding the relationship between teachers' perceptions of student abilities with technology and teachers' incorporation of technology in the classroom. Although his students were working at a level that was lower than the one assigned in iLit ELL, the students remained confident in their abilities and suggested its use for beginner language learners,

> I liked it because I learned a lot from it and I can hear what they are saying, like, when they are talking from the story, and I listen… it helped me to learn how to pick the answer from the story. I would say use it for new beginners.

Others mirrored the student's perspective of the program across the three classes. Regardless of the student's entry point, the embedded tools, such as translators, picture dictionaries and text-to-speech, supported student success and deterred avoidance. One student explained how he was disengaged at first, but the program provided enough prompts to motivate him to continue reading, "I'm lazy, so the iLit course try to push me to read every day."

In the end, most teachers and student participants regarded iLit ELL as a fluid program that has the potential to be successful across all learners and entry points. The program's possibility for success is rooted in its universal and personalized tools, regarded as helpful and motivating guides for students. Teacher judgment and discretion are also valued in the program, as educators can adjust the embedded units and lessons to the appropriate working grade-level of the class. Moreover, regardless of grade level, the program offers optional newcomer units that focus on enhancing literacy skills for beginner readers. Overall, when teachers accessed and utilized the embedded tools and services, they witnessed an increase in student motivation and interest and saw the program as an opportunity to engage all learners.

Summary of Findings

In summary, eight themes arose from the data: relationship between teacher attitude, program perceptions and degree of implementation; relationship between time, meaningful planning and program use; relationship between flexibility and adaptability when confronted with change; bridging the gap across diverse learners; iLit ELL as a second voice in the classroom enhancing skills and concepts, confidence, motivation and independence; gap in culturally responsive and student interest-based text; effects of teacher-scripted text, program volume and technical difficulties on implementing technology in the classroom; and iLit ELL as a universal design for literacy. While it aligns with the current literature, findings indicate additional factors affected the integration of iLit ELL, which will be discussed further in Chapter 6.

CHAPTER 6

DISCUSSION AND CONCLUSION

The purpose of this Interpretive Phenomenological study was to explore secondary teachers' perceptions of iLit ELL, a technological resource specifically designed for English Language Learners and to study the perceived effects the program had on student motivations and attitude towards learning English. The study took place over two academic semesters in 2018, where teachers implemented the iLit ELL program autonomously into their existing ESL class programming.

As the first to research the use of the program among secondary educators in Canada, I addressed the following research questions using teacher semi-structured interviews, student focus groups, student reflections, and my observations and field notes:

1. What are teachers' perceptions of iLit ELL as a technological resource and program for ELL students?
2. How do teachers perceive iLit ELL to effect students' motivation and attitudes towards learning English?
3. What are teachers' perceived levels of comfort in introducing new technological tools in their classroom programming?
4. How do students perceive iLit ELL as a tool for learning English?

The data were analyzed using Interpretive Phenomenological Analysis. I chose to conduct the study using IPA due to the descriptive nature of the methodology, as it gives participants the space to create meaning of their experiences while allowing the researcher to interpret, decode and make sense of the participants' meaning-making (Smith & Osborn, 2008).

Although the discussion chapter of an IPA research paper typically builds connections between the themes and literature, I have chosen to use this chapter to provide a summary of the findings as they relate to my research questions and the phenomenon studied (Pietkiewicz & Smith, 2014). This chapter also contains a discussion of the major findings from my interpretation, the literature, and it highlights potential implications and recommendations for practice.

Summary of Research

I have used the emergent themes, existing literature, and Davis' (1989) technology acceptance model (TAM), Bandura's (1977, 1994) self-efficacy theory, Deci, Connell and Ryan's (1989) self-determination theory, and Krashen's (1982) input and affective filter hypothesis, to provide a holistic view of each question.

What are teachers' perceptions of iLit ELL as a technological resource and program for ELL students? The purpose of exploring teachers' perceptions of iLit ELL was to uncover the program's degree of usefulness for secondary ESL classroom teachers. In analyzing the data, it was evident that there were mixed reviews regarding the program's ease of use, applicability, relevance, and effectiveness. When looking at the perceptions of the three teachers, Aya and Aelina found iLit ELL to be a useful and effective resource in reaching their learning goals and shared an interest in continuing the program. However, on a larger scale, these women represented the minority, as Angus and the other ten teachers in-serviced, either discontinued or did not initiate iLit ELL.

All teachers invited to partake in the study shared the common concern and desire to gain developmental and academic appropriate literacy resources for their ESL classes; however, only two teacher participants found the program to be effective in meeting their desired learning

goals. The reasoning behind Aya and Aelina's acceptance and perceived success with the program relates to Davis' (1989) technology acceptance model. Davis' (1989), technology acceptance model suggests external variables contribute to the user's perceptions of the program's perceived ease of use and usefulness, which affects their attitude toward, and application of, a new technological resource. Although the current and invited teacher participants initially perceived the program to be useful, only Aya and Aelina recognized the program as having ease of use. Unlike the other participants, Aya and Aelina spent time navigating the program, and built connections between curriculum, learning goals and the content within iLit ELL, while others were deterred by its size, flexibility and the personal time it required. Once Aya and Aelina established connections between content and curriculum, they experienced greater intentions to apply the program.

Aya and Aelina's intentions to apply the program transpired into action and created an opportunity for them to observe how the effective integration of iLit ELL increased their efficiency as educators and enhanced student learning and engagement. As a result, it appeared that Aya and Aelina understood the weight of their role in implementation, which effected their outcome and overall perception of iLit ELL. The effort and time they invested in planning and determining how the technology would be appropriately used and evaluated highlights existing literature which emphasizes educators as essential facilitators in effectively bridging curriculum and student learning needs to technology (Debele & Plevyak, 2012; Dunbar, 2016).

Like many teachers who engage with a new resource, Aya and Aelina experienced feelings of self-doubt and hesitation; however, these feelings soon diminished. Their perceptions towards the integration of iLit ELL changed when they began to observe positive effects on student motivation, as well as work process and product. The perceived success was attributed to

iLit ELL's immediate and personalized student feedback, differentiated tasks, student library, diagnostics, fluid units and lessons, and interactive readers. Aya and Aelina's observations of students engaging in these features reaffirmed themes within the literature, which ascribe relevant technological resources to improving students' writing process, motivation, and confidence through feedback, and relevant and relatable content (Foulger & Jimenez-Silva, 2007; Hermsen et al., 2015).

Additionally, while reflecting on their practice, both Aya and Aelina noticed an improvement in their efficiency and effectiveness as classroom educators. When combined with the teacher's instruction, iLit ELL alleviated the stress of having to search for resources and customized tasks for individual learning needs, while it provided more time for teachers to conference with students, and to focus on literacy goals, rather than redirecting behaviour (Baecher et al., 2012).

Moreover, those who found iLit ELL to be a useful technological resource for their ESL classes utilized the program beyond the student library and interactive readers. Aya and Aelina accessed and applied a variety of lessons, assignments, and assessments from iLit to enhance their practice. Both women and their students perceived the program as a transferable resource across all literacy classes, both mainstream and ESL. The perceptions of iLit as a transferable resource aligns with current research which indicates effective technology-enhanced learning supports differentiation and the achievement of all learners (native English speakers and ELLs) (Matuk, Linn, & Eylon, 2015).

In contrast, iLit ELL also appeared to hinder the flow of continuity, particularly for those who perceived iLit ELL to be an ineffective tool. For Angus, the most significant barrier of iLit ELL was its sheer size. The openness of iLit required teachers to invest time to explore, build

connections, and if desired, adapt the resource to the existing program. Angus' perceptions towards the program were heavily influenced by having to invest his time to explore and understand the resource. As demonstrated in the literature, time continues to be a setback when integrating technology due to the existing pressures and responsibility of having to plan (Brooks-Young, 2007; Liu, 2012; Tsai & Chai, 2012). Feeling overwhelmed by the program's size and the time it required to understand it, as well as his perceptions of the program's ease of use, Angus' intentions and actual use of the program were overridden (Davis, 1986). Moreover, since the use of iLit ELL was temporary and not mandated by the Board or school administrators, there was little motivation to overcome the depth of the program. These feelings resonate with previous findings that indicate even when there is consistency among boards and districts on the value, beliefs, training, and application of technology, teachers' attitudes inevitably regulate its use (Calderon et al., 2011; Hur et al., 2016).

Lastly, Angus abandoned the program due to the perceived disconnect between the academic and language abilities of his students and the program's materials, as well as the personal feelings which emerged while integrating the program. As found in the literature, teachers' decision to apply or avoid technology is rooted in their beliefs and perceptions of students' academic abilities and abilities with technology (Orafi & Borg, 2009). Such findings reiterate Cummins et al., (2007) belief that technology is rarely used to its protentional due to educators' image of students. Teachers are advised to see themselves as agents of change in technology integration (Fisher, 2006).

However, it appeared that Angus did not see himself as the head and neck of the program's implementation, nor did he regard the program as a tool to enhance his existing practice, instead, his perception of iLit ELL seemed to counter to his current pedagogy and

teaching style, which focused on social integration (Bandura, 1977). Features within the program, such as the teacher-text, appeared to foster feelings of doubt in teacher competency, as Angus explained, that the program developers needed to "trust teachers more." Contrarily, researchers argue that teacher acceptance and commitment towards change requires relinquishing control and embracing trust (Day, 2000).

Overall, the teachers' perceptions of the program, inevitably fell in line with current research which indicates experiences, confidence and mindset are essential elements in regulating the perceived effectiveness of a program and how often a program is applied and the extent to which it is used (Ertmer et al., 2012; Hur et al., 2016; Inan & Lowther, 2010). In the case of introducing iLit ELL, teachers who perceived their experience to be successful were more likely to continue to explore and utilize the program, as opposed to the teachers who found it cumbersome and timely. Based on my interpretation, those who experienced success, whether it was related to their practice, or based on student observations, shared a growing sense of confidence in their ability to integrate and apply iLit ELL and perceived the program as highly effective; the teachers' perceptions related to Bandura's (1977) self-efficacy theory. Bandura (1977) explains self-efficacy as an individual's self-perception and beliefs about the capability of his or her actions. Although the teachers who perceived themselves as having a successful experience with the program still saw themselves as having room to grow and understand the program,.

Moreover, mindset also seemed to play a critical role in determining whether iLit ELL was perceived to be a useful tool and resource for ESL students. Those who demonstrated a mindset that was open to change, exploration and new learning, while investing personal time to understand the program, expressed positive perceptions and regular use of iLit ELL (Lee et al.,

2017; Vannatta & Fordham, 2004). In contrast, the teachers who demonstrated a mindset flooded by hesitation, doubt, and discomfort with integrating iLit ELL abandoned the program (Dweck, 2008).

How do teachers perceive iLit ELL to effect students' motivation and attitudes towards learning English? Teachers' perceptions of iLit ELL's effects on student motivation and attitudes towards learning English varied and were based on how the program's features were utilized and integrated. Teachers who explored, adapted and applied multiple resources observed an increase in student motivation, autonomy, and attitude towards learning. In contrast, when only a few components were accessed, and the program was integrated inconsistently, teachers perceived little to no change in students' attitudes and motivation towards learning as noted in the interviews and field notes.

Aya and Aelina perceived iLit ELL as a powerful tool towards enhancing students' attitudes and motivation towards learning. The women's perceptions were related to their application of the resource and their observations of students while integrating the diagnostics, lessons, interactive readers, and assessments from iLit ELL. The teacher-selected tools were applied purposefully to align with the curriculum expectations, as well as the aims of the course and student goals. Both women noted how students took greater responsibility for their learning and were engaged in the assignments offered in iLit ELL. The changes observed in students was attributed to the iLit program, mainly, for its ability to differentiate tasks, produce personalized feedback, and choice for each learner. The teachers' observed degree of confidence relates to Deci, Connell, and Ryan's (1989) self-determination theory, which suggests opportunities that build competence, relatedness and autonomy enhance student motivation and engagement towards learning.

Although the women emphasized iLit as having a significant effect on student motivation, I believe the time they invested in meaningful planning and integration also contributed to strengthening the learners' attitudes and drive towards learning English. The relationship between purposeful instructional planning and the use of technology has been highlighted throughout existing research (van Olphen et al., 2012). When technology is integrated and adapted in relevance to the developmental, language and learning needs of the student, and teachers provide autonomy-supportive practices, student motivation, and academic outcomes are optimized (Black & Deci, 2000; Niemiec & Ryan, 2009; Reeve, 2009; van Olphen et al., 2012).

Moreover, by engaging in purposeful planning with iLit ELL, teachers were able to reach almost every student's learning needs and increase their drive for learning by having the time and resources to differentiate tasks and assignment parameters. Through differentiation, teachers can offer variations to the lesson or assignment that are reflective of the students' language skills (Martinez, 2011; Watkins & Lindahl, 2010). For Aya and Aelina, iLit became a go-to resource that alleviated the stress of personalizing learning, while the flexibility of the program provided them with the content and space to guide all learners. In response to the differentiated tasks, the teachers observed an improvement in students' focus, drive, writing process, and product, as well as their level of comfort and effective use of feedback. Aya and Aelina's observations align with current research that suggests purposefully selected technology-based teaching software can enhance student motivation, reduce anxiety and strengthen teacher's ability to differentiate instruction (Chen & Hsu, 2008; Echevarria et al., 2013; Reynolds, Arnone, & Marshall, 2009).

In contrast, student motivation is alternatively affected when there is minimal planning, and content does not align with students' language skills (Watkins & Lindahl, 2010). Teachers

who did not notice a change in students' motivation towards learning also did not apply the program consistently or develop a plan for integration. Since the program was not implemented with purpose, Angus was unable to differentiate the motivational effects of his teaching from iLit. However, based on student written and focus group responses, those who engaged with iLit ELL for a limited time were motivated to continue the program for its positive effects on reading, writing, and comprehension.

The teachers who perceived iLit ELL to have a positive influence on student motivation and attitudes towards learning attributed this effect to the personalized features within the program. Teachers and students discussed how the program was tailored to the students' learning needs, with features such as a student library that contained Lexile appropriate readings, immediate learner-centered feedback, and various tasks and assessments that focused on students' strengths and areas for improvement. When combined with other embedded supports, such as the picture dictionary, read aloud, and translator, these features mimicked the principles of the Universal Design for Learning (UDL) framework (Courey, Tappe, Siker, & LePaige, 2013). The guidelines of UDL support all students universally by reducing barriers to learning through multiple means of representation, multiple means of expression, and multiple means of engagement (Courey et al., 2013). When applied to ELLs, Rao and Torres (2016) argue a close relationship between UDL and Krashen's (1982) input-hypothesis and affective filter hypothesis theories, as UDL promotes instruction that is one-step above the student's comprehensible input, within non-threatening and non-anxiety producing environments.

As mentioned earlier, iLit ELL's instructional framework incorporates the Sheltered Instruction Observation Protocol (SIOP), which, like UDL, is multimodal support for students (Echevarria et al., 2013). The first principle of UDL, multiple-means of representation, aligns

with the multi-modal approach of including multi-media texts, visuals, clickable terms and definitions, and text-to-speech features, linked to motivating and supporting ELL's comprehension and development (Proctor, Dalton & Grisham, 2007). Additionally, multiple means of expression are related to the incorporation of instructional technology which provides opportunities for ELLs to demonstrate their ideas, knowledge and to build fluency through tasks that involve multiple forms of expression, flexibility, and choice. As ELL students engage with multimodal supports, they enhance their motivation towards learning through the exposure of new material and concepts that are comprehensible and relatable (Kareva & Echevarria, 2013).

Lastly, UDL focuses on encouraging multiple means of engagement related to promoting choice, autonomy, resiliency for learning, and persistence. To meet these guidelines, teachers are encouraged to recognize and address students' strengths, existing knowledge, and experiences when planning. Aya and Aelina both demonstrated an acute awareness of their students' experiences, interests, and learning styles, and used this understanding to manipulate the iLit program and increase student motivation towards learning. iLit ELL provided students with opportunities to engage in personalized tasks, personalized reading, and receive timely feedback that was relevant to their learning needs. Teachers who found iLit to motivate student learning credited the personalized and differentiated features as its greatest driving force.

What are teachers' perceived level of comfort in introducing new technological tools in their classroom programming? Teachers perceived level of comfort in introducing new technological tools in their classroom varied. Teachers who admitted feeling hesitant and unsure of their ability to implement a new resource were the most flexible and open to change. In contrast, the teacher who expressed a great sense of pride, and who explained feeling confident and unthreatened by change, appeared to be the most rigid in his approach and navigation of the

iLit ELL program. The contrast between the teachers' perceived level of comfort and actual comfort level seemed to align with my observations of the teachers' mindset.

Mindset is the set of attitudes that a person develops through lived experiences. It is often described as being fluid in nature and having an influence on an individual's motivation, development, and personality. According to Dweck (2006), there are two predominant types of mindsets: a fixed mindset and a growth mindset. A person who holds a fixed mindset believes that intelligence is innate, whereas an individual with a growth mindset believes intelligence evolves. Regardless of the type of mindset a person has, it transpires through their interactions and communication. When discussing their level of comfort with implementing a new resource, Aya and Aelina openly shared feeling vulnerable. However, their feelings of vulnerability were not regarded as setbacks, but as opportunities for growth, particularly, as co-learners with their students during times of change. In contrast, when individuals make adamant claims about themselves and their abilities, it is often a sign of a fixed mindset, even if the claim is directed toward desirable characteristics, such as Angus' confident attitude towards integrating technology (Dweck, 2006).

As a result, mindset has a significant effect on how individuals confront change. Researchers argue that individuals with a fixed mindset place greater emphasis on performance than learning and will often display feelings of helplessness when faced with obstacles (Donohoe, Topping, & Hannah, 2012; Hochanadel & Finamore, 2015). More specifically, people with a fixed mindset see their work as validation of their ability; therefore, when setbacks occur, it is reflected as a failure (Dweck, 2000). For Angus, his pride and identity were countered when he became responsible for navigating and implementing a novel program, causing a disruption to the flow of continuity and his self-perception. In contrast, those with a

growth mindset possess an intrinsic motivation to persevere through challenges and recognize the importance of effort (Dweck, 2000). Aya and Aelina displayed characteristics of a growth mindset while discussing the personal time they invested in exploring the program, building connections across iLit and the curriculum, planning and adapting lessons, and navigating through technical barriers.

With mindset and the integration of new technology in the classroom, prior experiences and professional development also affect teachers' degree of comfort to an extent. Teachers with positive experiences integrating technology typically have a proactive stance when having to introduce new technological resources (Chen, 2008). In addition to having positive experiences, teachers' level of comfort is also enhanced with the provisions of training, workshops, and demonstrations (Chen, 2008; Coleman et al., 2016; Murray, 2005). However, based on my observations, and interpretation of the data, the teachers' mindset superseded such factors. Although all teachers were given the same support, additional professional development opportunities, and one-to-one assistance, only those who displayed a growth mindset were committed, persistent and open to introducing, exploring and integrating a new technological resource.

Moreover, the observed divide between the teacher's perceived level of comfort and degree of comfort appeared to be rooted in their identity as learners. As mentioned earlier, to foster effective technology integration, teachers must understand the necessity of their role as agents of change (Fisher, 2006). Van der Heijden, Gelden, Beijaard, and Popeijus (2015), characterized teachers who are agents of change as lifelong learners; receptive to new teaching practices and resources; have a thirst to enhance their knowledge, and are reflective in practice.

Van der Heijden et al., (2015) findings overlap with my interpretation of the participants' mindset and identity as learners in times of change.

Aya and Aelina both characterized their role as co-learners and demonstrated the importance of being flexible to the evolving and specific learning needs of their students and the world in which they live. The women also discussed being in a state of constant reflection and passionately shared how they extended their knowledge through research articles, collaborating with colleagues, and partaking in professional development. Their commitment to lifelong learning aligns with the determinants that Horng, Hong, ChanLin, Chang, & Chu (2005) found to develop agents of change, such as individual personalities, educational philosophies, life experiences and attitude towards learning.

In contrast, Angus' understanding of his knowledge and that of his students were concrete, explaining that he explicitly understood what they needed to know then, now and in the future. Angus' attitude towards his knowledge relates to Dweck's (2006) belief that when teachers feel they have a permanent understanding of themselves and the learner, they hinder opportunities for growth. Additionally, when confronted with change and a new technological resource, Angus's actions aligned with Biesta and Teddler (2006) assertion that teachers' limited belief in their ability to learn or foster change, will deter their attempt to do so.

The contrast between the learner types reflects the mindset of the participants as they engaged in the study. Those who appeared to be lifelong learners possessed a growth mindset and approached change with receptiveness, whereas, the static learner exhibited qualities of a fixed mindset through a resistant attitude towards change. By taking on the responsibility as agents of change, and placing value in the instructional tool, teachers are more inclined to

immerse themselves in rich experiences that foster relationships among the technological resource and their pedagogy, as well as their self-efficacy (Coppola, 2004; Wozney et al., 2006).

How do students perceive iLit ELL as a tool for learning English? Understanding student perceptions of iLit ELL as a tool for learning English was a significant question to explore, as teachers during the pilot and present study voiced concerns regarding the need for relevant, meaningful and developmentally appropriate material for students. Based on the focus group discussions and final responses, the students perceived iLit ELL to be a useful, applicable and engaging tool for learning English; however, there remained a gap in the program's selection of culturally responsive and diverse text styles.

Overall, the students voiced their desire to continue the program as part of their current and future studies. Students exposed to the program consistently noted an improvement in their writing abilities and reading comprehension. The enhancement in reading comprehension was discussed in greater detail by students primarily exposed to the interactive readers. Students who utilized the interactive readers explained how the program helped them to think critically about the text, build connections, and look for context clues when responding to questions related to the reading. Moreover, students immersed in additional assignments, lessons, and assessments, noticed a relationship between the course content and the material in iLit ELL. In building connections, students shared common experiences, such as an increase in academic performance and engagement (Deci et al., 1989). The shared experiences appeared to be driven by the students' interactions with the program, as they were able to apply what they learned in class, receive relevant and immediate feedback, and participate in tasks that differed from the traditional method of pencil and paper.

In addition to optimizing the students' language learning experience, student participants discussed similar beliefs regarding the program's positive effect on their motivation, autonomy, and confidence. The students' perceptions of the program appeared to be influenced by the embedded supports, such as immediate feedback, translation, text-to-speech, picture dictionaries, and resubmission options, as well as the program's differentiated assignments which aligned to the students' learning needs. The program's effect on reducing anxiety levels, increasing student motivation and self-confidence relates to Krashen's (1982) affective filter hypothesis, which indicates that high affective filters foster greater performance when acquiring a second language. The shared perceptions also coincide with current research which found the interactive element of technology (audio and visual) to be a stimulus towards increasing student engagement and enhancing student focus and concentration (Clements & Sarama, 2003; Chuang, 2014; Richards, 2015; Traore & Kyei-Blankson, 2011).

Students also experienced feelings of autonomy while exploring and engaging with the program's library. The students' capacity to think, act and reflect independently appeared to be driven by iLit ELL's embedded scaffolds (initial reading survey, Lexile appropriate text, fiction, and non-fiction selection, translator, and text-to-voice). The increased sense of autonomy relates to Deci et al., (1989) self-determination theory, which suggests opportunities that foster competence, relatedness, and autonomy enhances learners' intrinsic motivation. Moreover, both students and teachers noted that the library increased students' interest and initiative in reading English texts. As a result, the students appeared to experience what researchers, Wigfield and Guthrie (2000), defined as intrinsic reading motivation, which is the disposition to read for enjoyment and interest, coupled with extrinsic factors such as personal satisfaction and higher academic achievement (Wang & Guthrie, 2004). The rise in independent reading relates to

current research, which suggests students who explore self-selected reading topics related to their interest and developmental stage build greater autonomy and motivation (Castillo & Bonilla, 2014).

Aside from finding the program effective in enhancing their learning experience and sharing an overall appreciation for the program's library and an interest to continue its use, some students discussed their craving for culturally relevant and diverse texts. The concern for cultural and varied styled texts relates to the reader's cultural beliefs and socio-linguistic group, which implicates how students view, comprehend, interpret and think about a text (Kendeou & Van Den Broek, 2005). In this case, the students' sociocultural-context and language are relevant factors to consider when attempting to meet the learners' literacy needs, as they affect the students' level of engagement and motivation towards reading through the creation of relationships between text content and prior experiences (Freebody & Frieberg, 2001; Woolley, 2011).

Summary of Major Findings

As discussed in Chapter 1, this study was driven by my pilot project and first-hand observations as an ESL Coach regarding teachers' desire and need for academically and developmentally appropriate resources that are engaging for English Language Learners. My experiences inevitably led me to explore secondary teachers' perceptions of iLit ELL, a technological resource for English Language Learners, and its perceived effects on student motivations and attitudes towards learning English. Based on my interpretation and analysis of the data, the following major findings emerged: teacher adaptability; the use of technology in differentiating instruction and increasing student motivation and teacher efficiency; mindset; and

the importance of scaffolded instructional technology and autonomy in motivating student learning.

This section of the chapter provides insight into the major findings which emerged from the research questions, data analysis, as well as my interpretation in connection with relevant research (Figure 4). Figure 4 clarifies how the eight themes connect directly to the questions and the four findings of the research.

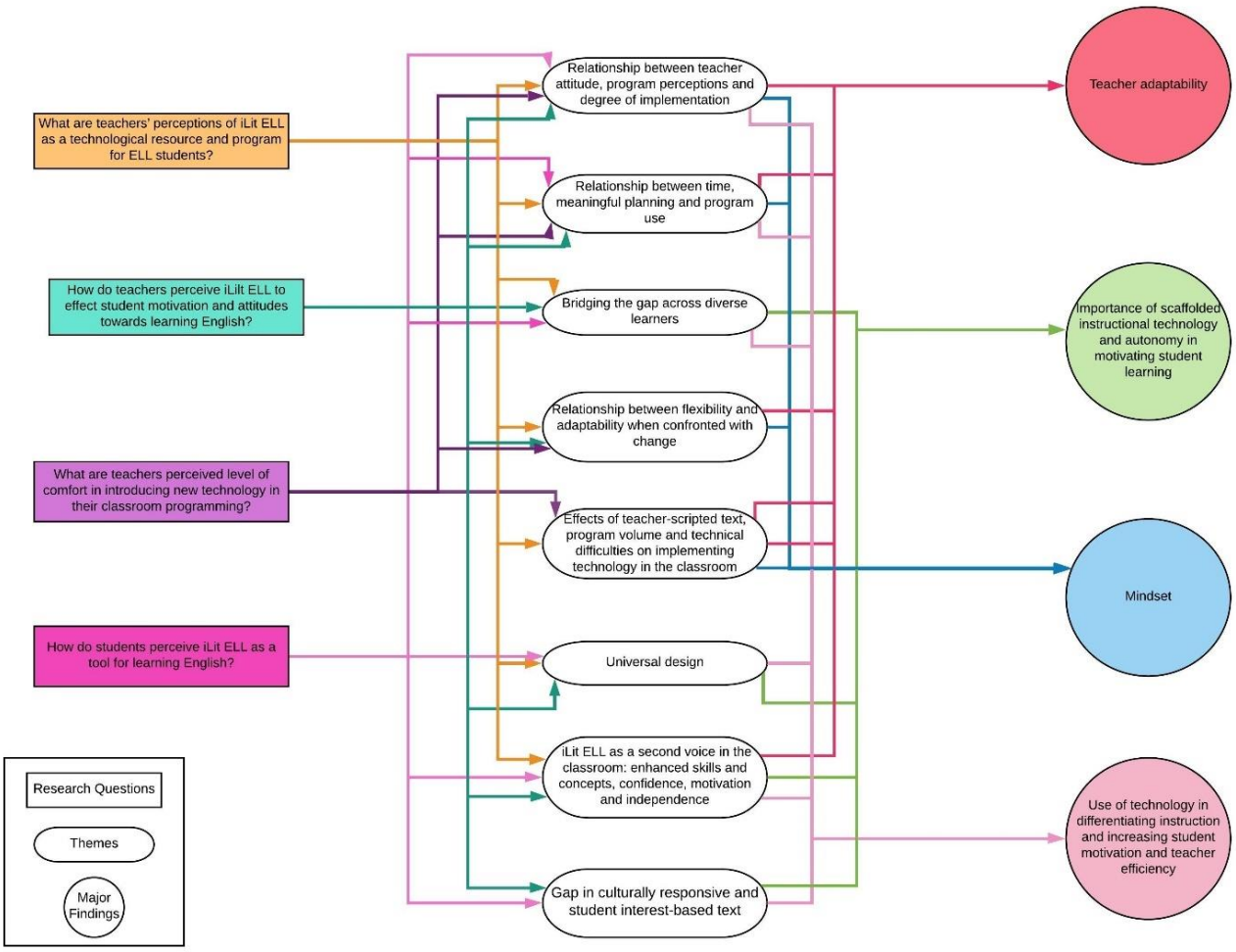

Figure 4. Relationship of research questions and themes to major findings.

Teacher adaptability. Teachers who practiced a flexible and adaptable pedagogy to teaching and learning experienced the most success with integrating a new technological resource into their existing practice. Adaptability is defined as an individual's response to change and is particularly important within the field of education, as teachers are in a constant state of managing, responding and experiencing change (Collie & Martin, 2016). To adopt technology as a tool and resource, researchers emphasize the importance of teachers being flexible, accepting of change, and receptive to new challenges (Ertmer et al., 2001). To address such changes effectively, teachers are encouraged to engage in a state of cognitive adaptability (building relationships and connections between existing and new experiences), affective adaptability (the ability to respond to change to enhance outcomes) and behavioural adaptability (seeking out and taking action) (Martin, Nejad, Colmar, & Liem, 2012).

Teachers in the study who perceived a successful and effective experience with iLit ELL demonstrated a readiness to respond to change and recognized that change required flexibility in their practice, lessons, and assignments. The teacher participants who demonstrated being flexible in practice experienced higher levels of comfort, efficiency, and observed an improvement in student motivation and work ethic while implementing the iLit ELL program. Researchers explain that personal adaptation is essential for those who desire success during times of change, but also vital in developing self-awareness in meeting the needs of diverse learners (Corno, 2008; Day, 2000). The significance of adaptability in teaching relates to differentiation and responding to the learning needs of students (Parsons & Vaughn, 2013). The diversity that exists among learners heightens the importance of manipulating learning objectives and teaching in ways that are reflective of the learner (Hargreaves & Fullan, 2012). More specifically, with the integration of technology, student achievement is optimized when the

technological tool is adapted to the relevance of the students' developmental, language and learning needs (van Olphen et al., 2012).

Differentiation is the variation among activities within the main lesson and provides students with a range of entry points for understanding and applying concepts (Martinez, 2011). Although effective when put into practice, differentiation remains one of the greatest obstacles experienced by teachers due to the time and resources it requires. While iLit ELL provided differentiated tasks for students, the teachers who went beyond the program and adapted it as they felt necessary, saw an even greater improvement in their students' focus, interest, and motivation towards learning. The teachers' actions reflect current research that emphasizes adapting existing resources towards students' existing abilities and interests enhances ELLs' language awareness, proficiency, and application (Baecher et al., 2012). Therefore, technology alone cannot improve ELLs reading, writing, oral and listening, it requires personalized and meaningful experiences attained through teachers adapting the material through choice, and their awareness of their students' strengths and areas of need (Baecher et al., 2012; Schwartz & Pollishuke, 2013).

The use of technology in differentiating instruction and increasing student motivation and teacher efficiency. Through effective integration and use of technology in the classroom, teachers can enhance students' motivation, exposure, engagement, and achievement of content and language through interactive and personalized learning experiences, while improving their efficiency as educators (Chuang, 2014; Keengwe & Hussein, 2014; Richards, 2015). Teacher participants, Aya and Aelina, both emphasized how iLit ELL alleviated the stressors of having to differentiate tasks while maximizing their time to provide additional

modifications to meet the learners' needs. In doing so, Aya and Aelina witnessed an improvement in student engagement, work ethic, and motivation towards learning.

Aya and Aelina's experiences with iLit ELL replicate previous findings that indicate technology-based teaching models reinforce teachers' opportunity to differentiate their lessons and assignments with greater ease while increasing students' motivation towards language learning (Chen & Hsu, 2008; Echevarria et al., 2013; Reynolds et al., 2009). Technology differentiates learning in many ways, from providing an alternative to how information is presented and manipulated, to providing meaningful and engaging learning tasks for learners (Bahrani & Tam, 2012; Black, 2009).

Students' attitudes towards learning affect their behaviour and performance (Kara, 2009). The effects of attitude on language learning are connected to the emotional, behavioural, and cognitive domains of the learner (Kara, 2009). The complex nature of attitude is related to the emotional process of learning, which in turn influences learners' motivation and perspective towards the target language (Choy & Troudi, 2006; Feng & Chen, 2009). Students who enjoyed working independently and wanted to improve their reading and writing skills, as well as their course grades, shared positive feelings towards the program while noting how iLit motivated them to complete the assigned task to their highest potential. Moreover, technology that supports differentiation has been linked to supporting language learners' remediation through personalized and individualized instruction, assignments and assessments (Chen, 2016; Coleman et al., 2016; Keengwe & Hussein, 2014).

Mindset. One of the most prominent observations I made throughout the study and my analysis of data was the effect of teacher mindset on technology integration. As discussed in Chapter 5, mindset is a set of established attitudes held by an individual. According to Dweck (2008), individuals can express a fixed mindset or a growth mindset (Figure 5). During my study, I found that teachers who displayed characteristics of a growth mindset were open to change and exploring, integrating, and adapting a novel resource. In contrast, the teacher who demonstrated a fixed mindset seemed discouraged and challenged by the unfamiliar application, which led to its discontinued use.

Tour's (2015) findings on teachers' digital mindset coincide with my observations and interpretation of the participants' experiences. By exploring the relationship between perceptions of technology affordance and its use among three teachers, Tour (2015) found that teachers' digital mindsets influenced how new literacy technologies were used in the classroom. Teachers who were receptive to change and open to investing effort believed digital literacy would provide additional affordances to their practice and were more inclined to integrate literacy technology, as opposed to those who did not. These findings reiterate Aya, Aelina, and Angus' perceptions and use of iLit ELL as their actions and decisions mimicked how mindsets affect the way new technologies are optimized and utilized in the classroom.

Although the concept of mindset is fluid and malleable, it often creates a static perception. Lankshear and Knobel (2006) explain this further by discussing mindset as, "sets of assumptions, beliefs, values, and ways of doing things that orient us toward what we experience and incline us to understand and respond in some ways more than others" (p. 31). Thus, teachers' mindset tends to overrule the expectations or suggestions provided by boards; therefore, teachers with a fixed mindset will often march to the beat of their drum and seek out

resources that are comfortable and make them feel confident within their existing pedagogy (Thomas, Reyes & Blumling, 2014). On the other hand, teachers with a growth mindset will view novel situations as opportunities for growth and learning in their practice (Dweck, 2000; Hargreaves & Fullan, 2012).

Lastly, based on my discussion with students and teachers, mindset appeared to be infectious. Aelina and Aya noted a sense of excitement in their students when they introduced and used the iLit ELL program. Both women mentioned modeling their enthusiasm before implementation and saw this attitude transfer to how their students accepted and perceived the program. Moreover, students' attitudes appeared to pour into their work ethic, showing greater commitment and motivation towards learning and achievement. The teachers' observations relate to researchers' findings, which indicate teachers who demonstrate positive attitudes and adopt a growth mindset, are likely to have a positive effect on students' attitudes and beliefs of the technological resource, and overall academic achievement (Boaler, 2013; Dweck, 2000).

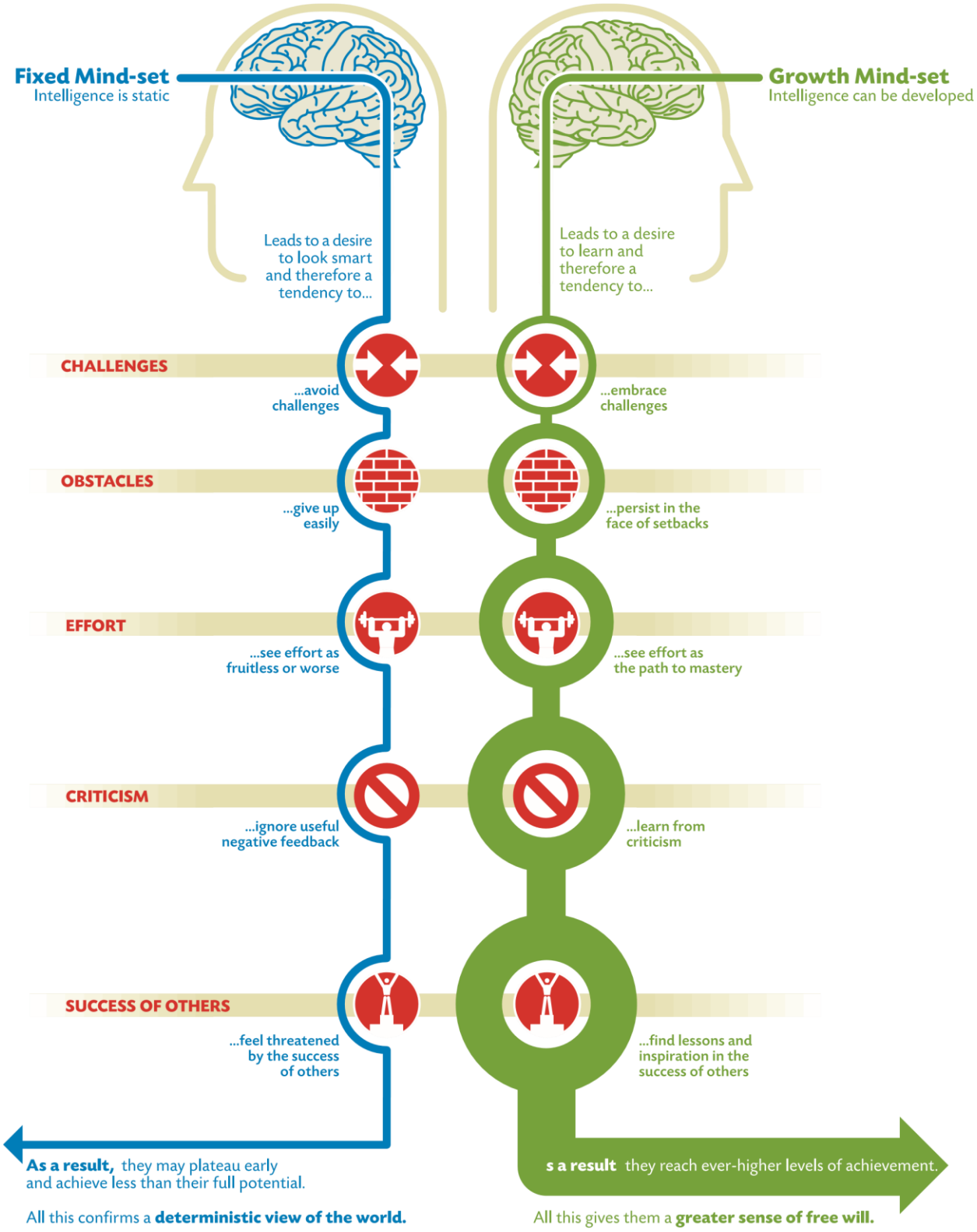

Figure 5. Growth vs. fixed mindset infograph (Stanford Magazine, 2007).

The importance of scaffolded instructional technology and autonomy in motivating student learning. Technology in English language learning classes promotes scaffolded instruction and content through multimodal instruction (Daniel et al., 2014). Scaffolding is an instructional method that supports ELLs to master and enhances their existing skills while building learners' independence through a gradual release of responsibility (Kareva & Echevarria, 2013; Nguyen & Watanabe, 2013). As a tool that can offer personalized instruction and immediate, relevant feedback, technology advances student attitudes and motivation towards learning through individualized learning and choice (Hattie, 2008; Keengwe & Hussein, 2014; van Olphen et al., 2012).

Woolley (2011) defines autonomy as "one's need to know and understand and also extends to one's need for significance and self-actualization, and this will be enhanced by the one's sense of purpose and control over one's learning" (p. 140). Teachers who integrated iLit ELL consistently observed an increase in student independence and motivation towards learning. Aya specifically noticed a difference among students who were initially defiant during instructional time and pen and paper tasks. When technology was integrated into her daily lesson, she witnessed these students and many others take the lead in completing assignments, putting in the effort, and remaining focused for the duration of the period. Students reaffirmed these observations by commenting on iLit's effects on their intrinsic motivation due to the program's multi-modal functions, scaffolded supports, differentiated learning tasks, and the student library.

Similarly, iLit seemed to provide students with a new opportunity to take the lead in their learning. Aelina observed an improvement in students' receptiveness and application of feedback with the program. She attributed this progress to the program's ability to provide

immediate next steps and guidance while finding that students felt less criticized when a piece of technology gave feedback. Students across all classes commented on the personalized feedback, explaining that it motivated them to complete the work and achieve higher grades (Deci et al., 1989).

Motivational theorists have stressed the importance of learners' intrinsic motivation, particularly in association with developing and maintaining autonomy (Deci, Connell, & Ryan. 1989). Deci and Ryan (1985) explicitly defined intrinsic motivation as "evidence whenever students' natural curiosity and interest energise their learning. When the educational environment provides optimal challenges, rich sources of stimulation and a context of autonomy, this motivational wellspring in learning is likely to flourish" (p. 245). When these suggested supports are in place and used to foster intrinsic motivation in the context of education and reading, student autonomy flourishes.

Limitations of the Study

The purpose of the study was to explore teachers' perceptions of iLit ELL and its perceived effects on student motivation and attitude towards learning English. Although the sample size of IPA research is generally small, due to the depth of analysis, the participant pool of my research reduced from 13 to 3 within the first month (Pietkiewicz & Smith, 2014). Secondly, due to technical difficulties and teachers' personal choice, iLit ELL was only used for two consecutive semesters by one participant, consistently for one semester by one, and inconsistently for one semester by the other. Thirdly, student focus groups were selected by teachers. Teachers were given the responsibility to select students that would represent the most diverse experiences based on the teachers' observations. Fourthly, all participants were purposefully selected by the boards and tied to the teaching subject area.

Additional limitations rest in the chosen methodology. The interpretive aspect of IPA research has argued to favour the researcher's personal bias while being a non-generalizable approach due to its focus on individual perceptions (Pringle, Drummond, McLafferty, & Hendry, 2011). However, I chose IPA with careful consideration, since my research is grounded in my personal experiences as an educator. I believed it was necessary to interpret the data from my lens, which considers teachers' and students' perspectives. Through interpretation, I could bring to life the perceptions and lived experiences of the teachers who experienced the phenomenon, creating a detailed analysis of their experiences, rather than a broader set of theories.

Recommendations for Stakeholders and Implications for Future Research

Based on the emergent themes and major findings of teachers' perceptions of iLit ELL and its perceived effects on student attitude and motivation towards learning English, I suggest the following recommendations for stakeholders and future research: differentiated professional development for teachers; applying consistent school and system-wide supports and beliefs on technology; adopting a universal designs method to teaching; further exploring teacher perceived efficacy and actual performance of technology integration; and a comparative study exploring best instructional models.

Differentiated professional development for teachers that enhance a growth mindset and acceptance towards technology. Teacher professional development (PD) is both costly and timely for districts and has been often considered ineffective in altering teacher practice (Darling-Hammond, Weig, Andree, Richardson, & Orphanos, 2009). The disconnect between districts' efforts to implement PD and teachers' receptiveness has been linked to its applicability in the classroom and insufficient time to understand and implement new learning (Christ & Wang, 2013; Desimone, 2011).

Throughout the study, I highlighted the significance and effects of differentiated instruction on student motivation and academic achievement through evidence found in the data and existing literature. However, as part of my recommendation, I would like to shift the focus of differentiated instruction from student learning to teacher professional development. As adults, we can easily overlook our memories of being students in the classroom, where each of us had our individual learning styles and preferences to instruction and application, yet we must be mindful that these experiences have shaped us into how we learn and adapt today.

Professional development has been regarded as a pivotal factor in preparing and sustaining teachers' integration of technology through ongoing opportunities that support teachers' effective use, understanding and comfort level, as well as the enhancement of student motivation and attitude towards learning (Ertmer, et al., 2010; Kopcha, 2012; Teo, 2010). Ongoing training holds even higher weight for educators who continue to negotiate new technologies within their existing pedagogies, specifically, for those who are resistant to change (Galligan, Loch, McDonald, & Taylor, 2010). To foster a shift in mindset, and to open avenues for growth and new learning with technology, Crichton, Pegler, and White (2012) explain,

> teachers need to be treated as learners and their learning must be honoured and personalized and supported. They need to be introduced to new technologies as learners first, before being called upon to use the technologies in their professional practice (p. 29).

Similar to my purpose for conducting this study, Crichton et al., (2012) emphasizes the importance for learners to engage in meaningful and relevant experiences to understand and make connections among prior knowledge, content, and application. Thus, to enhance the use and benefits of technology integration in language learning classrooms and optimize student

learning experiences, it is important that educators attained support from training programs and workshops that are tailored to their interests, teaching styles and curriculum goals, and which allow teachers the opportunity to extend their practice and build confidence in the classroom (Hoffman & Johnson, 2005; Liu & Szabo, 2009; Murray, 2017; Yildiz, 2007).

Moreover, attitudes towards technology are closely linked to mindset, as researchers suggest teachers' beliefs and attitudes about technology integration coincide with its frequency of use and effectiveness on student learning (Angers & Machtmes, 2005; Hermans et al., 2008). To overcome the barrier of preconized beliefs, Hew and Brush (2007) suggest districts and schools provide teachers with the necessary professional development that enhances teachers' attitudes towards technology, sustains integration and enhances student learning. As noted earlier, mindset is malleable and can adapt and alter the way an individual perceives, approaches, and handles change. Therefore, to promote a shift from a fixed to a growth mindset, and to adopt positive beliefs towards technology, researchers suggest the following: observational and planning periods that show how technology connects to the curriculum and can be applied in the classroom; provide time for teachers to participate and explore the instructional tool; to have a shared value and belief towards technology among administrators and districts; and finally, to consider teachers' timetable and responsibilities when organizing PD (Calderon et al., 2011; Coleman et al., 2016).

Through applicable differentiated learning opportunities and development that promotes a growth mindset, teachers can experience personalized learning and growth that can transpire into their classrooms. Various forms of professional development should motivate teachers to explore and see how strategies are applied, such as differentiated instruction and technology integration. In doing so, teachers can develop confidence in taking risks in challenging their

pedagogy through personal, vicarious and collaborative experiences that showcase the benefits of integration and participating in relevant professional development (Cole, Simkins, & Penuel, 2002; Mueller, Wood, Willoughby, Ross, & Specht, 2008).

Consistent school and system-wide supports and beliefs on the use of technology. Just as teachers' mindsets affect the mindsets of their students, districts' and administrators' beliefs and attitudes towards technology affect teachers' acceptance, optimal use, and effective integration of technology. Cummins et al. (2007) affirm this claim by explaining,

> ...Consequently, the potential power of technology is only rarely and minimally harnessed in these school contexts...the ways in which technology is likely to be used in any school context are intimately connected to the pedagogical orientations operating in the school…(p. 91-92)

However, providing teachers with technological resources is not enough. It cannot be assumed that effective technology integration is to follow if there is not a wide-spread vision, belief and investment in understanding the purpose and focus of the tool or resource (Cuban, Kirkpatrick, & Peck, 2001; Hofer, Chamberlin, & Scot, 2004). This belief coincides with my experience working in a school heavily comprised of Arabic speaking English Language Learners. To solve issues with behaviour, teachers demanded multiple on-site translators. However, from my perspective, the language was not the barrier, but rather teachers limited relationships and understanding of their students' experiences, feelings, and expressions. Thus, if teachers are not guided and taught to see the value, use, or applicability of a technological tool, then they will never see its full capacity (Cummins et al., 2007).

To address concerns regarding consistent beliefs and use of technology, Hannafin (2008) recommends the development of a technological vision and plan that is developed by teachers,

rather than being mandated from the top-down; provide training and professional development that is fundamentally related to curriculum and instruction, and is focused on a desired outcome; collaborate with universities and preservice candidates to provide in-school services that enhance educator and student technological proficiency; involve students in teaching and integrating technology in the classroom; and provide training and designation for an in-school staff expert. However, this is not to say that administrators, superintendents, and boards should not take part in designing the vision, instead, they are an integral part of the process, as they are deeply influential in communicating, modeling and promoting the vision and message of technology integration across the school (Hayes, 2006).

Through a cohesive vision and value for technology integration, as well as having consistent follow-up support, teachers will have greater direction on how to implement and integrate the tools into their practice, daily lessons, assignments and assessments (Kopcha, 2012; Mouza, 2008). This approach enhances the opportunity of fostering a vision of technology integration that is visible across all classes (Hannafin, 2008). Investing in a vision and model for technology integration improves its effective use and application while increasing student motivation and engagement in ways that relate curriculum to multimodal forms of learning (Hattie, 2008; van Olphen et al., 2012).

Adopting universal design methods to teaching. A significant finding among students and teachers was the applicability of iLit ELL across all learners of literacy. Programs that reduce student barriers by making learning accessible for all learners, such as the Universal Design for Learning, can foster comprehensible input, raise confidence and reduce anxiety through multiple means of representation, multiple means of expression and multiple means of engagement (Courey et al., 2013; Dalton, 2017). This differentiated approach to learning

encourages teachers to be reflective in practice and to consider all elements of the classroom environment, materials, instructional tools, methods, and their role in delivery when planning.

The adoption of UDL methods is particularly important for mainstream teachers at the secondary level who receive ELLs for non-sheltered courses and are required to teach academic language (ex. science, geography, and history). Cummins (2003) argues that academic language can be challenging, and even problematic for ELLs, as it is often abstract and difficult for them to ground within a familiar context. However, this challenge is also felt by educators, as many secondary teachers have shared with me their reservations of accepting ELLs in their mainstream classes due to feeling unprepared teaching concepts that are unfamiliar or abstract to the learner.

The UDL guidelines (Figure 6) are flexibly designed so that educators can select and apply the suggestions as they fit necessary to maximize student learning across all learners. For optimal integration, I suggest informing and supporting teachers through the Professional Learning Community (PLC) that are led by current teachers who utilize the UDL framework in their practice. Guiding and assisting teachers with building strategies that align to each domain and that apply to their daily practice, can help build teachers' confidence integrating the UDL approach, while they maintain autonomy through planning and integrating the framework as they feel needed.

Thus, as support for differentiated instruction, UDL promotes language instruction that is explicit to developing academic language while building connections between the learners' prior knowledge and learning needs. However, to create an understanding of the students' learning needs and past experiences, trusted relationships are required. Teachers are at the heart of instruction, are pivotal in creating a learning environment that motivates, engages and supports

ELLs in ways that enhance student learning and close the achievement gap (Turkan & Buzick, 2016). As a result, Baecher et al., (2012), explains when teachers have an awareness of their students' English language strengths and challenges, it allows them to foster opportunities that make learning achievable through choice and experiences that are related to the learners' experiential, cognitive and language development.

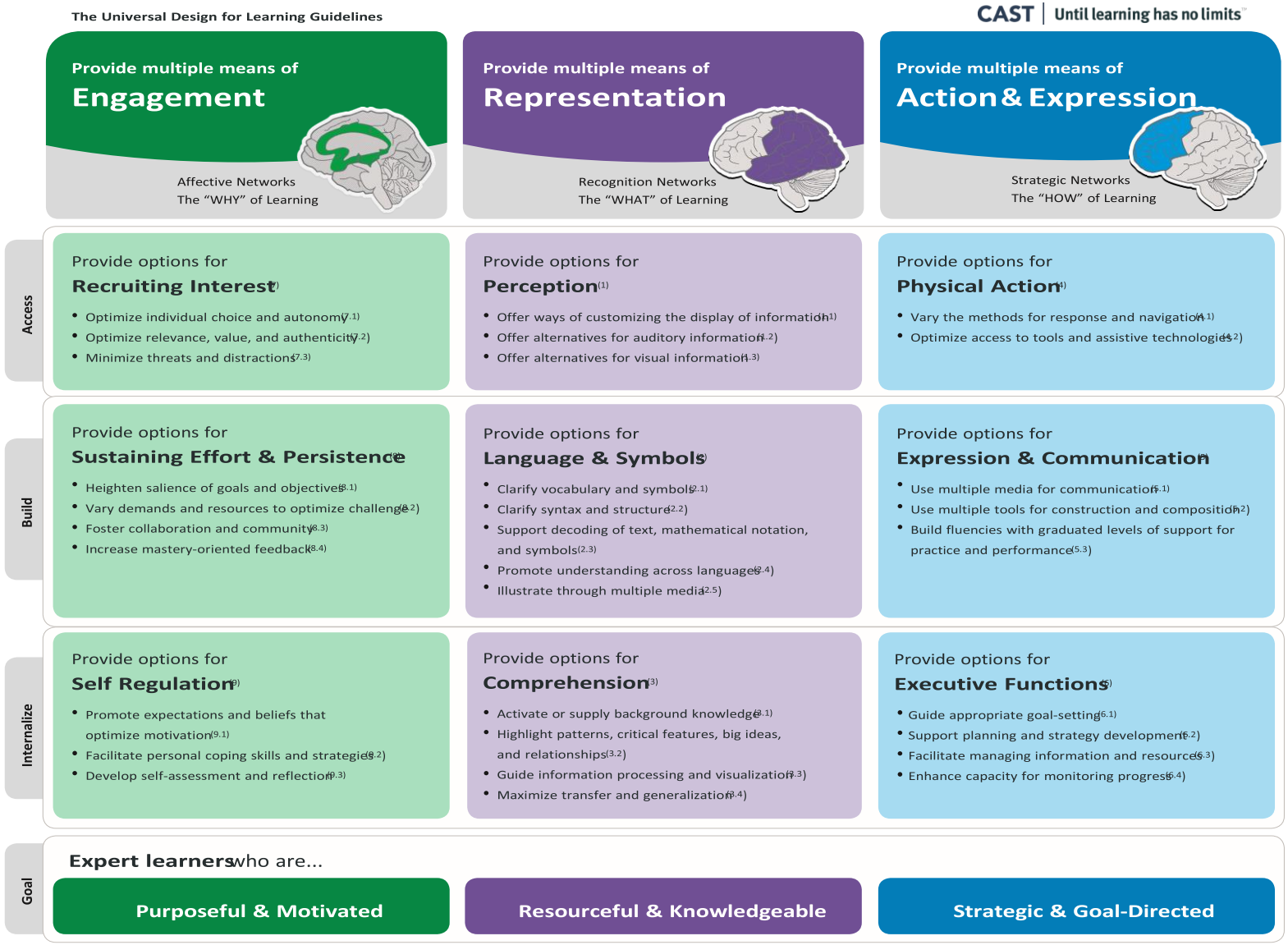

Figure 6. Universal Design for Learning Guidelines (CAST, 2019).

Teachers' perceived efficacy and actual performance with technology integration. Within education, self-efficacy focused on teachers' effectiveness on practice, and student learning, influences teachers' performance, perseverance, and motivation (Bandura, 1977; Klassen & Tze, 2014). Teachers with high self-efficacy are generally more open to change and characterized as life-long learners, who create supportive learning environments that often-set high standards and effectively monitor students' behaviour and achievement (Stewart, 2018). Conversely, teachers with low self-efficacy tend to believe "their influence as a teacher is limited by environmental factors beyond their control" such as reaching unmotivated students, while also avoiding obstacles beyond their perceived capacity (Swan, Wolf, & Cano, 2011, p.130).

Contrary to common beliefs, perceived self-efficacy does not necessarily translate to the typical characteristics of a high or low efficacious educator. As found in this study, there was a disconnect between teachers' perceived efficacy and actual performance when integrating technology. The teacher participant who assumed a high-sense of efficacy was least adaptable towards the integration of iLit ELL, whereas the teachers who perceived themselves as initially having low self-efficacy, were most flexible and adaptable to the resource. My findings share similarities with a recent study by Jacob and McGovern (2015) focused on new teachers' self-efficacy and professional development, which found that 60% of teachers who received poor or low teacher evaluations, perceived themselves as having effective or highly effective teaching practices and abilities. As a result, the concern rests in teachers' false or heightened perceptions of their self-efficacy, which can potentially motivate them to overlook their need for and

acceptance of professional development, supports, resources or guidance (Jacob & McGovern, 2015).

To enhance school districts' understanding of the supports needed to see new initiatives succeed and resources effectively utilized in the classroom, a more in-depth investigation between teachers' perceived self-efficacy and actual performance is suggested. To measure teachers' self-efficacy, particularly with the integration of a technological resource, would require an explicit understanding of the resources' purpose, functions, and goals, as well as, relevant and differentiated teacher training.

Comparative study exploring best instructional models. Upon reflection on my dissertation and recommendations, I also suggest the investigation and exploration of best models for sheltered and non-sheltered courses at the elementary and secondary level. Due to teachers' concerns and stresses regarding various levels of learners in the classroom, there is need for a consistent framework. I propose a comparative study between the Universal Design for Learning and the SIOP models and their effects on teachers' pedagogy and students' achievement in the Ontario context. However, unlike the methods used in this study, I propose a design that is based on fidelity in order to accurately and consistently measure the effects of the proposed frameworks.

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APPENDICES

Appendix A: REB Approval and Certification

Principal Investigator: Ms. Sara Shahbazi
REB Number: 34390
Research Project Title: REB# 17-233: "Finding the right fit: Exploring an Intervention Literacy Program for Secondary English Language Learners"
Clearance Date: November 10, 2017 (Windsor-Essex County District School Board)
Project End Date: December 03, 2019
Milestones:
Renewal Due-2019/12/03(Pending)
Renewal Due-2019/11/01(Pending)
Renewal Due-2018/11/01(Pending)

PANEL ON RESEARCH ETHICS
Navigating the ethics of human research

TCPS 2: CORE

Certificate of Completion

This document certifies that

Sara Shahbazi

has completed the Tri-Council Policy Statement:
Ethical Conduct for Research Involving Humans
Course on Research Ethics (TCPS 2: CORE)

Date of Issue: **20 October, 2013**

Appendix B: Teacher Semi-Structured Interview Questions

Semester 1
Semester 2
Both Semesters

1. Please describe your educational background.
2. Why did you choose to be an ESL teacher?
3. What recommendations do you have to program developers of iLit ELL?
4. In an ideal world, what would effective ELL program look like?
5. Would you use the program again? Why or why not?
6. Would you recommend the use of the program to other ESL secondary teachers? Why or why not?

Research Question 1: What are teachers' perceptions of iLit ELL as a technological resource and program for ELL students?

1. How did you incorporate ilit into your class and how did the program fit in with your existing program?
2. How often did you use the iLit resource?
3. Which parts of the program did you utilize?
4. How effective was the program in differentiating the students' tasks?
5. How did the program effect your assessment of students' learning?
6. Strengths and weaknesses of the program (instructional, resources, extended activities, lessons, readers)
7. How often do you integrate iLit with your ELLs?
8. Please describe your experience with using iLit in your classroom with ELLs.
9. What features, if any, do you use specifically within iLit, to target ELL learning.

Research Question 2: How do teachers perceive iLit ELL to effect student motivation and attitudes towards learning English?

7. How did the students react to the use of iLit when it was used? How much of their learning can be contributed to the use of iLit?
8. How would you describe your motivation towards incorporating iLit?
9. How would you describe student motivation towards using iLit?

Research Question 3: What are teachers' perceived level of comfort in introducing new technology in their classroom programming?

10. Please describe your level of confidence in your ability to instruct students through technology integration?
11. What are contributing factors in your level of confidence with technology integration, specifically with iLit?
12. What strategies do you use when confronted with new resources?
13. Please describe your comfort level with integrating iLit with your ELL students?
14. What is your comfort level with using new resources within your program, specifically iLit?
15. Why do you think you persisted with the use of the program, while the others did not?

Appendix C: Student Focus Group Questions

Research Question 4: How do students perceive iLit ELL as a tool for learning English?

1. What is your current level - ESL or ELD
2. Which supports in iLit did you use, how did this help/not help your learning?
3. What did you like about the program and why?
4. What did you not like about the program and why?
5. How often did you use the program and why?
6. How would you describe your motivation towards using iLit?
7. How would you rank tool in comparison to other learning tools and why?
8. What are your thoughts on using technology as a learning tool?
9. How much do you believe iLit contributed to your learning of the English language?
10. What recommendations would you have for the program developers in supporting your learning?
11. What recommendations do you have for your teachers in supporting your learning with iLit?

Appendix D: Student Final Reflection

Research Question 4: How do students perceive iLit ELL as a tool for learning English?

1. How did the iLit course program effect your reading and writing? Explain.

2. What would you change about the iLit program or what would you hope was different about how you used it?

3. Would you recommend the iLit program to other students wanting to improve their literacy skills? Be specific.

Appendix E: Samples of IPA Data Analysis

88.		**What are contributing factors in your level of confidence with technology integration, specifically with iLit?**
89.	Commitment Success Manageable Persistent Aware User Friendly Reflective	I think just experience, I think it was navigating it and implementing it in the classroom and knowing that it was working. That is the only way I would have felt better about it because I saw that I could handle it. Even when I noticed it wasn't working this year, I realized it and made the choice to move forward. I think if it happened the first time, I wouldn't have been as confident as a I am now. I think the layout is very user-friendly which helped a lot. There are some websites that you have to learn how to navigate, but this one was easy to navigate which helped too.
90.		

Sara Shahbazi
Watching and experiencing success with the program is a motivator for educators. She explicitly states that her growing level of comfort was a result of the program's level of manageability.

She is also reflective in her practice and aware of herself and students. Having this level of awareness, as well as her previous term to reflect upon, she knew that she had to move forward without the program, despite her earlier success.

Recognizes that if the technical challenges had occurred during her initial implementation, then her level of confidence would have looked differently than it does now.

36.	Self-Confidence Pride Time and Size Personal Pedagogy	I would say I'm pretty confident that I am largely using the tech resources out there that are effective for our students. I know there's all sorts of element that I am not too familiar with I mean for example I don't use social media but a lot of those mediums are largely Visual and I think at the end of the day what most of our students need is language construction tools. They are largely assessed in that manner even in the high school level and the post secondary level absolutely so that's I tried to use tools that I believe will help them the most. So if there is a tool out there a Tech Tool that I think will help our students so it doesn't take very long for me to learn it and so I don't consider that a real barrier to my pedagogy.

Sara Shahbazi
Admits to not being familiar with certain aspects of technology, but retracts by saying that he does not find the components he is unfamiliar with to be as important as what he believes is important, which is language construction tools

Sara Shahbazi
Again, looks at what he thinks is valuable and effective – never mentions students – Discusses the discomfort with time and the need to have a product that does not impede on his own pedagogy

106	Co-Learner Reflective	I try to learn main words in their language, "I'm teaching you so you can teach me", On our word wall we will have it in English and then in their language, that way they can see we are incorporating their languages. But I feel that when they constantly have a translator at hand, it doesn't motivate them to learn the language and is a band aid for the time being. I always reflect on when I was in French class, I would use the translator, but it didn't teach me properly. So, teaching the students when to use the translator properly when needed.

Sara Shahbazi
Realizes the importance of making connections with students and being a co-learner with them. Her emphasis on modelling shows and in using her previous experience to inform her practice demonstrates her role as reflective practitioner.

VITA AUCTORIS

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	University of Windsor, Concurrent B.Ed/ECE., Windsor, ON, 2013
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