

EXAMINING THE POTENTIAL OF TECHNOLOGY-ENHANCED  
LANGUAGE LEARNING AND TEACHING IN ENGLISH FOR  
ACADEMIC PURPOSES: LEARNER VOICES

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## **Abstract**

The growth of post-secondary English for Academic purposes (EAP) programs along with researchers' awareness and interest in leveraging technological tools in support of "student-centered learning" (Prensky, 2012) fueled this research. This study examines learners' beliefs towards technology use in a Canadian EAP university program.

Using a multi-phased, grounded-theoretical exploratory case study approach, the research uses complementary data sources including two online surveys conducted at the beginning and at the end of the program, class observations, individual students' digital diaries, stimulated recall interviews, and focus group interviews. The study examines 16 student participants' beliefs toward technology use and the factors that influence and constrain students' use of technology. The research was informed by a constructivist view of language learning and explores EAP students' interactions with technological tools to gauge their beliefs towards tech use in learning English. Furthermore, Benson's (2011) learner autonomy framework was used to investigate the development of learner autonomy. This framework is believed to provide an additional research lens in understanding EAP students' interaction with technology, impacting their evolved belief systems.

Comparisons between the surveys show that overall students' beliefs toward technology use became more positive from the beginning to the end of the course when students became more competent with increased technology exposure and use. Students realized the benefits of using technological tools and adopted some 21<sup>st</sup> century skills in learning English (Dede, 2010). A heightened critical awareness among students towards

tech use and some emerging individual language learning behaviors were reported in their digital diary posts and stimulated recall interviews. This specific finding transpired as one of the pedagogical factors- participating in the research study. Data from embedded case studies revealed contextual and pedagogical factors that influenced students' attitudes towards and subsequent use of technology in EAP. Factors constraining students' technology use included students' previous experience with educational technologies, characterized by limited support, poor infrastructure, and inadequate digital literacies. Recommendations for teacher education in tech-enhanced pedagogy and teacher-intervention in educating students about the rationale for tech use are made. Implications for leveraging students' digital resources and ongoing critical and reflective teaching practices are also suggested.

## Dedication

*This is dedicated to the two people who have made me who I am!  
My mother, Durdana Ahmed, who has always pushed me to “reach high... and dream deep” (Mother Theresa). My husband, Sheetu Latif, who has been my rock at all times and encouraged me to be “fanatically positive and militantly optimistic” (Rick Steves) throughout this long journey...*

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## Chapter 1: Introduction

Technology advancement has revolutionized society and intensified the motivation to communicate in global languages such as English, increasing the demand for language learning, technology-enhanced curriculum and flexible and/or engaging ways to learn. A paradigm shift in the theory and practice of language teaching, from a teacher fronted classroom towards a more learner-centered pedagogy using technology-enhanced language learning (TELL), demands more active participants, ‘*autonomous learners*’ who are “responsible and critical members of the communities in which they live” (Benson, 2011, p.1). Also, students, with enhanced access to technology, tend to be “digital natives” (Prensky, 2001a), many of whom are “native speakers of the digital language of computers, video games and the internet” (p. 2). Students today “want to learn differently than in the past. They want ways of learning that are meaningful, ways that make them see immediately that the time they are spending on their formal education is valuable, and ways that make good use of the technology they know is their birthright” (Prensky, 2010, p. 3). Students also expect teachers to use technologies in ways that align with their social and communicative practices (Kessler, 2018, p. 206). That is why it is imperative to try to learn what they believe works for them and what does not. This necessitates exploring TELL environments from learners’ viewpoints. In order to make sense of “the intensively interactive and linguistically rich environments [being] afforded by technology” (Chapelle, 2009, p.741), we must pay attention to what the learners’ beliefs are in regards to TELL (Wiebe & Kabata, 2010, p. 232) and not to only teachers’ and/or administrators’ perceptions. Reed (2017) found that “educational leaders can gain

insight on how to better align pedagogical practices with learning outcomes by gaining feedback from their students” (p.12). Wiebe and Kabata (2010) compared students’ and instructors’ attitudes and perceptions of computer assisted language learning (CALL) materials, specifically those used in a Japanese language program and found that instructors do not always have a good understanding of their students’ use of IT [Information Technology] nor do students necessarily understand their instructors’ goals for using technology-enhanced materials in their classes (p. 232). Also, discrepancies were noticed when instructors were asked whether they had explained to their students why they were using technology and students were asked whether their instructors had done so (p. 228). This discrepancy indicated that teachers would benefit from knowing students’ perceptions of their use of CALL materials as would students benefit from teachers’ perceptions as to what and why they were using CALL materials (p. 232). Levy (2015) also places great importance on careful interrogation of the student perspective as that can help ensure that research and practice remain aligned and connected (p. 556). This places greater importance on and the need to examine learner beliefs, especially when it comes to any research in the area of TELL incorporation in an educational system.

Also, “[t]he point of turning to new technologies is to find the pedagogies that promote high quality learning” (Laurillard, 2007, p.158), that can accommodate various learning styles and engage students of mixed abilities in a learning environment.

Pedagogies that are student-centered, engaging and that incorporate a mix of instructional activities for the whole class, are what send teachers on a quest for technology integration and for the most suitable tools for use in the classroom. In the case of English for

academic purposes (EAP) courses especially, where a lot has to be covered within a very limited timeframe, teachers resort to incorporating TELL pedagogy to successfully meet the demands of timely teaching practices. Kessler (2018), however cautions, “when considering the use of existing, evolving, and new technologies, it is important to consider the extent to which they facilitate learner-centered instruction.” (p. 208). This research intends to explore technology-enhanced pedagogy from the learner’s perspective and investigate how TELL environments are developed and facilitated within an EAP context.

### **Rationale for This Study**

#### **Why EAP?**

Over the past fifteen years, both Canada and the U.S. have seen dramatic increases in international student enrolments in post-secondary institutions. In Canada between 2001 and 2010 the number of international post-secondary students rose by 10.4% a year on average with international students accounting for 21.8% in advanced research programs in 2010 (Statistics Canada, 2014). In addition, the Canadian Government is looking to further double the number of international students in post-secondary Canadian programs within the next eight years (Morfini, 2014). The U.S. has had the highest rate of growth in international university student enrolment in 35 years, increasing by ten percent to a record high of 974,926 students (Institute of International Education, 2015). However, there has been a dramatic shift since, as foreign language student enrolment has plummeted in the U.S. for the first time in five years within the first year of Donald Trump’s presidency (Krantz, 2018). This decline in international enrolment in 35 states (Toppo, 2019) would mean Canada benefitting from students

choosing to relocate from the U.S. institutions to Canadian schools. Therefore, this intense internationalization of higher education would further incite the need for growth of crucial post-secondary EAP programs in the Canadian context specifically.

Technology-enhanced programs are an emerging strategy to support such EAP growth. Educational technologies can benefit EAP learning by enhancing learner autonomy, language output, collaboration, learning communities and the development of 21st century skills (Dede, 2010).

Researchers in the past have examined language learning environments and learner motivation in TELL within the ESL/EFL context (Kessler, 2009; Stepp-Greany, 2002; Wang & Vásquez, 2012; Winke, Gass, & Sydorenko, 2010), along with ESL students' attitudes towards CALL in an EFL setting (Zhang, 2011, Liu, 2009); however, few have investigated learners' readiness for and attitudes toward TELL as they evolve within an EAP context. Gilbert (2013) discusses four different types of technology use and their benefits in EAP classrooms rooted in learner needs as recognized by researchers and classroom instructors, but not by learners themselves. Kuteeva (2011) calls for a "real need for further research in [the area of EAP], as information and communication technologies keep evolving" (p.45). Liu (2009) in his Masters thesis investigated Chinese college English learners' beliefs in CALL and urged teachers to "attach great importance to ... dealing with students' beliefs, for instance, being aware of students' past classroom experiences and their expectation about CALL" as part of a reformation of



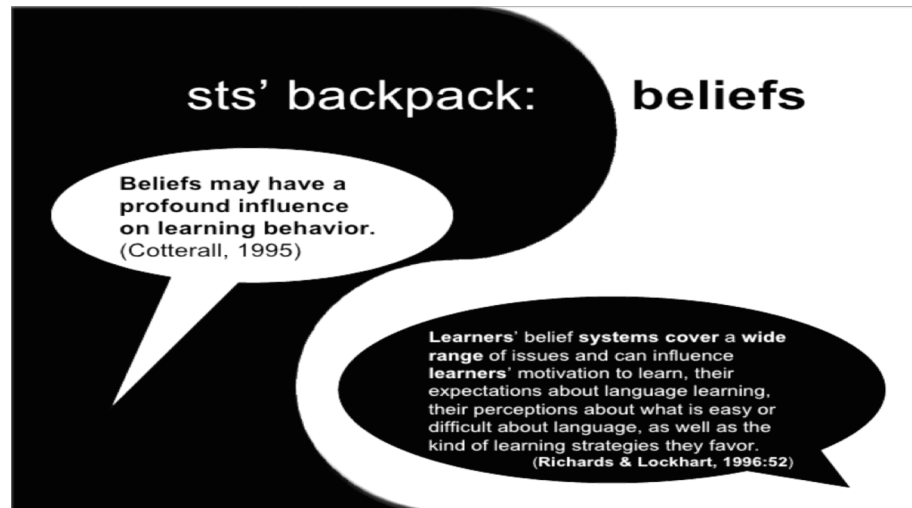
teaching strategies (p. 2).<sup>1</sup> Zhang (2011) in his PhD dissertation explored Chinese ESL students' attitudes towards the use of CALL in a university in Central Eastern China. His conclusion was that although educators and teachers at all levels realized the benefits of educational technology in China, and generally students had a positive attitude towards the use of educational technology, not all universities were financially affluent enough to purchase and implement it. The reasons he highlights are lack of funding, teachers' reluctance for training, lack of time and syllabus related goals that had to be met. As a result, "most teachers in the university never use CALL in their ESL teaching because they are uncomfortable with computers and uncertain about the consequences of using computer in an ESL class." (p. 88).

Atai and Dashtestani's (2013) is the only study that I was able to locate that examined the attitudes of EAP participants (Iranian undergraduate students of civil engineering) toward internet-based reading comprehension instruction in an EFL context. Overall it was a short study only capturing attitudes at a specific moment and not a study that follows the same set of students over the whole term and it examined EAP within a very specific context, undergraduate civil engineering students. Palomeque and Pujola (April, 2009) in the 43<sup>rd</sup> annual international IATEFL conference talked about the importance of balancing and combining teacher and student belief systems in order to achieve the Ying Yang relationship in language learning and teaching in the virtual world. Their slide as seen in Figure 1, showing students' beliefs as their backpacks, helps depict the complexities that lie within a belief system. The figure also highlights the

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<sup>1</sup>as cited in the abstract as the study is published in Chinese and only the abstract is available in the English language.

significance of the current study of students' belief systems being influenced by past experiences of language learning.



*Figure 1. Students Backpack: Beliefs. (sts' = students'): Learners' belief system and language learning and teaching in virtual worlds. Adapted from Palomeque C. & Pujola J. (31<sup>st</sup> March - 4<sup>th</sup> April, 2009; 43<sup>rd</sup> Annual International IATEFL Conference, Cardiff). Achieving the Ying-Yang in language learning and teaching in virtual worlds. [Powerpoint slide 7 of 23].*

### **Gaps to be investigated.**

My study investigates some of the gaps that were found in previous research. First of all, this present study looks at students' beliefs in an EAP ESL context at a university in urban southern Ontario. This research explores learners' beliefs of TELL, examines learners' investments and motivation (Gardner, 2010; Gardner & Lambert, 1972; Norton, 2013; Norton & McKinney, 2011; Ushioda & Dörnyei, 2013, 2009) and identifies benefits and constraints of TELL in EAP teaching and learning from the learners' perspective. Secondly, while most of the studies have used the terms beliefs and perceptions interchangeably, this study looks at perceptions of students under the

umbrella of belief systems which are cognitive and affective in nature (Lawrence, 2000, pp. 24- 25) and reflect the knowledge or information an individual may have about a specific innovation (Turnbull & Lawrence, 2003, p. 307). In the case of examining students' beliefs, I explore areas of students' past experiences with TELL, motivation, expectations, attitudes, and perceptions about TELL use that are interwoven in students' beliefs (Lawrence, 2000; Palomeque & Pujola, 2009; Turnbull & Lawrence, 2003) and variables influencing individuals' perceptions (Feng, 2012, p. 54). Thirdly, I look at beliefs of students from the beginning to the end of an EAP course (over a period of one whole term) in an effort to determine any development that may have occurred due to students' progress and experience with TELL within the same context.

In this case, I conducted two surveys: Survey 1, towards the beginning of the program, and Survey 2, at the very end of the program, in order to determine whether students' beliefs evolved with course progression. Bueno-Alastuey and Lopez Perez (2014) suggest that future TELL research should explore "whether students change perceptions as the course progresses" (p. 523). In addition, a detailed examination of individual students' beliefs was done between the two survey timelines. In-depth research that investigated individual learner voices was conducted over an extended period of time and not just at the surface level. This is much needed to fathom a complex phenomenon like belief systems, in this case, students' beliefs. Finally, I examined an EAP course within a blended learning environment. A lot of the studies do not specify the environment, however, we will see in the discussion within the research context, why it is important to define the technological environment within which the language learning – and the research - are taking place.

## **Research Context**

The current research context is part of a bridging EAP program that is an increasingly popular and common type of post-secondary EAP program. The research study explores EAP learners' beliefs of TELL through a multi-dimensional and qualitative case study research methodology, integrating complementary open-ended and closed data collection approaches. The study employed a progressively focused approach conducted in three phases in order to maximize the depth of understanding of a complex phenomenon like student beliefs and their relationship with perceptions around language learning and attitude towards TELL approaches in EAP.

### **Why Blended?**

The EAP course that is the subject of this research fits the definition of a blended environment as defined in Chapter 2, where a lot of the teaching and learning activities took place online as well as face-to-face. That is why it is important to understand how a blended environment can be different from a fully face-to-face, fully online or even a web-enhanced environment. Pierre, the EAP course teacher in this study, mentioned in his interview that he “fore[saw] a blended future where classrooms are linked to online platforms and communication apps and tools” and that already he was trying to achieve a “kind of an integration between desktop, internet, apps, mobile kind brought into the classroom and being actively used by the teachers and students” in a way that made sense. Understanding the blended context is pertinent to the study, because that shows the extent and nature of use of specific tools in and outside of a specific type of learning environment and can influence beliefs depending on the way technology and pedagogy are integrated. Therefore, it is important to understand the difference between the blended

context and other learning environments because that played a role in shaping the learners' beliefs in the current study on the one hand and addressed one of the gaps found in previous research on the other.

### **Research Objectives**

The participants of this study are EAP students attending a university in a large urban center in Southern Ontario. Participants' classroom and online activities and experiences will be documented exploring the following research questions.

1. Do EAP students' expectations and beliefs regarding TELL evolve through a course and if so, how?
2. What contextual, pedagogical, and or individual factors shape EAP students' beliefs over time?

### **TELL Teaching: My Journey**

My interest in investigating the use of educational technology in English language learning and teaching originated from my own varied teaching contexts and experiences. My journey with TELL and teaching began with the use of overhead projectors, tape recorders and the maximum of a lecture or two with Powerpoint presentations. Due to lack of funding and resources in the two public and private universities where I had taught EFL, there was very little to no opportunities of using any other kind of educational technologies beyond that. However, my experience of teaching Business English in Singapore back in 2005 was an eye opener as they had the latest smart board accompanied by cutting-edge educational technology in teaching as well as assessing, providing feedback to students. I feel that is when the challenge of learning and teaching at the same time made me value the affordances of these tools. From that point onwards,

as an English language teacher, I would be seeking such opportunities, trying to create and trying to maximize teaching with the available tools.

When I began teaching EAP at an American university based in the Middle East, I remember how I would have to put in an advance request every semester to be given a classroom with a projector and a computer with Internet connection. Although there were textbooks and a lab time allocated to practicing reading English, administrators would be surprised why this English teacher would need a computer to teach English! Students would log long hours over a semester that they had spent practicing reading at the lab, yet their actual development in the reading skills did not reflect that. Upon my volunteering at the lab, I realized that students would be logged onto the reading app, but would be working on their homework or other activities and bypassing the system in reality. Not only was the reading app “RapidReader” useless, it was also boring (I found out upon discussion with some of the students); so they were not really keen on using it and hence not benefitting from it. As I was also the ESL department coordinator, I was in an administrative position to change a lot of the things in terms of the curriculum and to some extent the system. In discussion with my colleagues, we introduced writing of book reviews for lower level EAP students and research papers for higher level students replacing the reading app. In the case of classroom teaching, I noticed that my students were more engaged, participated more in class, and benefitted from the simple use of Powerpoint, and the Internet instead of the black board and textbooks alone. This I observed among students at all the four levels of this EAP course that I had taught. I noticed that any explanation that was broken down into points and discussed using the Powerpoint or with the internet support for illustrations or association made for

comprehension, was often better understood, more engaging and more welcoming to them (Bueno-Alastuey & Lopez Perez, 2014; Chang, 2014; Aborisade, 2013; Hong & Samimy, 2013; Feng, 2012; Stepp-Greany, 2002).

Subsequently, I did some practice teaching as part of completing my TESL certification and worked with educational technology a lot in teaching and preparing materials for the CLB (Canadian Language Benchmark) pre-Benchmark level at a LINC (Language Instruction for Newcomers to Canada) program to new immigrants in Toronto. Here once again I felt the great difference it made to be able to demonstrate, elaborate, give examples at a level where adults were not even at a working English level and more often than not communication would have completely broken down, if not for the use of educational technology.

These past experiences of having worked with and without educational technology in teaching English in different parts of the world and with learners of varied age groups and language levels got me intrigued in investigating deeper into the role of TELL within the EAP context, factors that facilitate language learning as well as whether learners' beliefs evolve through a course. Recognizing the gaps that remain as few studies embark in researching this area, I hope that this research will add value and knowledge about EAP for teachers, teacher educators and administrators of the complex nature of second language learner belief systems toward TELL. I further hope that it will aid stakeholders, like teachers and course administrators to redesign, and rethink some of the strategies, tools and methodologies that are being used in incorporating TELL into language courses. This has been very aptly said by Prensky (2010) as he believes, "...to be the most successful at using technology in their classrooms, teachers do not need to

learn to use it themselves (although they can if they want to). What teachers do need to know is just how technology can and should be used by students to enhance their own learning” (p. 3).

### **Summary**

The rationale for this research is based simultaneously on my own personal interests and experience using technological tools in teaching English as well as my recognition of gaps that exist in our understanding of learner belief systems and how these beliefs impact practices using technology. This research will attempt to examine how learner belief systems evolve through a course and thereby influence and are influenced by practices within an EAP context. In order to fulfill the purpose of this study, this paper first reviews the literature on blended approaches and defines the purpose, gaps to be investigated and pedagogical and theoretical background of this study. The study is then described in detail, examining the methodology, participants, data collection and analysis strategies. The last section of this paper focuses on the results, discussion and implications of the findings.



## Chapter 2: Literature Review

As demonstrated by Conole (2008), students today work in “a complex and multifaceted” environment where technology is “at the heart of all aspects of their lives” and they expect an appropriate rather than extensive, integration of technologies in their instruction (p. 136). Prensky (2010) also believes that no generation has ever been before so “deeply and permanently technologically enhanced, connected to their peers and the world” as they are now (p. 2). In order to develop appreciation for meaningful technology use and for a better understanding of past and current research on this topic, this discussion will be divided into three main areas that will be followed by the theoretical framework that informed this study:

1. Defining online language learning environments.
2. Rationale for blended approaches in language learning/teaching.
3. Language learners’ beliefs of blended approaches.

### Defining Online Language Learning Environments

Having established the need to define a blended environment in Chapter 1, we will now look at various other descriptions and definitions in order to understand the specific blended context of the current study. Singh and Reed (2001) from a corporate software development perspective highlight optimizing the learning outcome and cost of program delivery through adopting the blended learning approach. They believe that

*Blended learning focuses on optimizing achievement of learning objectives by applying the “right” learning technologies to match the “right” personal learning style to transfer the “right skills to the “right” person at the “right” time.* (italicized in the original, p. 2).

The following principles are mentioned as being embedded within the above definition:

- Focusing on learning objectives rather than the method of delivery
- Supporting different learning styles to reach broad audiences
- Bringing in individual and different knowledge into the learning experience
- Embracing the most effective strategy of “just-what-I-need, just-in-time”  
(adapted from the original, p. 2).

Then they move on to introducing the different dimensions of the blend where learning can be a combination of one or more of their given dimensions: blending offline and online learning, self-paced and live, collaborative learning, structured and unstructured learning, custom content with off-the-shelf content learning and finally, work and learning (pp. 2-3). Of the five dimensions they elaborate, the offline and online learning dimension seems to be a fit for this study context. Within this dimension, a learning program is described as “providing study materials and research resources over the Web while providing instructor-led” sessions as the main medium of instruction (p. 2).

Whittaker (2013, pp. 11-12) in her introductory chapter in defining blended learning (BL) in English language teaching, adopts a table from Smith and Kurthen (2007) that uses percentages in differentiating some of these terminologies used to describe online learning environments (see Table 1).

Table 1 *Taxonomy of terms related to blended learning*

Term	Definition
Web-enhanced	Subjects that make use of a minimal amount of online materials, such as posting a syllabus and course announcements.
Blended	Subjects that utilize some significant online activities in otherwise face-to-face learning, but less than 45 per cent.
Hybrid	Subjects in which online activities replace 45-80 per cent of face-to-face class meetings.
Fully online	Subjects in which 80 per cent or more of learning materials are conducted online.

*Note.* Reprinted from Smith and Kurthen, 2007, *Taxonomy of terms related to blended learning*, as cited in Gruba and Hinkelman, 2012, p. 4.

However, the definition of online learning environments provided by Table 1 can be problematic and confusing to teachers when they actually try to differentiate the environments and can end up using terms for environments interchangeably due to the ambiguity created by trying to maintain such percentages in one's practices.

According to Bueno-Alastuey and Lopez Perez (2014, p. 509), "Blended learning is a recent development in education, which involves combining face-to-face (FTF) classes with computer-assisted language learning (CALL) modules (Trinder, 2009), in search of the most effective and efficient combination for individual learning subjects, contexts, and objectives (Neumeier, 2005)".

Blended approaches to learning and teaching consist of integrating technologies in FTF environments through a principled selection of actions, tools, and networks that are situated in particular groups, times and locations with an aim to meet specific educational goals (Gruba & Hinkelman, 2012, p. xiii). The types of blend can vary ranging from approaches which only include web-based activities for homework and is often known as web-enhanced (e.g., Sagarra & Zapata, 2008, as cited in Bueno-Alastuey & Lopez Perez,

2014, p. 509) to approaches which offer a full integration of CALL with online activities and computing technologies complementing FTF tasks and is also known as hybrid (e.g., Banados, 2006; Ellis, Steed, & Applebee, 2006, as cited in Bueno-Alastuey & Lopez Perez, 2014, p. 509). The types of blend may also vary from school to school, depending on the institutions' and stakeholders' agenda and policies. Despite these perceived differences, Whittaker (2013, p.12) argues that many of these terms are synonymous and that in English language teaching (ELT) 'blended learning' is the most commonly used to refer to any combination of FTF teaching with computer technology (online/offline activities/materials). This last definition of Whittaker (2013) is the one this study will embrace. When we discuss the next points, reasons for and benefits of blended approaches, it will become clear why or how the blending of FTF and online re/sources can vary.

### **Rationale for Blended Approaches in Language Learning/Teaching**

At the beginning of the 21<sup>st</sup> century it may be hard to imagine what language teaching and learning will be like in the next one hundred years, but some authors believe that much of our future is closely connected to blended learning. Thorne (2003) claims that blended learning could be one of the most important educational advances of this century, while Hauck and Stickler (2006) see it as an answer to problems in higher education systems (Grgurovic, 2011, p. 100).

According to the above quote, institutions can have varied rationale for adopting a BL approach in education. In this section research findings will be shared on the benefits of BL that inform the rationale for BL use. These will include reported administrative benefits, benefits related to teaching and learning as well as individual benefits that include motivation, autonomy and the notion of engagement as promoted through its use.

### **Administrative benefits.**

Kern (2011) in talking about technology and language learning points out that “[a]s online and self-directed learning components have become more common in foreign language teaching, blended learning is increasingly becoming the norm in university level courses” (p. 206).

Some of the administrative benefits from the perspective of the stakeholders have been identified by Goertler, Bollen, and Gaff (2012) as space and financial savings for the institution, improvement of quality of instruction, access to more non-traditional students, engaging the digital natives in a learning mode they know, and flexibility in time and space (p. 298). In comparison to traditional FTF learning, BL includes administrative benefits such as, greater flexibility, reduced costs, unlimited time outside the classroom to complete online tasks and extension of materials and learning scenarios outside the classroom (Bueno-Alastuey & Lopez Perez, 2014, p. 510). Singh and Reeds (2001) have also mentioned that by putting their four identified principles of BL into action, organizations have experienced “radical improvements in the effectiveness, reach and cost-effectiveness of learning programs relative to traditional approaches” (p. 2). These improvements are so profound that they believe to have “the potential to change the overall competitiveness of entire organizations” (p. 2).

### **Teaching and learning benefits.**

Various pedagogical purposes for implementing BL in second language (L2) instruction have been reported by Hong and Samimy (2013, p. 331): a) opportunities to communicate with native speakers via computer-mediated communication (CMC) (Stockwell & Levy, 2001; Toyoda & Harrison, 2002); b) tasks to learn the target

language culture through CMC (Ducate & Lomicka, 2005; Hertel, 2003; Zeiss & Isabelli-Garcia, 2005); c) a virtual classroom to promote learners' interactions in the target language out of the classroom (Heins, Duensing, & Stickler, 2007; Sanders, 2006); or d) an electronic venue containing numerous authentic materials (Hart, 2002; Mishan, 2005).

Many of the implicit constraints of time, geography and format of physical classrooms are now no longer valid within the BL approach (Singh & Reeds, 2001, p. 3). Also, logistical and structural challenges of EAP courses (200- 400 students per teacher, low resourced contexts, inadequate classroom spaces, lack of teaching-learning facilities, few teachers) in developing or under developed countries were reported being solved by introducing technology alongside FTF classes (Aborisade, 2013). At the Federal University of Technology Akure (FUTA), Nigeria, the teachers' use of Moodle for posting useful links and sites to download materials, posting information regularly, and course discussion forums for students to share ideas, ask questions, and discuss their progress on the course, drastically improved the quality of teaching there (Aborisade, 2013, pp. 38- 39). Moodle use enabled teachers to provide more frequent feedback, provide links to diverse materials and resources and thus helped to create avenues for greater interaction among learners in the target language (Aborisade, 2013, pp. 35- 43).

The factors impacting university-level language teachers technology use and integration have been described as “*technology was pedagogically useful for extending learning beyond the classroom, providing visual enhancement, providing opportunities for authentic language input and output, and implicitly teaching additional skills*” [italicized in the original] (Karabulut, 2013, p. 103).

Some of the identified linguistic benefits of learners in a BL environment over e-learning and FTF mode were, a positive effect on students' performance and language skills, reinforcement of students' autonomy and reflection, the facilitation of the review and control of learning, more meaningful and individualized feedback, high ratings in enjoyment and usefulness and higher time spent on task (Bueno-Alastuey & Lopez Perez, 2014, p. 510).

Gilbert (2013) discusses four different types of technology use and their benefits in EAP classrooms. First, she discusses case studies of concordancing or 'data-driven learning (DDL)' as beneficial for developing students' accurate linguistic knowledge (pp. 122, 125). In case of it being used within a BL context in EAP, the example from Thurnstun and Candlin's (1998) study is drawn upon to show that student feedback on teacher-guided vocabulary learning task was "highly positive" (p. 124). It was reported that "the investigation of target vocabulary using concordances not only help[ed] them to develop the ability to guess the meanings of unknown words from the context, but also enrich[ed] students' knowledge of collocation and grammatical structures in the context of authentic language" (p. 124). Other projects (Charles, 2007; Yoon, 2011) exploring EAP writing using concordances have also been cited by Gilbert, however, she stresses the need for both learner and teacher to develop new technical skills for the effective use of concordancing programs in EAP (p. 126). Then, examples of hands-on webpage searching and evaluation experiences are presented to show how they help develop critical e-literacy skills among learners. She suggests that in the EAP classrooms this can be done through introducing internet-based projects and activities by the teacher to help EAP students develop "autonomous strategies for determining the credibility of web-

based information” (p. 130). This is followed by examples of wiki use that have been reported to have helped EAP students share and build the important cultural knowledge needed to more fully participate as members of the wider communities in which they live (p. 122). The study on wikis was introduced during computer lab classroom time and as an extension of a classroom activity within that EAP course. Although a few students posted comments outside of regular class time, the teacher found it to be most productive when she had students in the lab (p. 134). Finally, web-based learning management systems (LMS) are explored to show “how flexible learning opportunities can be provided where learners see limited class time in intensive programmes” (p. 122). Lee (2016) has also reported wikis to have granted students the ability to take an active role in their own learning and stay focused on making progress in their coursework in a fully online learning environment (p. 88).

### **Motivation, autonomy and engagement.**

A number of benefits for students related to the general use of technology in the classroom include, motivation, improvement in self-concept and mastery of basic skills, more student-centered learning and engagement in the learning process, and more active processing, resulting in higher-order thinking skills and better recall (Brownlee-Conyers, 1996; Dwyer, 1996; McGrath, 1998; Weiss, 1994, as cited in Stepp-Greany, 2002, p. 165). In a fully online Spanish learning course, students reported that their computer-mediated communication (CMC) tasks kept them motivated throughout the semester and engaged them in working together with their classmates (Lee, 2016, p. 89).

Learner engagement in tasks has been associated with the use of educational technologies. Chang (2014) in her PhD dissertation looked at English language learning



students of an Intensive English Program (IEP) and their engagement in computer-assisted language learning tasks and found that “if teachers can provide opportunities for setting goals, provide opportunities for interaction, and provide authentic tasks, learners may be engaged in doing tasks. This may be done through the use of internet technologies” (p. 26). She looked specifically at Lin’s (2012) model of task engagement as a combination of behavioral, cognitive and emotional expressions that demonstrate an individual’s active involvement and investment during a task (p. 5). In accordance to the framework, she found that her intermediate level “participants appeared to be behaviorally engaged in Internet tasks” (p. 26), “cognitively engaged in a task if they ha[d] the opportunity to interact with other people” (p. 26), and overall emotionally engaged while doing a task (p. 27). The conclusion drawn based on participants’ use of the internet was that because students showed positive behavioral and emotional task engagement, teachers should integrate Internet technologies in curriculum (p. 27).

Chang’s (2014) study results not only showed a positive relationship between the use of technology and student engagement in doing tasks, but it also implied that the use of information technology provides opportunities for interaction and collaboration, student-centered and authentic approaches to learning, and participation and involvement in discussing learning related issues that are related to the components of task engagement (pp. 8-9). Kuteeva (2010) also found more student engagement, interaction and peer collaboration as important gains in using wikis in academic English writing (p. 52).

Within a BL context, “if teachers can provide opportunities for setting goals, provide opportunities for interaction, and provide authentic tasks, [using Internet technology] learners may be engaged in doing tasks” (Chang 2014, p. 26).

BL environments have also been reported to increase interaction among students in otherwise extremely challenging and trying circumstances. Aborisade (2013) in researching blended learning in a Nigerian context talks of how students were encouraged to use the wiki platform to collaborate on group wiki pages to share information on meeting times and to draft/edit their term papers; students used micro-blogs on their profile pages to reflect on their learning and record ideas that they have gained and would like to develop later. The findings reflected that the totality of the blended experience kept “students engaged, interacting in English and interested in learning like they never [had] been before” (p. 38).

Communication, empowerment and learning have been identified as the three common factors of student motivation provided by a technology-enhanced setting: “Communication” is represented by the finding that students liked the ability to communicate with others and to engage in real as opposed to contrived, communicative acts. “Empowerment”, describes the finding that students felt empowered in the technology environment since they felt less isolated and were less afraid to contact others. The “Learning” factor describes the finding that students believed that computer gave them certain kinds of control over their learning by enabling them to learn faster and more independently and to write more creatively (Warschauer, 1996, as cited in Stepp-Greany, 2002, p. 166).

Also, three elements of motivation have been displayed by first year undergraduate EFL students in learning the target language using computer: students expressed a strong desire to achieve goals, expend all efforts persistently and consistently, and show positive attitudes towards learning the target language, English

(Anwaruddin, 2013, p. 62). In addition to the three elements of motivation, students were also first “on task” for longer periods of time during the CALL lessons. Second, student attendance was 99% during CALL lesson in contrast to the average attendance of non-CALL lessons of 91% (p. 62). This was an action research study that looked at Web 2.0 and its application in teaching EFL to first year undergraduate students at a university in Bangladesh.

Online learning has been reported to have “surpass [ed] face-to-face classrooms in providing learning experiences that are ‘social, active, contextual, engaging and student-owned” (Everhart, 2006, pp. 135- 136 as cited in Davies, 2011, p. 15). Hong and Samimy (2013, p. 331) suggest research studies showing that BL provides benefits for language learning which might be otherwise challenging in the traditional FTF-based classroom environment, for example, contributing to linguistic achievement (Deusen-Scholl, Frei, & Dixon, 2005; Hegelheimer, 2006; Kern, 1995; Pyne & Whitney, 2002), promoting learners’ motivation (Ushida, 2005; Warschauer, 1996b), expanding knowledge of the target culture (Dubreil, Herron, & Cole, 2004; Zeiss & Isabelli-Garcia, 2005), and empowering learner autonomy (Blin, 2004; Luke, 2006). Singh and Reeds (2001, pp. 6 - 7) report findings from two universities in the States to have improved learning outcomes by providing a better match between how the learners want to learn and the learning program that is offered by adopting the BL approach. Extending reach to a greater audience (student body), optimizing organizational development cost and time and students’ traveling cost and time have also been reported among the benefits of adopting a BL approach. Finally, students’ program completion rate had been reported to have gone up by 94% compared to self-paced fully online learning mode earlier. The

improvement was attributed to the ability of a scheduled live event to motivate learners to complete self-paced materials on time, the availability of interaction with instructors and peers, and higher quality mentoring experiences (pp.6 -7).

Now that the relevance for blended approaches in learning language has been established, we need to see what existing research illustrate with respect to students' beliefs toward blended approaches in learning language.

### **Language Learners' Beliefs of Blended Language Learning**

In this section we will look at studies that have identified key areas that have been reported to influence learner beliefs of a BL approach. For example, reasons like students' previous experience with educational technology, convenience of the delivery format, multiple attempts, individualized learning, immediate feedback options, enjoyment factor of learning as well as initial learning curve have been reported to have impacted students' beliefs' in learning language within a BL environment.

#### **Reasons for choosing blended courses.**

In discussing reasons for choosing blended courses, studies have reported students' previous experience with online courses in general, the convenience of a BL course model, as well as other benefits and constraints identified by teachers and students. These are essentially some of the major reasons that students opt for the BL option.

#### ***Previous experience with online courses.***

It was found that students who were already attending an online or hybrid class showed a higher degree of online readiness for taking an online course in the future than students who were attending a traditional language class (La Piana, 2014, p. 79). La Piana

(2014), who compared students' perceptions of online versus traditional language learning among Virginia and North Carolina college students taking foreign or second language classes, further discovered that students who had already taken a foreign language class online had a much better perception of online language learning than those who had never studied a language online (p. 79). However, the researcher found no significant differences between students who considered themselves the strongest in interpersonal intelligence (that is extrovert) and those who scored the strongest in intrapersonal intelligence (shy or introvert type) in their preferences for online versus traditional language classes. This was contrasting to Harrington and Loffredo's (2010) findings who found that shy students (i.e., intrapersonal learners who focus more on the self) preferred online and extroverts, interpersonal learners, preferred FTF/traditional classes as they prefer to work with other people (p. 89). Bueno-Alastuey and Lopez Perez (2014) in their study also found that students' rating of the usefulness of Information and Communication Technologies (ICT) in all the skills and areas of language learning in a blended environment varied depending on ICT use in their course. Students with an increased use of technology in their courses realized the true potential for productive skills compared to students who had used less ICT within their EFL course (p. 509). Correlation between students' usage of computers to their confidence in CALL and subsequent inclination for more CALL based courses, was also found by Zhang (2011, p. 84).

#### ***Convenience of course models.***

It has been found that students opted for a hybrid course (defined as blended instruction, Sloan-Consortium, 2005, as cited in Goertler, et al., 2012, p. 2) due to

convenience inherent in the flexibility of the course model, which is one of the main reasons for the attractiveness of such a delivery model for stakeholders (Goertler, et al., 2012). The multiple delivery formats of a course using comparable course materials actually attracted students and got them interested in taking foreign language courses, like, German, French and Spanish online (pp. 311- 316).

Sagarra and Zapata (2008) looked at Spanish as a second language being taught in a BL approach. The students reported having enjoyed the most opportunities for multiple attempts, receiving individualized immediate feedback, being able to work on their own pace, consolidating class content and having activities that used a myriad of formats that are accompanied by images and that allowed them to work within the online environment (pp. 219-220).

***Other benefits and constraints reported by students.***

Stepp-Greany (2002) reported a number of benefits acknowledged by students of Spanish as a second language: increased motivation, improvement in self-concept and mastery of basic skills, more student-centered learning and engagement in the learning process, and more active processing, resulting in higher-order thinking skills and better recall (p. 165). Students also appeared to have gained confidence directing their own learning (Stepp-Greany, 2002, p. 165). Students perceived that they had learned the most from that which they had enjoyed the most, attributing both a learning and interest value to the use of a computer lab for learning Spanish (p. 172). Benefits reported by Iranian EAP students in the Atai and Dashtestani's (2013) study examining BL included up-to-date information, the use of various materials in learning, comprehensive information, not being time-consuming, and easy access. The attitudes of the EAP participants of this

study toward internet-based reading comprehension instruction were generally positive. They unanimously considered the Internet as a powerful tool for enhancing students' reading comprehension skills (pp. 21, 33).

Concerning participants' perceptions of the limitations of using the internet in EAP courses, the majority of the participants identified "slow internet speed", "unfamiliarity with major academic websites", "inadequate Internet-based facilities at university", "inadequate Internet-based skills", "low credibility of the content of free websites", and the "high cost of connecting to the internet" (Atai & Dashtestani, 2013, p. 34). Aubrey (2014), who looked at 44 Japanese students' reactions to using Google Docs in EFL writing, reported challenges in accessibility to the Internet and the students' learning curve as being an issue with "a new technology" in this case the use of Google Docs (p. 77). Kessler, Bikowsky and Boggs (2012) call for patience and time to be administered by both teacher and students in adapting to new technologies and innovative teaching strategies (p. 93).

Prihatin (2012) in his doctoral dissertation studied instructors' integration of computer technology in two universities in Indonesia and reported "limitations of facilities, students' social background, and confidence in using technology" (p. 150) as major challenges along with Internet connection failure and virus attacks in the computer lab impeding a smooth implementation of technology in learning English. He concluded that although both the instructors had overall positive attitude and viewed technology as "a useful tool to support student learning", they did feel both students' and teachers' basic computer skills to be prerequisites to technology integration in language instruction (p.152). In teaching, teachers seem to lack the support and encouragement to use

contemporary, familiar CALL technologies on the one hand; technologies which facilitate learner-centered instruction are also lacking on the other (Kessler, 2018, pp. 206, 208). That is why Kessler's (2018) call for education to be "refocus[ed] with the learner as the point of leverage- for example, by attending to students' learning styles or helping learners to develop awareness of how they best learn" (p. 209) - is very timely and in line with the learner-centered aspect of this research study.

### **Theoretical Framework**

Given the complex nature and constant change in the evolution of technology and its use in education, no one theory is able to capture all the underlying concepts alone and that is why several complementary theoretical frameworks have been outlined in this section that break down and define concepts that help inform this research.

EAP education in the digital age calls for new pedagogical paradigms that can help learners to develop new literacies and "21<sup>st</sup> century skills" (Dede, 2010) required for successful communication in academic and professional contexts (Kuteeva, 2011). Among 21<sup>st</sup> century learning and thinking skills, Dede (2010) identifies information and communication technology (ICT) literacy skills as paramount. ICT literacy requires "students to be able to use technology to learn content and skills- so that they know *how* (original italicized) to learn, think critically, solve problems, use information, communicate, innovate and collaborate" (p.56). The 21<sup>st</sup> century EAP learners according to the revised conceptual framework for digital literacies will be required to exhibit leadership for digital citizenship, develop cultural understanding and global awareness by engaging with learners of other cultures using technology, evaluate and select information sources and digital tools based on the appropriateness to specific tasks, use



multiple processes and diverse perspectives to explore alternative solutions and above all transfer current knowledge to learning of new technologies (Dede, 2010, pp. 58- 59).

The basis for the kind of educational reformation brought about with the incorporation of TELL, is born in the Constructivist theory. Constructivism has been described as a cluster of approaches, rooted in the belief that knowledge cannot be taught but must be constructed by the learner (Candy, 1991: 252, as cited in Benson, 2011, p. 38) and that knowledge is produced through socially-mediated interpretative processes. While structuralist approaches emphasize ‘innate categories of knowing and concepts that are imposed by individuals on the world, empiricists approaches emphasize ‘how experiences imprint the structure of the world into the minds of individuals (Benson, 2011, p. 38). Social constructivism stresses the importance of social interaction and cooperation when learning, “[t]hat is, learning does not happen outside performance; it occurs in performance” (Swain & Lapkin, 1998, as cited in Davies, 2011, p. 12).

The relationship of these theories to education and learning can be understood through John Dewey’s contribution to three main areas of learning: the relationship between education and social participation, education as problem solving, and classroom organization (Benson, 2011, p. 29). Dewey propagated for educational activities that began from the immediate personal and social experience of the learners and saw learning as an adaptive process, in which interaction with environment generates problems that must be solved in order for individuals to satisfy their needs (Benson, 2011, p. 29). Both Vygotsky and Dewey argued for a social, scaffolded view of learning (Johnston & Lawrence, 2018, p. 10). Learning as an adaptive process is also at the root of constructivist approaches. Dewey’s problem-solving method regarded schools and

classrooms as microcosms of the community in which learners worked together to solve shared problems and it is through collaborative work that learning contributed to the development of community (Benson, 2011, p. 30). This can lead to fostering autonomous learners whom Kumaravadivelu (2001) terms as the “postmethod learners”. The postmethod learner is an autonomous learner who is willing and able to take charge of his/her own learning (Holec, 1988, as cited in Kumaravadivelu, 2001, p. 545). With the help of their teachers and their peers and the careful planning and integration of EAP technology tools (Yim & Warschauer, 2016, p. 603), postmethod learners can enhance *academic, social and liberatory autonomy* (Kumaravadivelu, 2001, pp. 547- 548) through exploiting technology-enhanced tools in a blended approach. This notion of the postmethod learner may contribute in understanding students’ behavior, their attitude shaping their belief systems. This will be further explored in Chapter 6 of this study.

Additionally, E.M. Rogers’ “Diffusion of Innovation Theory (DIT)” (as cited in Boston University School of Public Health, p. 4) has been used in both the students’ online survey (Survey 1 and Survey 2) questionnaires. The theory originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption means that a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behavior, etc.). Adoption of a new idea, behavior, or product (i.e., “innovation”) does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. The use of the “five established adopter categories” (p. 4) in both

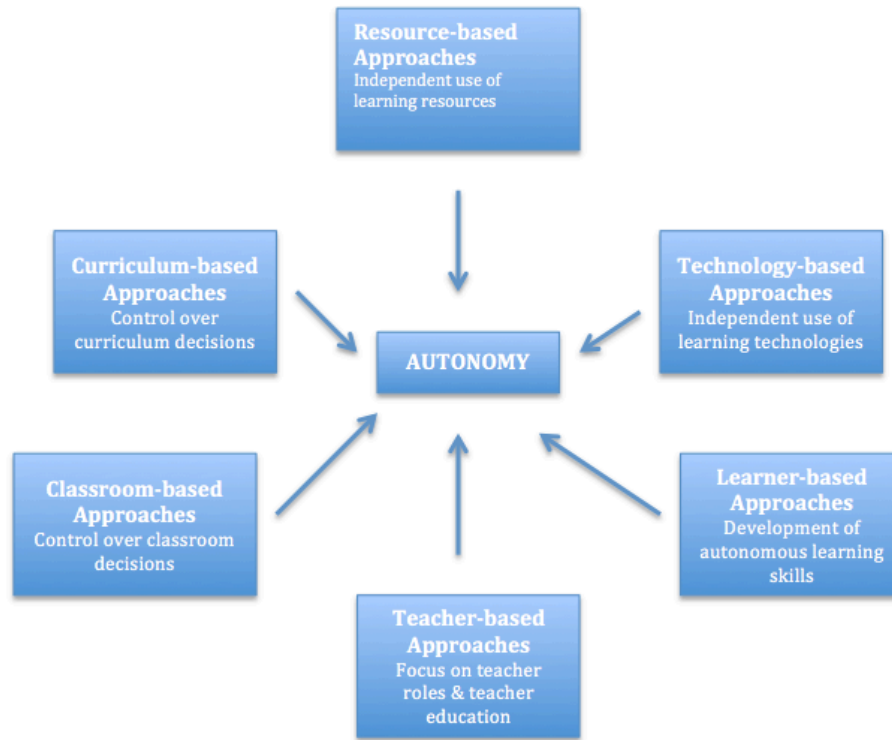
the surveys (see Table 2) will help us understand the characteristic of the individual/s in relation to their use of tech-tools/apps better, leading to their attitude towards TELL and influence on their belief system. It must be noted that although this DIT framework is generally used as categorization tool, this scale has been adopted in this research particularly as a reflective tool to gauge students' own perception of themselves as a tech user.

Table 2 *DIT terminology and descriptions used in Survey 1 and 2*

<b>Terminology</b>	<b>Description</b>
<b>Innovator</b>	You like looking for new technology apps, games, software, extensions; You spend time learning how to use new technology; You like sharing new technologies with your friends
<b>Early Adopter</b>	You like using new technology apps, games, software, extensions that are useful; You spend time learning how to use new technology only when you think it will be useful to use
<b>Mass Follower</b>	You like using new technology apps, games, software, extensions only when others have used and found it to be useful; You spend time learning how to use new technology only when you have time; You like adopting the technology to benefit you only
<b>Late Adopter</b>	You like to start using new technology once many people have used and reported its usefulness; You like using new technology apps, games, software, extensions once its usefulness has been proven
<b>Resister</b>	You do not like using new technology apps, games, software, extensions just because it's the trend and everybody is using it; You think that it can be a waste of time and energy learning how to use new technology; You like to continue to do things the way you used to before the use of technology came about

Furthermore, this current research will explore EAP students' interactions with any or all of the approaches proposed by Benson (2011) to categorize areas where TELL

seems to facilitate autonomy and also influence learner beliefs about language learning using technology. “[A]utonomy is a precondition for effective learning; when learners succeed in developing autonomy, they not only become better language learners but they also develop into more responsible and critical members of the communities in which they live” (Benson, 2011, p. 1). In keeping with this statement, I wanted to understand if the TELL components influenced students’ beliefs towards their language learning. Also, I wanted to see if the tech-tools paved the way towards more independent and self-sufficient learning “exceed[ing] the designers’ [the EAP teacher’s] original intentions... [and] leading to new ways of teaching and learning” (Hanson-Smith, 2000:2, as cited in Benson, 2011, p. 149). Benson’s (2011) framework for the development of autonomy (pp. 125- 126; Figure 7.1) is as follows:



*Figure 2.* Benson's framework for autonomy in language learning and related areas of practice (p. 125, Figure 7.1)

- *Resource-based approaches* emphasize independent interaction with learning materials. Resource-based approaches serve as an umbrella term for approaches such as, tandem learning, distance learning, self-instruction, and out-of-class learning, that tend to build learners' independent interaction with physical, human or digital language learning resources (Benson, 2011, p. 127).
- *Technology-based approaches* emphasize independent interaction with educational technologies. This approach is not only inclusive of out-of-class learning under resource-based approaches, but also highlights exclusively autonomous learner interaction in TELL environments.

- *Learner-based approaches* emphasize the direct production of behavioral and psychological changes in the learner.
- *Classroom-based approaches* emphasize the learner control over the planning and evaluation of classroom learning.
- *Curriculum-based approaches* extend the idea of learner control over the curriculum as a whole.
- *Teacher-based approaches* emphasize the role of the teacher and teacher education in the practice of fostering autonomy among learners.

The above approaches will be addressed individually not only to gauge learners' extent of autonomy in learning English, but also to fathom interaction and subsequent evolution in thinking, strategy use and behavioral change in learning language that may have taken place within these specific approaches within the current study.

Recognizing the implications, this study embraces some of the key concepts derived from the Constructivist approach that provide a broad and critical perspective in understanding the role of TELL in issues of students' beliefs. Benson's (2011) framework is used to assess areas of behavior and beliefs that relate to autonomy and perceptions about effective language learning and teaching. These theoretical frameworks together will provide an integrative lens that will help interpret data and understand the complexities of EAP learners' belief systems. It will further help to interpret and understand the findings in relation to the research questions proposed in this study.

Exploration of each of these approaches discussed in this section will be informative in analyzing the data and subsequently understanding the study results.

## **Summary**

As illustrated in this chapter and in Chapter 1, learners' belief systems are multilayered and have a "profound influence on learning behavior" (Cotterall, 1995, as cited in Figure 1) which can affect their attitude towards and use of technological tools in studying English. Learners' attitudes can be affected by the degree of exposure to TELL, the nature of exposure, the nature of the educational delivery modality, learners' interactions with the approaches stipulated in Benson's framework, an array of factors that can directly or indirectly influence students' belief systems and subsequently their behavior in learning English. These are among the areas to be investigated in this study. A theoretical framework has been included in the effort to clarify the complex nature of learners' belief systems towards TELL. This framework will provide the theoretical foundation of this research and will be further examined and defined in the discussion of the results of this study. Chapter 3 will outline the methodology used in this research.

## **Chapter 3: Methodology**

The purpose of this study is to explore technology-enhanced pedagogy from the learner's perspective and investigate how TELL environments are developed and facilitated within an English for academic purposes (EAP) context. This chapter will begin with a description of the research design and rationale, which will be followed by a description of research methods, participants, data collection and analysis tools and strategies and a discussion of how this research approach will ensure credibility. An overview of perceived limitations will conclude the chapter.

### **Research Methods: Overview and Rationale**

Due to the exploratory and complex nature of this study dealing with students' beliefs, I have chosen a constructivist, partly grounded theoretical approach within a case study methodology. Thus data collection will be inductive in nature (Morse, 2001, as cited in Mills, Bonner, & Francis, 2006, p. 26), in that issues of importance to participants emerge as I, the researcher, employ multi-dimensional and qualitative case study research, integrating qualitative methodology that captures experiential understanding of participants (Stake, 2010, pp. 56-70, as cited in Simons, 2014, p. 461) within the singular case, i.e., the EAP classroom. The main methods used of data gathering to access this way of knowing were qualitative. Online surveys, interviewing, observation and document analysis were the primary data collection approaches used in this study. These were supported by embedded case studies where individual students' reported their technology use in EAP through diaries/journal writing, stimulated recall interviews, and focus group interviews. As stated in the literature review, research into students' beliefs has focused principally on examining phenomena through self-reported



data using online surveys and/or semi-structured interviews as data collection methods. This study uses a case study approach that provides multiple lenses into rich contextualized data to maximize the depth of understanding of student beliefs, a complex phenomenon. Yin (2014) defines a case study as an empirical inquiry that investigates a contemporary phenomenon within its real-world context (p.16). Case studies are seen as an ideal foundation for this research given the exploratory goal of this study, examining contextually bound students beliefs towards TELL. Levy (2015) also stresses the importance of qualitative researchers going to the people and observing them within the context, specifically, where new technologies are being employed and to develop a better understanding of learner experience (p. 555).

Data were collected from multiple sources of evidence and the single case study also had multiple embedded units within, particularly, where individual students were studied against the single case. These embedded units were then triangulated and corroborated to strengthen findings (as stressed by Yin, 2014, p. 121). According to Baxter and Jack (2008), “The ability to look at sub-units that are situated within a larger case is powerful when you consider that data can be analyzed *within* the subunits separately (within case analysis), *between* the different subunits (between case analysis), or *across* all of the subunits (cross-case analysis). The ability to engage in such rich analysis only serves to better illuminate the case” (p. 550).

The study also adopted a progressively focused approach conducted in three phases, where the result from each phase determined the nature of the queries in the following phase. According to Yin (2014), “any case study finding or conclusion is likely to be more convincing and accurate if it is based on several different sources of

information, following a similar convergence” (p. 120). Keeping this in mind, I had designed a multi-phased study where data were collected from multi sources. Not only were there the two online surveys conducted towards the beginning and at the end of the study, but there were also the in-depth individual student interviews to clarify comments/choices made on the individual surveys as well as the digital diary (DD) posts to triangulate, corroborate, complement and even expand upon the findings or conclusion.

As this research is exploratory, data collection in each phase was analyzed sequentially and used to refine approaches and procedures in subsequent phases. This particular aspect is inspired by the Grounded Theory Method (GTM) which “is designed to encourage researcher’s persistent interaction with their data, while remaining constantly involved with their emerging analyses. Data collection and analysis proceed simultaneously and each informs and streamlines the other. The iterative process of moving back and forth between empirical data and emerging analysis makes the collected data progressively more focused and the analysis successively more theoretical.” (Bryant, 2014, p. 125).

All these data collection procedures and analyses were conducted focused on the two research questions posed earlier in Chapter 1:

1. Do EAP students’ expectations and beliefs regarding TELL evolve through a course and if so, how?
2. What contextual, pedagogical, and or individual factors shape EAP students’ beliefs over time?

## Research Context

The researcher had approached a number of EAP courses for conducting this research. The chosen context was the one that had agreed to participate. This context can thus be called a site of convenience. This was an English language course under the academic program of a university situated in a large metropolitan area in Ontario, Canada. It is an eight-week English language program, EAP 1<sup>2</sup> designed to provide an intensive learning experience for university-bound students.

The program is only available to applicants who apply to that institution and are not accepted to the EAP 2 program that is an EAP bridging program. Applicants at IELTS 5.5 or equivalent (CLB 6) are required to take 4 months of academic English language study (EAP 1 + EAP 2) to complete the program. Applicants at IELTS 6.0 (CLB 7) or equivalent are required to take 2 months of study (i.e., EAP 2) to complete the program. Course details for the EAP 1 where I conducted the research are as follows:

Table 3 *EAP-1 course schedule*

<b>Term</b>	Fall
<b>Format</b>	Full-Time In-Class
<b>Start Date</b>	29-August
<b>End Date</b>	21-October
<b># of Classes</b>	39
<b># of Hours</b>	160.00
<b>Schedule</b>	Monday-Friday, 20 hours per week

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<sup>2</sup> EAP 1 was a pseudonym used for the course. The course is for high school graduates who have not yet achieved the English language requirements to enter the next step, i.e., the EAP 2 course which is a bridging program geared towards improving students' English and academic skills, to prepare them for undergraduate studies at that university.

The course entails intensive work on academic reading, writing, listening and speaking skills in English. The textbook “Making Connections” by Pakenham (2008) is recommended and course objectives are detailed in accordance to the development of the four language skills (for details on EAP 1 course outline, see Appendix A). In addition to students meeting specific reading, vocabulary, writing, listening and speaking goals by the end of term, they are expected to have met some specific sociocultural and sociolinguistic skills. These include awareness of cross-cultural issues, awareness of different socio-academic constructions of knowledge, showing of respect and openness to the points of views of others and participating in out-of-class social and cultural experiences. As additional work, students are required to complete a total of 3 reading logs (bearing a total weighting of 40%) and 3 listening logs (bearing a total weighting of 30%) to be completed in alternate weeks (i.e., weeks 2, 4 and 6 of the course). The logs are geared towards developing students’ reading and listening comprehension skills and these are additional work outside of the classroom- teaching context. Students are also given opportunity to sign up with conversation partners to ensure more practice in speaking in addition to marked in-class presentations and debates. The minimum passing mark for this course is 65% in each of the four skills, i.e., reading, writing, listening and speaking including obtaining separate passing marks for both the final research project components (essay writing and oral presentation) as well as the final in-class evaluation (includes attendance and in-class marked work). For detailed course outcomes and outline for EAP 1, refer to Appendix A. This course outline was provided by the institution and does not reflect the activities or the nature and use of the TELL tools that were observed being used in the classroom. The TELL tools were thus unique to this

specific class observed. A discussion of the teacher participant and later discussions in Chapters 4, 5, and 6 provide an accurate depiction of the TELL components in use.

### **Research participants.**

The research participants are essentially the teacher of the EAP 1 course, Pierre, and the 16 students of this class, who all participated in the study.

### ***Teacher participant.***

In this particular study the teacher is at the forefront of designing, modifying and altering a lot of the pedagogical and contextual factors influencing students' beliefs as we will see in detailed discussion in Chapters 4, 5 and 6. The teacher plays a significant role in any tech-mediated classroom (Knobel & Kalman, 2016; Kern, 2011; Johnston & Lawrence, 2018) and that is why it is important to discuss the background of the EAP 1 course teacher, Pierre. His background will be discussed as taken from the teacher interview. This discussion is pertinent to better understanding the EAP context of the research.

### ***Background.***

Similar to many of the course teachers at that institution, Pierre had teaching experience at home and abroad (Japan, Korea). What sets him apart though is his unique passion for developing programs and designing online course materials, textbooks and curriculum. Much of his website design, skill development and graphic designing skills were self-taught and began with dissatisfaction towards the way things were in the classroom, and was further fueled by his Master's degree that got him thinking "specifically on using theoretical frameworks to inform the development of an online teaching platform that was better suited for language learning." When asked if any

courses taken during his Master's program transformed his work with online apps and tools, he said,

I realized in my Masters that when learning is mediated through technology then there needs to be, you need to look towards theory to provide an explanation to what's happening and in order to guide the process, ideas that were espoused in SCT [Socio-cultural theory] specifically constructivism, the idea of collaboration, learning communities of practice; all, kind of spoke to how learning could be possible in online environment specifically increasing social presence to mitigate any issues that arise when using technology.

Not only did he talk about being inspired by the ecological perspective of Van Lier (2010) that cautioned him to take note of certain affordances and constraints in tech-mediated approaches, but also “the Community of Inquiry framework was the guided tool” that he believes helped mitigate those constraints through the use of various platforms that encourage collaborative work among students as well as the teacher and students. These, he believes, lie at the core of integrating and exploiting the various Google extensions and in the way he did in this specific course. He spoke very strongly about the importance of the Community of Inquiry model and its three presences: cognitive, social and teaching, as a theoretical basis to inform a facilitative framework in designing online collaborative work and this is further elaborated in his interview as well as a book chapter that he co-authored, on using web-based technologies in collaborative writing in EAP contexts. Thus, Pierre's years of teaching experience in various contexts, educational background, desire for change and transformation in the education industry impacted his teaching methods, techniques and strategies that created a unique language classroom environment within the EAP 1 course.

### *Student participants.*

#### *Demographics.*

There were 16 students (9 male and 7 female) in this class and all participated in both the online surveys (Survey 1 and Survey 2) as well as the FG interviews. The research participants of the study were between 18-20 years old. They were all from China and educated until high school in China (13 of the 16 participants) while two students had attended college/university in China and came into this EAP 1 program to Canada. Of these two, one had completed her undergraduate studies in China and was working there at a bank. She wanted to improve her English for work purposes. The other student had completed three years of undergraduate studies and wanted to study in a Canadian university. A third had completed his last two years of high school in Canada. In terms of learning English in a school setting, the average students had been learning over 5 years. A few of the students also had experience of being educated in international high schools in China with English as the medium of instruction. This was revealed in the research, but no further enquiries were made in this regard. Thirteen of the 16 participants self-identified their level of English knowledge as Intermediate (CLB level 5-6) while among the remaining three students, one self-identified as lower Intermediate level in English (CLB level 3-4) and the two as upper-intermediate (CLB level 7-8).

#### *Naming the participants.*

All the participants, teacher and students, were given pseudonyms by the researcher to maintain their anonymity and confidentiality. Students were renamed using common English names. The researcher created a table with their original and

corresponding English pseudonyms in order to avoid any confusion in analyzing and reporting data. The teacher participant chose his own pseudonym for this research.

*Selected participant subsample.*

In conducting more in-depth research, I decided to use a subsample of participants. Such sampling was done to limit the data set for more in-depth research. As Miles and Huberman (1994, p. 11) mention “reducing the data, whether they be quantitative or qualitative, sharpens, sorts, focuses, discards, and organizes data in such a way that final conclusions can be drawn and verified” (as cited in Tashakkor & Teddlie, 2003, p. 373). For this purpose, a total of nine participants were chosen to take part in the embedded units within the case study research. I decided on nine instead of the initial eight as back up of one extra in case any one participant chose to drop out of the study. Initially I had chosen eight participants as that is a 50% representation of the whole class. I had an informal discussion with Pierre about the students’ behavior and attitude towards learning, overall work ethics like submitting homework and completing classwork. All these factored into the final selection of the nine participants. This type of purposive sampling was also done based on students’ level of English (self-identified on the survey as Intermediate, i.e., CLB levels 5-6). Having spoken to Pierre, I decided that Intermediate level would be good in terms of their comfort with the language as newcomers to Canada and their comprehension of English to be able to understand and participate in the study. I used Roger’s diffusion of innovation theory response that investigates attitudes towards the adoption of technology in higher education (see Table 2 for detailed description of the terminologies) in Survey 1 to capture an overall wide and varied range of belief systems. From the responses, I shortlisted three Innovators, two



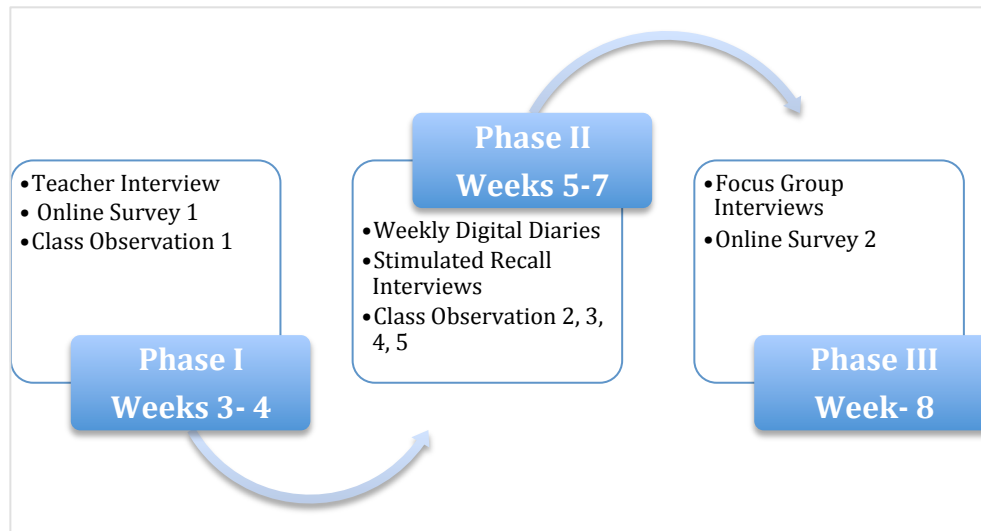
Early Adopters and four Mass Followers for the embedded units, for more individual in-depth study. I looked for interesting and at times contradictory responses to TELL components in students' online survey. For example, in response to their additional thoughts on technology and learning English, interesting responses like, *"Use some game to teach student, people always learn more when they are happy"*, *"Technology can let students more interested in learning English, they can research many information on it"* *"...teaching English should depend on the teacher because there has the difference between technology and human."* or, *"I used to learn english by app called 100 words"*<sup>3</sup> got me further interested as not all students had additional thoughts or even volunteered more thoughts on the use of educational technology upon completion of the survey. As can be seen from the shared examples, I had chosen instances where students expressed a strong preference for computer-mediated lessons and even the contrary as well as responses that expressed strong preference for the use of technology, but chose the option that computers can be distracting in the classroom on a Likert scale in the survey. This I believe would give an overall and fair representation of students' varied comfort level of technology use, varied attitude towards educational technology and thus give me a wide range of beliefs systems.

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<sup>3</sup> Note that all students' direct quotes will be reported verbatim and in italic in this format.

## Data Collection

The data collection tools and methods have been represented in the following figure which is followed by a description of the three data collection phases.



*Figure 3.* Data collection plan and tools.

### Tools and process overview.

As can be seen in Figure 3, the data collection process took place over a period of six weeks. The first two weeks of the term were an introductory/orientation period for both teacher and students and that is why upon discussion with Pierre, it was decided to conduct the study within the following six- week period, not interfering with these initial weeks. As noted above, due to the exploratory nature of the study, data collected from each phase were analyzed in order to develop the queries for the following phase. An overview of the three phases will be followed by an outline of the data collection tools in this section.

### ***Phase I.***

#### *Overview.*

Phase I comprised of a semi-structured teacher interview, online student Survey 1 and class observation 1 by the researcher. All these collected data were analyzed to form queries and prompts for the following phase II. Phase I was designed to provide partial data for research question 1. This would help give a general picture of the EAP 1 learners' understanding of the role and expectations of the use of TELL in the EAP 1 course towards the very beginning of their course when students were getting oriented to TELL materials and tools within their course. This phase also helped me choose participants for the next phase II of the study.

### ***Phase II.***

#### *Overview.*

Phase II included multiple embedded case studies in the second half of the class term where nine students were chosen for closer investigation through their individual digital diary (DD) writing and stimulated recall (SR) interview sessions to document their beliefs over a period of three weeks. This phase took place between weeks five to seven of the course and between the two online surveys.

In this phase there were a total of three DD writing sessions followed by three SR interview sessions with the nine participants. Although there was one class observation done in phase I of the study, phase II also had four class observations done in four consecutive weeks by the researcher.

This phase began with the students writing their DD posts. As the first couple of weeks students would spend time getting oriented with the new environment and

classroom, I had decided upon this particular time frame, i.e., weeks 5- 7 as apt for this phase of the research. The SR interviews, on the other hand, were aimed to verify and elaborate on the recorded observations of the participants in their DD posts. Overall, phase II was designed to help provide more in-depth information, give a more comprehensive picture of the individual, pedagogical and or contextual factors that the learners may report influencing their EAP learning and subsequently their belief and behavior towards TELL tool use in their learning. I also expected to examine in-depth students' past experiences using educational technology, their understanding of technological tools used in class, their experiences with it, their attitudes towards it through the DD posts and SR interviews. Phase II is also expected to provide information to gauge if/any development has occurred in students' understanding of the role and expectations of the use of TELL in their EAP 1 course as they were encountering more exposure and becoming more adept to the use of the tech tools or apps within that context. For detailed prompts and goals of each session, see Appendix B.

### ***Phase III.***

#### *Overview.*

Phase III comprised of an online Survey 2 by all the 16 student participants and two FG interviews divided into two groups, FG 1 comprising of the nine participants of phase II and FG 2 of the remaining seven who participated in phase I of the study only. Phase III was designed to provide data for addressing research question 1 and comparable data set to phase I of the study as well as emerging issues related to use of technology by students at the end of the course. As surveys seemed to provide at times partial or incomplete information, the FG interviews were designed to alleviate this and thus collect

more complete information from participants. For example, some of the overall Likert scale choices made by students in Survey 1 and 2 were discussed in the FG interviews.

### ***Informed consent.***

The research began upon official clearance from the ethics board of the context. The teacher participant volunteered and upon receiving his consent (form attached in Appendix C) the research began with a semi-structured teacher interview. The class was visited by the researcher in week three of the EAP 1 course to introduce the research, orient the students to the study and collect informed consent forms from the students (forms attached in Appendix C).

### ***Teacher interview.***

The semi-structured interview with the teacher, Pierre, was conducted to develop a better understanding of the context that I was about to research as well as to corroborate and triangulate findings during the analyses of the collected data. The semi-structured teacher interview questions had all been adapted from other studies that used survey and interview methods to investigate teacher and students' perceptions and belief systems towards computer-assisted language learning (CALL) (Feng, 2012; La Piana, 2014; Lawrence, 2000; Zhang, 2011). The interview questions were designed to elicit information about the teacher's English language teaching background, experience with technological tools/apps, theoretical underpinnings informing teaching strategies and methods being used, current and envisioned beliefs informing EAP teaching and classroom use of tech-mediated approaches (see Appendix D).

### ***Documents.***

The course-related documents that were provided by the teacher included the course outline, course outcomes, schedule, students' academic program handbook, materials/resources like: text book, assessment rubrics and specific handouts during class observations. These helped the researcher get oriented with the materials or resources students would be using in their learning and talking about in the upcoming surveys, their DD posts as well as their SR interviews. It must be mentioned that all interviews including the teacher's interviews (pilot and the study) were fully transcribed for data analyses purposes. Some of the selected documents were collected by hand and others were made available by Pierre electronically shared through the Google drive. These documents also helped later corroborate or even counter findings.

### ***Online surveys.***

Both the surveys were designed to be between 20 -25 minutes long. All 16 students in this specific class were invited to take part in the online surveys. All the online survey questions had been adapted from other studies that used survey methods to investigate teacher and students' belief systems towards CALL (Feng, 2012; La Piana, 2014; Lawrence, 2000; Zhang, 2011). The questions were further modified and revised prior to the pilot based on my supervisor's research experience with Web 2.0, Telecollaboration, CALL and belief systems in general. My prior experience of working on a research project looking at teacher beliefs also provided ideas and queries for designing the study.

It must be mentioned that all the online survey questions as well as the DD prompts were a mix of open-ended and closed Likert scale questions. The purpose of the

mixing of open ended and closed question approaches in all aspects of data collection was aimed to reap the most accurate and complete depiction of the phenomenon (in this case, students' beliefs) under investigation (Johnson, 1995; Johnson & Christensen, 2000; Patton, 1990; Tashakkori & Teddlie, 1998, as cited in Tashakkori & Teddlie, 2003, p. 299). It had also been done to ensure “*complementary strengths and nonoverlapping weaknesses*” from quantitative and qualitative data [italicized in original] (Brewer & Hunter, 1989; Tashakkori & Teddlie, 1998, as cited in Tashakkori & Teddlie, 2003, p. 299).

#### *Online survey 1.*

Survey 1 (see Appendix D) was designed to gauge students' level of English, comfort level with technology use, experience and enthusiasm for the use of tech-mediated approaches towards the beginning of their EAP 1 course. Also I wanted to record what beliefs students held regarding tech tools and apps as they were slowly being introduced to them. Survey 1 questions aimed to gather information of participants' demographic profile, English language level, background, their digital literacy and confidence in general as well as in learning English and their overall and envisioned belief in the use of technology in learning English. Survey 1 provided further information of students' past experience and use of tech-mediated approaches that guided their initial beliefs towards the beginning of their EAP 1 course.

#### *Online survey 2.*

Online Survey 2 had to be conducted prior to the FG interviews to ensure participation by all students. So, accordingly, the Survey 2 was conducted first, posted online the evening before the last day of class, to ensure participation of all 16 students

and the FG interview was conducted the following day.

The questionnaire of this Survey 2 (see Appendix E) was designed based on the results of Survey 1. The questions from some sections were repeated to identify any changes from the beginning of the term to the end. Some of the queries in Survey 2 were modified based on findings from Survey 1. These queries were obtained from the earlier research findings from phase I and II. Survey 2 was designed to help compare students' beliefs and attitudes from the beginning of the course, where students had little exposure to TELL in this specific context, to the end of the course when they had gone through tech-enhanced language learning experiences. These findings will be discussed in Chapters 4, 5 and 6.

#### *Survey 1 piloting.*

According to Yin (2014) piloting not only assists in developing relevant lines of questions, but it also provides some conceptual clarification for the research design (p. 96). Keeping this in mind, I had conducted a pilot of the Survey 1 questionnaire in a different class within the same program. A total of 16 participants of the pilot study shared similar educational and ethnic background as the study participants. In addition to the online student survey, the student participants of the pilot were asked to complete a response survey of individual questions. This response survey was to evaluate students' understanding of each question on the online survey. In this response survey students were asked to mark each question on a Likert scale of 1- 3; 1 being easy to understand and 3 being could not understand. Having studied the results of the response survey, I went back into that class and had the survey questionnaire displayed on the class projector and individual students were asked about what exactly they could not



understand (3) or found not very clear (2) and took down notes as they responded. Based on my notes, and discussions with both teachers (pilot teacher and Pierre), modifications were made only on the DIT scale descriptors where I added more explanation in the Survey 1 questionnaire for clarification and better comprehension. I did not pilot Survey 2 because although the queries in Survey 2 were similar to content to Survey 1, the queries developed essentially based on results from phase I and then phase II of the study and therefore the issues explored were very unique and specific to the research context. Also, student comprehension seemed clearer over the study and the comprehension issues of Survey 1 had already been dealt with in the piloting of Survey 1.

### ***Class observations.***

“If a case study is about a new technology, for instance, observations of the technology at work are invaluable aids for understanding the actual uses of the technology and any problems being encountered” (Yin, 2014, p. 114). My purpose for class observation was strongly driven by this statement. Hence, the class observations were conducted to get oriented with the dynamics of the classroom, experience first hand the apps/tools that were being used and to see how they were being used as well as to get better oriented with the participants. In the case of qualitative research examining the learner’s perspective in CALL, Levy (2015) strongly advises the researcher to observe “how participants experience and interact with a given phenomenon at a given point in time and in a particular context” (Heigham & Croker, 2009, p. 7, as cited in p. 555). Also “the intent” of class observation was “to describe the scene or event as it is, providing a rich, textured description to give readers a sense of what it was like to be there or provide a basis for later interpretation” (Simons, 2014, p. 462). With all these intentions in mind,

a total of five classes were observed that amounted to a total of 13 hours. Within the four-week period of data collection, class observations took place the beginning of week 4 and ended in week 7. Out of the 8 hours of class per day, students had a one hour break and I observed either the first half or the second half of the break and of course this was done in discussion with Pierre.

The focus of these observations was to see how the teacher was encouraging and using the platform in various capacities. For example, I wanted to see how he was uploading student presentations on Google Powerpoint presenter, using Google Docs to address grammar, giving feedback to the whole class while the students were becoming adept to responding through technology in debating, researching topics, collaborating on completing and submitting their assignments, and corresponding with the teacher. During these sessions, I took handwritten detailed notes, like, the length of time observed, activities, technology use observed and later that same day would transfer the handwritten notes onto my computer. These notes were later consulted in developing queries for the DD prompts, SR interviews as well as Survey 2 and FG interview questions.

***Digital diary (DD) posts.***

Phase II of the study began with the chosen subset of nine participants writing the DD posts. I had initially planned the DD posts to be similar to writing a diary, recording everyday or interesting events or activities, however, from the initial online survey as well as from my discussion with Pierre I realized that given the current English level of the students, the DD posts would have to be in the form of a questionnaire, a mix of open-ended and closed Likert scale questions, of some sort, giving them prompts to write versus writing in abstraction about whatever came to their minds. In keeping with this

thought, I created a platform on the G suite<sup>4</sup> for this purpose where only these nine phase II participants were able to access and answer individually. The prompts would be posted on the platform at the end of each week, on Thursday evenings and students would get an invitation from me via email to access the weekly DD post and complete by the night as they would each have a stimulated recall interview the following Saturday and Sunday based on their DD posts.

There were a total of three DD posts over a period of three weeks. The DD posts were designed to take approximately 10- 15minutes. The purpose of the DD posts were to recall thoughts, events related to the use of tech tools in class, critical thinking, ideas that may be going through their minds as they were experiencing and using certain technological tools in learning English between weeks five and seven. These were thoughts that they may not have shared in class, reflections regarding certain tech tools lessons, and materials used by the teacher. Hence, I treated these thoughts/critical observations as an extremely valuable and rich data set. Please see Appendix B for details of the DD post and SR interview goals, prompts and queries.

### ***Stimulated recall (SR) interviews.***

There were a total of three SR interviews. Each DD post was followed by an SR interview. The SR interviews were all conducted using Screencastify that is an extension one can use within the browser, Google Chrome. It allows you to record your screen activity for creating tutorials, online interviews and runs entirely in Chrome. All the interviews were thus recorded and then fully transcribed for analyses purposes. The SR

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<sup>4</sup> G Suite comprises of Gmail, Hangouts, Calendar, and Google+ for communication; Drive for storage; Docs, Sheets, Slides, Forms, and Sites for collaborative and individual work- all on the Google platform.

interviews were aimed to verify and elaborate on the recorded observations made in the DD posts. The goal of the SR interviews was to prompt participants to recall thoughts they had while recording a certain event in class related to the use of an educational tech-tool or describing useful tools used in class in their DD posts that week. “In other words, the theoretical foundation for stimulated recall relied on an information-processing approach whereby the use of and access to memory structures is enhanced, if not guaranteed, by a prompt that aids in the recall of information” (Gass & Mackey, 2000. p. 17). In the case of my research, the prompts were the DD posts written by the participants themselves. The SR interviews typically took place a day after the DD postings as mentioned above. Given the number of students, the interviews had to be divided between Saturday and Sunday. Bloom (1954) found that if the recalls were prompted within a short period of time after the event (generally 48 hours), recall was 95% accurate (as cited in Gass & Mackey, 2000. p. 18). Keeping this in mind, I had to go through individual DD responses the very next day and prepare questions for the upcoming SR interviews. It must be noted that as questions of the SR interviews were prompted by the responses on the individual’s DD post, the queries of the interviews varied as well as the length, between 30- 50 minutes, per interview. Also, during the SR interviews, I took notes of any interesting observations or comments made by the interviewee. These notes were also used, when/if required to corroborate and enhance findings in the data analysis and discussion section.

#### ***Focus group (FG) interviews.***

Focus groups excel at providing in-depth qualitative insights gleaned from a relatively small number of people (American Statistical Association, 1997, p. 10). This

can be achieved by providing students opportunities to speak openly, free of inhibition, as one on one may be intimidating to some, especially at a lower level, and “generate data through the give and take of group discussion. Listening as people share and compare their different points of view provides a wealth of information- not just about what they think, but why they think the way they do” (American Statistical Association, 1997, p. 1). As a result, I decided that FG interviews would be an appropriate instrument to efficiently obtain a broad variety of EAP learner perspectives on TELL and an overview of the issues influencing students’ belief systems and reported practices using tech tools. Also the FG interviews would help corroborate, compare, contrast and enhance findings from the online surveys.

Phase III of the study ended with these two FG interviews that were each 90 minutes long and were audio recorded and fully transcribed for analysis. The FG interviews were conducted in more of a discussion forum with some guided questions in a semi-structured interview/discussion format. Questions of the FG interviews were based on results and findings from phases I and II of the study. A sample of the interview questions has been added in Appendix E to provide an understanding of the nature of the queries.

There were a total of two focus groups as mentioned earlier. The purpose for keeping the participants separate in two groups was because FG 1 members had participated in a specific phase of the study that the FG 2 members had not. Therefore, it would also be meaningful to compare the findings within the two groups and see how one group members deviate from or conform to the other group members in their attitudes, thoughts, and or beliefs around tech-use and English language learning.

## **Data Analysis**

All interview and discussion data were fully transcribed by a hired professional transcriber for a complete, bias free and accurate transcription. This then underwent thematic coding using NVIVO 10 and 11 to determine patterns, concepts to show factors shaping students' beliefs toward TELL, perceptions about TELL's role and perceived actual benefits. In the early stages of coding, ideas that came out of the data were recorded in the form of memos (on NVIVO 10) which are "fairly unstructured notes and comments" on the early results and are "extremely valuable" and "an important component" of the Grounded Theory Method (GTM) (Bryant, 2014, p. 129). According to Charmaz (2006 as cited in Bryant, 2014, p. 129) coding is "the process of defining what the data is about", what the researcher sees in the data. "...Thus the codes are emergent, they develop as the researcher studies his or her data. The coding process may take the researcher to unforeseen areas and research questions." (p.129). As I proceeded with coding, visited and revisited the data, the memos transformed and narrowed down to more concrete themes that were common across data sets. Thematic analysis was also done to show linkages, similarities and differences within, between and across subunits of the single case, the EAP 1 course. Data were further contextualized in individual experience and illustrated the potential variables influencing students' views on TELL. So, for example, from the initial Survey 1 themes from the description of class activities like, reading blogs, posts, online newspaper, writing using Google Docs or Drive evolved in the SR interviews and DD posts into the role of the environment, the role of the teacher, English learning in China. These themes transformed into themes, like, the context in Canada through questions that arose from activities introduced by their EAP 1

course that they had not done in China, - these became more clear and explicit in phase II of the study and further verified in phase III through the FG interviews and Survey 2.

All transcribed data of the SR interviews underwent member checks by the phase II participants in keeping with the constructivist grounded theoretical approach, where “data is mutually constructed by researcher and the researched” (Wertz, Charmaz, McMullen, Josselson, Anderson, & McSpadden, 2011, p. 169). Member checks were done in the form of asking for further explanation or clarification to individual responses in their DD posts. For example, Amy wrote in her DD post that technology was not useful for communicating when one needed to resolve conflict or confusion while working on Google Doc with a partner. When this was pointed out to her for an explanation, she changed her mind saying, *“Yes, I kind of misunderstanding... I only think about the ones we usually use on the class, the several technology tools. Yeah... But when I think about the all the kind of technologies, and then I think, yes, I strongly agree with that and it’s really helpful for us to do something”*.

Then she asked whether she could change her opinion from her DD post. Joanne, another participant, who required a lot of scaffolding and modifying of words/phrases in her interviews, after clarification on instances changed her mind from her opinion initially expressed in the survey as well as DD posts to her SR interviews.

In order to ensure triangulation and to explore correlations and to seek disconfirming instances throughout the data set, the data were visited and revisited and themes reviewed over time in keeping with the research queries and questions. In this way, many of the closed-ended Likert scale items were correlated with the responses of the open-ended items (Tashakkori & Teddlie, 2003, p. 366) procured from thematic

interpretation using NVIVO10/11 through the various data sources like, the online surveys, DD posts, SR interviews and FG interviews.

All the Likert scale data were mapped onto Microsoft Excel sheet in order to compare and understand the emergence of beliefs of individuals between Surveys 1 and 2. During data analyses, throughout, the bigger picture that is the two research questions were consulted as data were visited and revisited for further clarity and answers.

Throughout this research, I kept field notes recording my viewpoints of experiencing site visits through class observations, during one on one SR interview sessions, FG interviews. These notes were used to contrast, decipher and to clarify data collection/analysis processes throughout the various phases of the research. These notes were further used in triangulating findings and to help my decision-making processes, keeping these as transparent as possible during the analysis and for readers' comprehension of the study.

Qualitative data collected through my detailed field notes and the participants' DD posts combined with their SR interviews were used to complement, detail and expand understanding of the potentials of TELL in an EAP context. Due to the exploratory nature of this research, the range of data collected underwent data transformation and consolidation to play with the data and see them from different perspectives.

### **Ensuring Credibility**

“Avoiding bias is but one facet of a broader set of values that falls under the rubrics of research ethics” and a “good case study researcher will strive for the highest ethical standards while doing research” (Yin, 2014, p. 76) and this is one of the reasons for designing, collecting and combining various data sources to gain complementary data



from multiple paradigmatic perspectives. Having some experience conducting case study research, I recognize the benefits and limitations of close personal contact and the subjective nature of interactions with case study participants and data (Ahmed, 2004). This was the reason for integrating open-ended and closed questions from multiple sources at multiple phases to gain complementary data from multiple paradigmatic perspectives. However, I am increasingly skeptical of the claim that research can be objective. I recognize that my interest in technology enhanced language learning, my teaching experience, with and without technology, filters and biases have framed my research design and will frame what information I select from the observations, interviews and analyses. That is why I have subscribed to the idea of documenting my biases, thoughts and rationale for decisions made, interpretations and analysis throughout the research process. Effort was also made to seek disconfirming instances within the data set to counteract biases or initial judgments. Hence the multi-phased research approach was taken in order to integrate complementary, yet paradigmatically distinct, research approaches that can synergistically inform each other throughout the study resulting in richer data collection and analytical approaches. For example, I had a folder titled field notes where I recorded in detail the methodology used to write up the SR interview and DD posts prompts specifically and cross-checked them to the research questions numerous times to stay focused on the greater picture of the research. I compared specifically the individual students' responses across Survey 1, DD posts, SR interviews and Survey 2 and then the FG interviews and tried to identify the emerging or similar patterns prior to coming to a conclusive theme or node for that particular student.

Triangulation methods of observation, interview, and document analysis; member checks through the SR and FG interviews were used to provide a thorough understanding of the perception, contextual factors, and practices of research participants. Some of the same queries were revisited, repeated within multiple data sources from Survey 1 to Survey 2 and FG interviews, from DD posts to SR interviews for confirmation, disconfirmation of instances, and triangulation purposes.

I believe in maintaining a transparent research process to the best of my ability, describing my rationale related to research logic and processes. Keeping this in mind, I maintained detailed notes after class observations, interviews and decision-making situations, like, change of survey questions in the study based on the results from the pilot, reasons for choosing individuals for the phase II study. This was used to understand decisions, interpretations and analyses and to correlate and enhance findings. Throughout observation, data collection and analysis I actively seek out evidence to disprove interpretations, assertions and hypotheses, subscribing to a view that only partial truths can be revealed. As good case study research and research in general has been described as patient, reflective with a willingness to actively seek opposing views of the case (Stake, 1995), I will follow this approach.

### **Limitations of the Study**

I recognize that my presence, even as “non-participant”<sup>5</sup> in the case study environments may have encouraged more awareness of technological tools being used by both teacher and/or participating students that otherwise may not be used. I suspect that

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<sup>5</sup> I have put this phrase in quotations as I sincerely doubt that any researcher present in a situation can be a non-participant observer as one's presence seems to imply some degree of participation.

the focus of my research will also promote some thought and awareness about the benefits or limitations of technology use that otherwise may not be present; hence my skepticism about the potential “objectivity” of research. This is one of the reasons I attempt to examine the issues through multiple lenses and multiple sources at different times (within the 8 week timeframe) within the EAP 1 course.

In spite of all possible efforts made towards ensuring the credibility of the study as discussed in the above section, I do understand that the findings cannot be generalized beyond very similar context, regarding issues around TELL and students’ beliefs. Also, being sole observer and researcher in this study may have made me miss potentially valuable teaching and learning moments and seeing alternate interpretations of data. In addition, given my responsibility as sole researcher on this project, I had to limit myself to collecting data from only one class in these wide-ranging, multi-leveled intensive academic English language programs, missing out on the integration of technology and other technological tools in other courses or components of these academic English programs. In hindsight, I further recognize the limitations of my data making instruments, the risk of bias in selecting and framing content in questionnaire instruments and interview processes based on my understanding of technology integration. However, this is also why other studies were consulted in designing and framing the data collection tools and questions as mentioned in data collection tools and overviews section earlier.

The researcher’s proximity to the teacher of the EAP 1 course can be viewed as another limitation of the study. The context itself can be viewed as a sample of strategic convenience as has been mentioned earlier. I had attempted to contact a number of institutions and only this particular one came through. Pierre himself is also somewhat of

an extreme sample in that his teaching methodology, philosophy and beliefs were quite unique and shared no resemblance to the teacher of the pilot study who was in the same program. Pierre's educational background, having completed his MA from the same program as the researcher, knowledge of my research, his involvement and advice on the online survey questionnaire may have influenced or directed his teaching strategies, methods and the nature of use of technological resources in the EAP classroom. However, we must remember that the teacher was not the subject of the study here hence the results or outcome of technology use could not have been predicted. The teacher's role is pivotal but that is the case in TELL integration in any curriculum, but how that will be accepted and to what extent be beneficial or not and subsequently used, depends largely on the student body, who are at the receiving end and who were the subject of this research.

Given the timeline of my research, I was limited to conducting the study in a class of one particular ethnic group of students who were newcomers to Canada. Given their specific ethnic background, they did not have access to a lot of the technological tools back home that other/s from different countries or in Canada are adept at or have taken for granted. Also, due to the small number of participants as well as change of queries (from online Survey 1 to 2) as they emerged during the data collection process, it was not possible to conduct ANOVA or t-tests or any other tests with the quantitative/ Likert scale data.

However, efforts were made to overcome some of the limitations through applying multiple lenses in the data collection as well as varied analysis procedures. The students' ethnicity can be a limitation on the one hand as well as a strength of the study

on the other. It actually added a whole new cultural dimension to the study that I had not foreseen when I had undertaken it. Their teaching/learning and technology use culture is unique and this is further explained and elaborated in Chapters 4, 5 and 6. Some of the queries changing from Survey 1 to 2 and even from DD post 1 to 2 or 3 can also be viewed as a strength as Leavy (2014) believes,

A qualitative researcher may adjust his or her methodology over the course of a project to facilitate new learning or new insights or to adapt to unanticipated challenges, obstacles, or opportunities. The malleability of qualitative methodologies is a strength of this approach to knowledge generation (p. 4).

In spite of the limitations, the researcher's previous experience and the efforts to make the data collection and analysis procedure extremely transparent at every step of the way can alleviate some of the factors that may seem limiting.

## **Summary**

This chapter described the research methods used in this study, the rationale for the design of this approach, the participant description, background and details of the data collection tools and analysis procedure grounded in theory. Efforts to ensure the credibility of the study as well as the role of the researcher in the study have all been clearly detailed. This chapter ends with a discussion about the limitations of the study and efforts made to overcome them. The findings from this research will be explored in conformity with the existing theories and the two research questions in the upcoming Chapters 4, 5, and 6.

## **Chapter 4: Surveying Students' Emerging Beliefs**

This chapter is structured around answering research question 1: whether students' expectations and beliefs regarding TELL evolved through this EAP 1 course. In keeping with the research question, this chapter will discuss results that came from the two online surveys, class observations and the two focus group (FG) interviews. Findings from these data will also be corroborated with relevant data from phase II of the study where individual students reported their technology use through weekly digital diary (DD) posts and stimulated recall (SR) interview sessions with the researcher. The findings highlight the changes and nuancing in students' beliefs around the role of technology in learning English as well as perceptions of the role of a teacher in a TELL environment. These were the two main areas where students' beliefs seemed to have evolved from the surveys to their two FG interviews.

In determining the evolution in students' beliefs in the role of technology, first we will discuss their understanding of technology use in Canada vs. the lack of technology use in China. The importance and necessity of past experiences influencing belief systems were discussed in Chapter 2. Here I will be depicting students' past experiences in China in order to understand and gauge nuancing in their beliefs and finally the impact of learning English in Canada on their beliefs. This will be followed by a discussion of students' thoughts and feelings about their overall performance and their perceptions of learning on the last day of class and the role of technology in their EAP 1 course specifically. Changes in students' perceptions of tech-literacy and confidence and their self-selection on the Diffusion of Innovation Theory (DIT) scale from Survey 1 to 2 will be discussed along with their reasons. Finally, beliefs about the role of a teacher in a

TELL environment, and the role of institutions in implementing educational technology for language learning will also be reported. In all these areas students' beliefs regarding the use of technology and its impact on language learning evolved. This discussion is aimed to provide an in depth picture of students' beliefs being altered as they underwent the EAP 1 course experience.

Before we move into the discussion of beliefs, students' experiences in English learning environments in China will be presented as this sets the backdrop for their evolved beliefs and will help contextualize the factors, extent, and nature of beliefs discussed later in Chapter 5. A lot of the differences we will see occurred in comparison to their past beliefs regarding learning English. The following discussion will also provide a more discernible profile of this unique cohort of students illuminating the complexities and the contextual nature of belief systems. That is why it is important to know where these beliefs are rooted, based on experiences in the past.

### **English Learning Environment in China**

Students' learning of English in China specifically came up in their DD post 1 and was followed up in their SR interviews 1 and 2. A few of the students also talked about their previous English learning experiences in the FG interviews. This section will briefly introduce the Chinese educational background they described and more in-depth data will be presented and discussed in the following Chapter 5.

According to the student participants in this study, whether from international or regular high schools in China, English was generally taught by the grammar-translation method. This involved a focus on grammar rules, translating from English to Chinese and vice versa, memorization of essays, paragraphs and mostly learning English through

reading and writing. Generally, these students described Chinese schools as being traditionally teacher-fronted, where teachers lectured, and students listened and took notes. Learning English outside of class was only doing homework (Catherine, John)<sup>6</sup>. Teachers taught English in Chinese through grammar rules and explanations of tasks given in Chinese including all instructions and interactions in class. There were lots of exercises to be done, homework, no practice of speaking, memorizing of word lists, preparing for tests. In John's words, learning English in China, "*[i]s very boring. Every day you need to memorize a lot of words and paragraphs*". Walter mentioned in his SR interview, "*all we do [in learning English in China] is only for marks, and even for the review like before the exam, teacher will review it, it's not for knowledge*".

According to Cheng (2016), students studying at the international high schools in China have to choose either to prepare for TOEFL or IELTS and their studying of English proceeds accordingly. Students who are not studying at international schools are prepped to take the "Gaokao" which is the higher education entrance examination that students pursuing education at the tertiary level have to complete. This is prerequisite for tertiary education entry in China and students are prepped for this in Chinese high schools. Usually they have to take this examination in their last year of senior high. This "teaching-to-the-test" phenomenon is prevalent in almost all educational institutions in China (Cheng, 2016, p. 99).

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<sup>6</sup> These are paraphrases from quotes by students of phase II, specifically, Catherine and John (pseudonym used). All paraphrases will be reported in this style, i.e., including the participant name in parentheses and all direct quotes from students will be italicized.



Students shared that a lot of the teachers at the international schools, on the other hand, are from Canada, and the UK. In the International schools the speaking and listening skills is taught by English L1 speaker teachers, while reading, writing and grammar is taught by the Chinese teachers (Naomi). For students studying at regular Chinese schools, occasionally there would be visiting English L1 speaker teachers for short periods of time, who would mainly focus on listening and speaking skills (Catherine, Eric, Joanne).

Against this kind of background, students came into this course and had their beliefs challenged and evolved through their daily English learning experiences and practices within the EAP 1 course. Thus students' beliefs will be explored through beliefs that evolved from the time that this cohort came into the EAP 1 course with their past beliefs of English learning in China through the eight weeks that they spent within this course in Canada.

### **Technology Use in Learning English: China vs. Canada**

*In China, "we all sit on the seat, and hear what our teacher teach us from the textbook, no speaking exercises and we have to do a lot of homework and paper, we don't have any time to practice our speaking, we must memorize the words and phrases, for me, i think it is so boring!!!!"*

(John, DD post 1)<sup>7</sup>

*Whereas, in Canada, "it brings a lot of fun to us, and makes us feel confident, and imporve [improve] our speaking skills effiently [speaking efficiency]*

(John, DD post1).

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<sup>7</sup> This style of referencing students' direct comments with their names and data collection tool mentioned in parenthesis is done to keep track of the evolution of a belief, at a specific point of time (from beginning to the end of the course) in the EAP1 course and also to distinguish phase II participants from the rest of the class.

According to the above statements, China provided them with a traditional teacher-fronted classroom as opposed to a more “*practical*” approach in Canada (Catherine, DD post 1). In this regard Catherine elaborated, “*We most learned grammar and remember vocabulary in China, and we are learning more practical English and join more activities about learning English [here in Canada]*”. Another participant, Eric said, “*In China, we never practice speaking*” (DD Post 1). Oscar shared similar experience as Eric, “*following China textbook and learn lots of vocabulary and grammar. but no chance talk in a real communicate*” (DD Post 1). Since the class observed in this study was a mix of students coming from international versus regular Chinese high schools where the use of technology varied between limited use to no use, their beliefs towards technology use in learning English also varied according to their exposure. As described earlier, students’ test-based English learning experience in China, required students’ memorization and recitation of paragraphs to the teacher and thus has been described as very boring by John (SR interview1). Teachers would teach reading and grammar using Powerpoint for presenting the reading exercises or grammar rules for students of International Chinese schools, but then further explanation would be done using the black board, not at all the way they were experiencing technology use in their EAP 1 course.

Oscar commented in his SR interview 3,

*But in China, there I only have the kind of traditional education. And there are no any technology, so your teacher just read the book and write some information on the board. And you copy it, and go home and review it. It’s just day by day. And compare with now, it’s too boring.*

Many of them practiced for the IELTS tests and some mentioned that there were websites given by teachers where they could practice listening. One mentioned (Amy,

DD post1) that at her International school, her English L1 speaker teacher would give the students voice recordings done by the teacher to listen at home and repeat after towards pronunciation practice. That was the closest they were to using any kind of technology in learning English in China. There was a lot of translating of sentences from Chinese to English and vice versa done by students (John, SR interview1), whereas in their EAP 1 course, they were asked to give their opinion in impromptu debates in class, conduct research online on a given topic prior to a debate, write reports, and participate in group presentations using Google apps and tools extensively, as can be seen in Table 4.

Table 4 *Tools used and activities done in EAP 1*

<b>Tools used</b>	<b>Activities Done</b>
Google Drive (individual folders for students)	Save, exchange and share all written work, assignments, essays
Google Doc	Compose all written work in and outside of class; teacher shared and posted all feedback to written work; peer and teacher editing done simultaneously
Google Slides	Compose all presentations collaboratively/individually, also shared for teacher feedback
Google+ Community	Post and share student created videos made outside of class (3 videos per student, per term), all students were encouraged to comment on their classmate's videos
Google+ Hangout	All teacher-student and student-student communication; all announcements, changes in schedule, plans shared/exchanged; students contacted teacher instantly (if any question)

Thus students' past English learning methods, styles, and experiences in China played an important role in comparison to the emerging belief they held in regards to their learning of English. This impacted some of the student's thought processes and their language learning preferences for certain tools and styles and subsequently their general

beliefs towards TELL. Discussion will reveal that although this was more prominent in phase II of the study, students actually talked about their experience of going through the EAP 1 course and about the role of technology in their FG interviews too.

### **Learning English: thoughts and feelings.**

On the last day of class, students were asked at the beginning of their FG interviews to share their thoughts about what expectations they had regarding learning English, the environment, the teacher, and the course in general before coming to Canada. Most of them thought that they would have a Chinese teacher, have lots of homework and tests. One of the participants said in the FG interview, *“I cannot adopt this course, very well. This I thought, may be teachers talking speed is very fast, and also I can a lot of vocabulary I don’t know, so and also I think, I thought, may be [EAP 1] class is like we have to reading textbook, we have to use textbook everyday.”* (Eric). In terms of activities they believed that they would be doing, lots of reading, translating from Chinese- English, as well as memorizing vocabulary lists, as it was part of an EAP bridging program. One student, John, included that he had come to know from his friends who came to the program before him that they would have to take their laptops to class everyday and this really surprised him as they were not allowed to take cell phones or laptops to class in China.

However, in talking about their experience throughout the course, FG 1 members (phase II participants of the study) believed that a lot of use of technology improved their listening and speaking skills specifically, prepared them for the next level, the EAP 2 course, and made them more confident to face the challenges of that level. One of the FG 2 member’s said, *“Um, I feel better because before I came here, I don’t know how to use*

*the Google Drive and to learn English, so after the [EAP 1] programs I learned a lot.”*  
(Tracey).

### **Perceptions towards the role of technology.**

In talking about student experiences with the use of technology, they all spoke very positively in the FG interviews, as Oscar noted, *“I want to say during this course technology is used and also improved all the English skills and I think the technology is very useful for our study and improvement, um.”* FG 1 members all agreed that the use of Google Drive and Google Docs made their academic life convenient and that they would continue to use these newly developed skills in their EAP 2 course. FG 2 members (non-participants of phase II), on the other hand, talked about technology as an assistant to their teacher in completing the curriculum timely and effectively. They all agreed that the use of technology made their workload manageable. One student Kacey commented,

*We can't finish any of our homework without technology, coz everyday we write an essay and do our homework and when we submitted it on Turnitin or may be just Google Drive. [Pierre] will help us check out it and give us grades. So I think do homework and also the study is deeply connected with technology.*

In their SR interview 3 when asked what students thought was the role of technology in learning language, Oscar said, *“Assistance. Because actually you don't need to rely on technology to learn language, but maybe sometimes it will help you to language and just be very efficiency.”* Amy believed that teacher teaching without any technology can be extremely boring, *“I think the role of using technology, it's abstract [attract] your attentions on something. It's like to pay attention to something and to feel more interested at that, and make the life easier.”* Technology use can help review class materials after class, (Amy, Catherine), make the learning process fun and enjoyable

(Walter, Naomi). Catherine, Eric and John believed that a good combination of both teacher and technology is needed for students to become successful in learning language. *“Yeah, because I think teacher and technology, it can combat [combine] together to improve student study. I think it is a efficient way. Yeah.”* (John). They believed in the success of blended learning as it saves time by helping students understand faster, review easily and *“many young people who really, really like to use technology to help them study”* (Catherine, SR interview 1). From their previous experience of learning English in China, only learning through reading books is reported as being boring as opposed to learning through illustrations using videos and pictures. In talking about the role of technology in studying English, Walter said, *“Oh, yeah. Yeah. Because sometimes if teacher just simply explains something, sometimes I will not understand, but if they use the technology, for example, they show a video, that make a lot of sense for me.”* (Walter, SR interview 3).

In talking about beliefs in the usefulness of technological tools and apps in learning English, Joanne said, *“Yeah, because we have a limited vocabulary, so for example when we go to buy a meal, a lot of vocabulary I don’t know. So use dictionary is very important for us, and e-dictionary is very quickly than the paper dictionary.”* (SR interview 3). Naomi gave an excellent analogy in explaining the role of technology in developing one’s language skills,

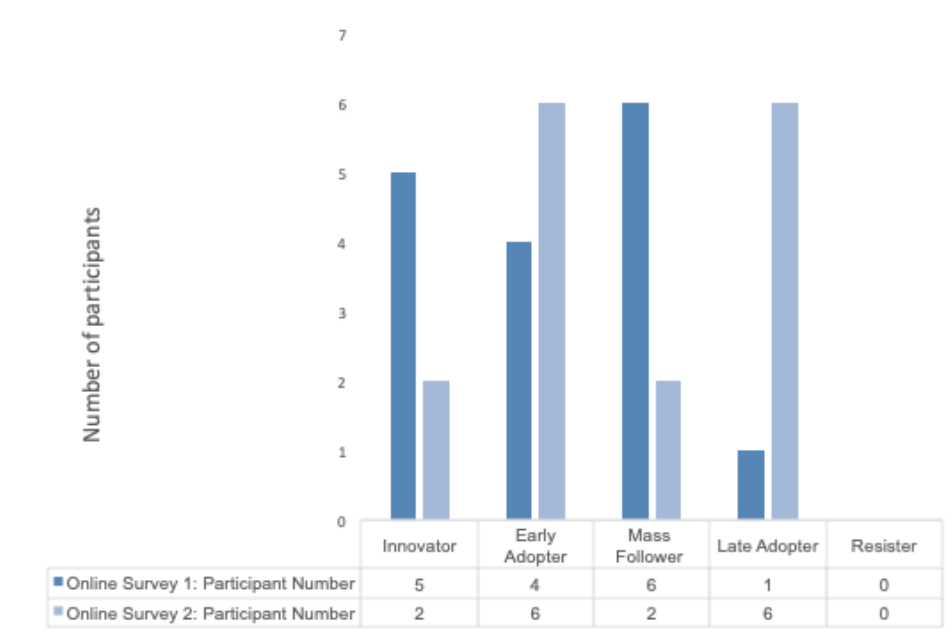
*I think technology a little bit like your friend, because you know, teacher is like your parents, they always force you to do your homework, to do things like that, but your friends, it’s like teach you some learning tips, and then you can use those tips to improve your language. And it’s bring some fun, because some teacher are really, you know, serious type, you cannot really feel interest about that class. So in that point, technology really promote your interest, improve your interest.*

(SR interview 3)

Overall, from Survey 1 to 2, students' awareness around the use of educational technology in EAP seemed to have been heightened as students' technology use increased compared to their use in China and as they used more tools/apps towards the end of the course. However, for a few, like, Joanne, Walter, and Jake, they seemed to continue to have ambivalent feelings towards the role of technology in learning English.

**Emerging beliefs in tech-literacy and confidence.**

Students talked about learning a lot, being more confident in speaking and improving their listening and speaking skills in English, attributing it to the use of technology in the FG interviews as well as in the online Survey 2. Students' tech literacy and confidence were gauged from their responses in Surveys 1 and then 2 as well as in their stimulated recall (SR) interviews and digital diary (DD) posts.



*Figure 4. Survey of Students' Tech Literacy. A comparison showing students' self-selection of technological descriptors from online Survey 1 to 2. The numbers vertically represent the number of student participants who chose a particular descriptor. The darker shaded bars depict results from online Survey 1, while the lighter shaded bars depict results from online Survey 2.*

***DIT scale: self-ranking of tech-literacy.***

In the DIT scale used in the online surveys, students were asked to choose one of the five descriptors (explained in Table 2, Chapter 2) that they felt best described them as a user of technology. The DIT scale was used in both surveys to see if students' perception of themselves as tech- users changed from the beginning of the course in Survey 1 with little exposure to the end of the course in Survey 2 with more exposure to technological tools. The results reflected that generally, with increased use and exposure to educational technology, students' awareness became heightened and they seemed to



have become more critical of themselves as users of technological tools. Overall, as reflected in Figure 4 above that there was an increase of early adopters and late adopters from Survey 1 to 2 and both the number of students in Survey 2 declaring themselves as early and late adopters became equal. Thereby, one group identified themselves as adequate users of technology (Early Adopters) but not as advanced as the Innovators on the one hand, while on the other, the Late Adopters felt inadequately skilled and the need for more time to develop their technological skills and hence identified their tech-literacy accordingly. Notice though that not a single student identified themselves as resisters even though they had limited educational technology use in their previous English learning in China. The connotation prompted by these labels may have influenced choices made by some of the students, like avoiding the resister category, or even prompted the heightened critical awareness towards one's tech-literacy.

Details of findings from the surveys are followed by student's explanations provided in the comment sections of the DIT scale as to why they had chosen a specific descriptor. These details will help to clarify student participants' choices and beliefs regarding their tech literacy level and comfort with educational technology use in learning English.

*From survey 1 to 2 the changes on the DIT scale.*

In the case of emergent beliefs regarding themselves as users of technology, a majority of the students identified themselves as either an Early Adopter or a Late Adopter in Survey 2, having gone through a course where technology use was extensive and very much encouraged in learning English. As can be seen in Figure 4, from Survey 1 to 2, the Innovators decreased from 5 students to 2, the Early Adopters increased from 4

students to 6, the Mass Followers decreased from 6 students to 2, while the Late Adopters increased from 1 student to 6 students. However, at the end of the course, the Early Adopters and the Late Adopters became the highest and equal in number of students (6 students each) who believed to represent those two descriptors and the Innovators and Mass Followers became equal in number (2 students each). Summarizing their reasons for change revealed that the decrease in Innovators to Early Adopters was prompted by the overall realization that even though they were aware of the potential benefits of apps/tools in learning English, they were not the ones to search for more apps/tools and be innovative in trying them out, as mentioned earlier. Also, some students may have overestimated their digital literacies initially in Survey 1 and became more self-critical having used technologies by Survey 2, hence the perception of being less digitally literate compared to Survey 1. The Late Adopters on the other hand, believed that they were not as tech savvy in finding new, useful apps/tools and also the ones who seemed to be facing slight challenges or still needed help in continuing to perform activities using the tech-tools in their current course. In other words these Late Adopters did not feel that they were as autonomous in technology use as the Innovators or Early Adopters. A detailed discussion of the changes reflected in Figure 4 above will help fathom why students' beliefs in their technological skills altered from Survey 1 to 2.

*Reasons for specific choice.*

Since the Innovators and Early Adopters are the top two self-identified technologically more literate groups and have an interest in enhancing their language learning experience with more technology use, I have decided to call these two groups the Technophiles, i.e., lovers of technology. This group is based on student's responses in

Survey 2 of the study. As mentioned above, generally there was a heightened awareness with increased use of technology with course progression, and this is also reflected in their comment section. The total eight Technophiles whether Innovators or Early Adopters commented on the usefulness of specific technology use. The remaining eight, Mass Followers and Late Adopters' comments are also reflective of their critical awareness towards the benefits of educational technology and the need for its use. This will be discussed in the following section.

Table 5 *Changes in students' self-ranking of tech literacy from Survey1 to 2*

<b>Names</b>	<b>Survey 1 (DIT Scale)</b>	<b>Survey 2 (DIT Scale)</b>	<b>Tech Literacy</b>	<b>Grouping</b>
Eric	INNOVATOR	INNOVATOR	Unchanged	Technophile
Kacey	INNOVATOR	INNOVATOR	Unchanged	Technophile
Oscar	INNOVATOR	EARLY ADOPTER	Less	Technophile
Naomi	EARLY ADOPTER	EARLY ADOPTER	Unchanged	Technophile
Victor	EARLY ADOPTER	EARLY ADOPTER	Unchanged	Technophile
Tracey	EARLY ADOPTER	EARLY ADOPTER	Unchanged	Technophile
Ethan	MASS FOLLOWER	EARLY ADOPTER	More	Technophile
Amy	MASS FOLLOWER	EARLY ADOPTER	More	Technophile
John	INNOVATOR	LATE ADOPTER	Less	
Wesley	INNOVATOR	LATE ADOPTER	Less	
Joanne	EARLY ADOPTER	MASS FOLLOWER	Less	
Walter	MASS FOLLOWER	LATE ADOPTER	Less	
Catherine	MASS FOLLOWER	LATE ADOPTER	Less	
Jacey	MASS FOLLOWER	LATE ADOPTER	Less	
Zara	MASS FOLLOWER	LATE ADOPTER	Less	
Jake	LATE ADOPTER	MASS FOLLOWER	More	

*Beliefs of the Technophiles (Innovators and Early Adopters).*

As reflected in the Table 5 above, the Innovators and Early Adopters in online Survey 2 have been given the title “Technophiles”. These were students who have valued and spoken about the benefits of educational technology from the beginning to the end of the research study and also they were ones who had sought and found tools on

their own in addition to the tools the teacher was using in the EAP 1 course towards enhancing their English learning experiences outside of the class.

Among the eight Technophiles, five students perception of their digital literacy remained the same from Survey 1 to 2. Interestingly, among these unchanged five, two were Innovators and three self-ranked as Early Adopters as reflected in Table 5. When faced with any technology related problems, all five resorted to working on their own first, before asking for help, a choice of statement in their Survey 1 that reflects their level of ease and confidence in handling technology related difficulties. This choice they made in one of the Likert scales under the section, technical literacy and confidence, where students were asked what they did upon encountering technical problem/difficulty. Students were given an array of choices, like, immediately giving up, asking a partner, teacher or an expert, trying to first learn themselves and upon failing asking someone, asking on a technical blog or forum or other. In providing reasons for identifying themselves as tech-savvy, the Technophiles mentioned the usefulness of technological apps and its impact on their lives. To quote one of the Innovators,

*“... I always want to find some good technology to makes my life more convenient”* (Eric). Another Early Adopter said, *“I always choose useful apps and learn about them to help other people and me...”* (Tracey). While in the Survey 2, not only did the five mention specific usefulness of apps, but also they spoke of themselves as users searching for new useful apps in explaining their choices on the DIT scale. For example, two of the Early Adopters said, *“I always look for interesting apps if I have time. I figure out that some apps are really helpful, such as Google Docs and IChecker.”* (Naomi) and *“New high-tech can help people learn, talk and know things fast. Especially among*

*students, so I would like to use these things” (Kacey). Another of the Innovators (in Survey 1) who changed to an Early Adopter in Survey 2, reported of specific tech- tools being useful in learning English, “in the [EAP 1] course I use google tools everyday. Especially chrome, which is a perfect search engine and answer very official [meaning very effective and professional]. It's very useful for our debates information search.” (Oscar).*

Of the three Early Adopters among the Technophiles (see Table 5), one had actually identified himself as less-tech literate by Survey 2 and the remaining two believed themselves to be more tech-literate by the end of their course. Although they realized the usefulness of technology and all three liked using it (Oscar, Ethan and Amy), they were not adventurers when it came to trying out new apps or tools like the Innovators in this group. For example, in reporting reasons for their choices one of the students who agrees that technology can “*make my life easier and quicker*” (Amy, Survey 1, Mass Follower) specifies clearly that she will only use technology if she finds it to be useful by others and then only spend time learning how to use it (Amy, Survey 2, Early-Adopter). Ethan, who had said he found technology to be interesting as a Mass Follower in Survey 1, realized that he actually felt very “*comfortable*” as an Early Adopter in Survey 2. Having gone through their EAP 1 course and using technology more throughout the course, he actually identified himself as part of the Technophiles by the end of the course. Therefore, more practice seemed to have increased his proficiency in the use of those specific tools, or so he believed. And that seems to be the case for students who believed to have become more tech savvy by the end of the course.

*Beliefs of Mass Followers and Late Adopters.*

Among the remaining eight students who identified themselves in these two less enthusiast categories of tech-literacy, Jake had believed himself to be less tech-literate in Survey 1 (Late Adopter), but believed that he was more tech-literate by Survey 2 (Mass Follower). Although he states the reason for such choice as not being good at using new technology and because he is “*used to use paper to do [his] works*” (Survey 1), having undergone the EAP 1 course by the end, he realizes that he “*like[s] to use it [educational technology]*” (Survey 2) and has become more tech-literate as a result.

The rest of the seven students had identified themselves as more tech-literate at the beginning of the course, but believed that they were actually less-tech literate by the end of the course. Out of the seven, three had identified themselves as Innovators in Survey 1, but two changed to Late Adopters and one to an Early Adopter. In providing reasons for their choices in Survey 1 both the late adopters mentioned the usefulness of technology and one of the participants went as far as to say, “*I like to adopt new things from every area*” (John, Survey 1). However, in identifying themselves as less tech literate in Survey 2, only one commented, “*because i am not good at finding some new apps, so i tend to use some apps that my friends recommd to me*” (John, Survey 2). Having gone through the experience of using technology in the way that was being asked of them by Pierre, made them feel that they had more to learn in order to be functional and autonomous in exploiting educational technology. For example, two of the students mentioned “*not being good*” (Walter, John) or comfortable using new app (Jacey) and unwilling to spend time “*finding a new technology and use it*” (Zara, John).

Among the remaining five participants, four identified themselves as Mass Followers and one as an Early Adopter in Survey 1, while four became Late Adopters and the latter became a Mass Follower in Survey 2. Although the Early Adopter believed that she could do her *“job better if [she could] use technology expertly”* (Joanne, Survey 1), changed her reasoning as she became a Mass Follower to, *“I use technology when I found that my friends or teachers use it. I seldom spend time on learning how to use new technology because I’m not sure it is useful for me.”* (Joanne, Survey 2). All the four Mass Followers in Survey 1 in giving their reasons for such choice, mentioned that they realized the importance of using educational technology, however, they are *“not really good”* (Walter), *“lazy”* (Zara), and will try it only *“[i]f many people use it”* (Jacey). When these same students identified themselves as less tech-literate at the end of the course in Survey 2, they believed that the reasons were that they did not like change and so preferred using old apps (Catherine) as well as preferred to use apps that were proven to be popular and fashionable (Jacey) only; they did not enjoy using technology as they were not good at it (Walter) and finally, they do not want to spend too much time finding and then learning the use of a new technology (Zara).

Finally, it can be said that from the details of findings discussed above students’ beliefs regarding their tech literacy was a result of heightened awareness towards technology use, meaning, through increased exposure and use, students became more critical of themselves as users of educational technology. On the one hand, some remained the same in their perceptions of tech literacy, some changed from being less to more tech literate, while on the other, some changed from being more to less tech literate by the end of the term. However, more generally, the rate of usage of tech-tools from the



beginning of the course to the end did actually influence students towards a kind of realization when exposed to tech learning that they may not be as tech savvy as initially thought or that they had actually improved from where they were at the beginning of the course. The learning seemed to prompt more critical self-reflection on digital literacy on the one hand and the realization of the depth of technology that was available to them on the other. In Chapter 5 we will see that some of these students even go as far as to try out other kinds of technological tools on their own towards improving their language skills.

### **Confidence in using certain technological tools.**

In the case of confidence, there was a qualified increase of confidence and understanding of the benefits of educational technology with continued use and exposure from Survey 1 to 2. This is reflected in the Likert scale choices students made to certain statements related to technology use in learning English. For example, in ranking their level of confidence in technology use, in Survey 1, 38% of the students ranked themselves as being 50-80% confident in using Google+ Hangout whereas, 50% of the students ranked themselves as 50-80% confident in Survey 2. In using Google Drive, 38% of the students ranked their confidence level between 80-100% in Survey 1, whereas, in Survey 2, it increased to 44%. Students mentioned that they had never used the G suite before coming into their EAP 1 course, as Amy informed, *“I just know about the internet google.com...we didn’t use Google before”* (SR interview 1). Therefore, this increase in confidence within 8 weeks time frame is significant given their limited to no prior experience with educational technology.

### **Beliefs towards the value of technology in EAP.**

Students' beliefs towards the value and use of technology in learning English within their EAP 1 course was gauged through an array of choices they made on the Likert scales in the online surveys. For example, in choosing statements on a Likert scale in Survey 1, 100% of the students agreed with the statement noting "Computers and mobile devices help me learn English more easily and faster". 94% of the students agreed with the statement, "English teachers should integrate technology into their classrooms and courses because technology makes their learning experience better". Another statement, "Lessons that use multimedia tools, like videos and slides, are more effective than when my teacher just uses the board to explain things" also got 94% of the students in agreement with it. Although students were not 100% confident in using technology in Survey 1, they seemed to have started to realize the benefits and appreciate it's use in learning English as reflected in Survey 1 Likert scale choices and also in the results of the DIT scale.

Surprisingly though, 50% of the students who agreed with the statement, "I get distracted when my teacher uses any technology or multimedia tools or apps" in Survey 1, agreed with statements in Survey 2, like, "I understand better when my teacher uses multimedia tools, like videos and slides" (94%), "Google saved a lot of my time and helped my writing skills" (94%), "Interesting and useful apps/tools get me interested and I learn better" (81%), "I enjoy and learn more when lessons are taught using multimedia apps/tools" (81%), and "I get bored listening to lectures only without videos or pictures" (63%). This change of attitude toward the use of educational technology from Survey 1 to 2 is reflective of students' critical awareness that seemed to increase by the end of the

course. Also, in students' DD post 3, all nine students (100%) agreed with the statement, "A boring lesson can be made enjoyable and interesting if technology is used" and "I will continue to use more apps/tools to improve in all the English language skills".

Therefore, from Survey 1 to 2 there appeared to be an enhanced sense of the value of technology use in learning English and a shift in more preference for using certain tech-tools and more awareness towards the overall role and benefits of the tools they were using in the EAP 1 course. It must be mentioned that some tension between technology as distraction and tech enhancement was observed among a few and this is discussed further in Chapter 5.

### **Emerging Beliefs in the Role of Teacher and TELL Environment**

In gauging whether students' emerging beliefs regarding the role of teacher and TELL environment, I will explore what students believe to be the role of a teacher in a TELL context, more specifically, whether students believe that teachers should teach students technology, teacher's role and teacher's attitudes. Finally, this section will end with a discussion on what students believe to be the role of an institution in providing educational technology.

#### **The role of a teacher in TELL context.**

In discussing the role of a teacher in a TELL context, I will first discuss whether students believed that teachers should teach technology, what role their teacher played in introducing technology, what they believe should be the role of a teacher in a TELL context and whether the teacher's attitude towards TELL influenced the students' attitudes and subsequent use of technology.

***Should teachers teach students how to use educational technology?***

When asked in Survey 1 if they thought that teachers should teach students how to use technology to learn English, all the student participants replied in the affirmative. Some of their reasons were, “*Yes I do, because students are more attracted by the technology and this way can help students more interested in English learning*” (Amy), “*Yes, because it is a simple way to improve your English, and it is also convenience for learner to study every where*” (Catherine). In reply to whether teachers should teach students how to use technological tools in learning English, they all pointed out in Survey 1 that they had not used the G suite before as Google is banned in China. They all spoke highly about the benefits of their teacher introducing it to them in their EAP 1 course. They all spoke of technology being convenient, time-saving, interesting, and making English learning “*quicker*” (Jacey), “*easy and faster*” (Tracey) and even reduce “*waste of paper*” (Jake). Because of their particular tech-savvy and tech-enthusiast teacher, this particular class was introduced to a wide range of applications within the Google+ platform, which was not the case in learning English in China. In the end, most of them felt that “*teachers should teach students how to use technology*” (Wesley & Oscar) and this will become more evident in the next point where students credit their English teacher completely for introducing them to the use of technology as without that most of them reported they would not be using technology in learning English.

### ***Teacher's role.***

In relation to her EAP 1 course and the role of Pierre, Amy stated,

*At the beginning of the class, most of our class didn't use Google Chrome or any Google technology before, and [Pierre] ask us to download the Google Chrome on our computers, and teach us to download some several useful technology, things like the Google Plus, Google Hangout and Google Slides and Google Doc. And he says in the future study, we will use these tools to help us to learn in this class and how to connect with each other.*

All the students agreed in their SR interview 1 that because Pierre introduced them to the G suite, like, practicing writing using Google Doc, exchanging information and being updated through Google+ Hangout, they were compelled to make use of these tools, prior to even thinking of its benefits (Catherine, Amy). They believed that especially in a TELL context, the responsibility of tech introduction lies on the teacher (Naomi, Zara). They applauded Pierre's efforts in introducing technology (Naomi, Amy, Catherine), as it has made their learning "*convenient*" and "*easier for our comprehension to understand the knowledge* [meaning, easier for them to understand a given context or the task at hand]" (Eric). This was quite a contrast to a test passing (Walter, Kacey), vocabulary -memorizing (Eric, John, Walter) experience they described in their previous learning of English in China.

In their SR interviews 1, comparing the teaching of English in China vs. Canada, Chinese teachers are mentioned "*teach[ing] English by Chinese*" (Walter), through reading and writing (Amy), teacher giving speeches while students listened (Zara), through Powerpoint and recorder at most (Joanne), no practice of speaking (Eric) and they studied English to pass exams and get good grades (Walter) only. Oscar added that Chinese teachers were using the "*old education system*" to teach and it was "*boring*" and

*“hard [to] pay attention”*. Whereas, in Canada they were all pushed to learn English through the environment (Oscar, Walter), the apps and tools used; they were enjoying learning (John) for the first time and found it to be a fun and interesting process (John, Walter).

In talking about the role of a teacher in a TELL environment in the focus group (FG) interviews, students talked about the teacher being a guide, a mentor, a facilitator. Both FG 1 and 2 members talked about the importance of the teacher in introducing technology, however, technology could never outrun the importance and need of a teacher. In Jake’s words, *“I think we do need teacher, technology only provide a system to teacher, but technology can’t replace the role of teacher.”* In regards to the role of a teacher in a TELL environment, John said, *“I think teachers role is more like a guide and [Pierre] told us how to use the technology and how to make the study and technology together to make our study more better, more convenient.”* FG 2 members mentioned that it was the teacher who supported transforming knowledge (Tracey), help find good information (Wesley), introduce skills and concepts (Jake) and was a *“mentor”* (Wesley). Eric talked about the importance of a teacher using technology as without it and only textbook use can be less interesting and even hard for students to grasp a new concept. Joanne strongly advocated for the teacher to be the one introducing technology, *“Because my teacher use the technology in class I can know how to use some technology for my study and also if I can’t get some information I can use get help and know because he use the technology.”* Here she meant that her teacher’s posting/sharing of handouts and explanations on the Google drive benefitted her in following lessons outside of class. Thus, their learning of English using this technology-mediated approach in this Canadian

context seemed to have impacted their beliefs regarding the role of a teacher and use of educational technology.

***The teacher's attitude.***

*If the teacher don't use some technologies in class and they don't ask us to use it, I will not use it by myself.* (Zara, SR interview 1)

*"[Pierre] always like encourage us to use technologies...And sometimes I have to use it, and after using it, I just start to agree with him, like maybe technology is really useful."* (Walter, SR interview 1)

*"when I came to Canada and [Pierre] taught us to use Google Document, and I feel that application is amazing, and I just want use the application as long as I can."* (Naomi, SR interview 1)

The students agreed that the attitude of a teacher towards technology influenced the students' attitude towards and subsequent use of technology (Walter, SR interview 3; John, Naomi and Catherine, SR interview 1). They all appreciated their teacher, Pierre, for forcing them to use technology as he designed all the tasks and activities around the use of Google extensions. Overall, all the 16 students agreed that the role of a teacher was pivotal in introducing and promoting the use of educational technologies (Knobel & Kalman, 2016; Aubrey, 2014; Kern, 2011; Zhang, 2011). This realization was specifically voiced by all the participants in the DD posts and FG interviews while comparing their learning of English in China versus their EAP 1 course. This realization was voiced in their discussion of the teacher's role in a tech-mediated environment.

In the FG interview 2, the seven non- participant students of phase II of the study, all acknowledged that they would not have been able to have such a positive experience of technology if not for their course teacher (Kacey, Jake, Wesley). They all agreed with Jake that technology was an *"effective [tool] to assist teachers to finish the curriculum*

*and the works.*” They believed that technology played an important role in completing their EAP 1 course (Jacey, Kacey, Tracey, Wesley) by allowing them to complete and submit work on time (Kacey), work collaboratively, write essays, assignments, and present (Jacey), and correct mistakes efficiently (Wesley).

In talking about teacher’s attitude towards influencing students’, John mentioned in SR interview 1, *“You know, if Pierre [EAP course teacher] not teach us to use the Google, teach us to use the Google Drive, Google Doc, and we never know how Google meaning.”* whereas, *“Yeah. In China we never use this, and you never will take a computer or cell phone with you in the classroom.”* (John). Thus, students believed in the role of a teacher in the introduction to educational technology and in the enhancement of their EAP learning experience to be very important. Such belief of students evolved with course progression and increased confidence and skill in using educational technology in EAP.

### **The role of institutions in providing more technology.**

When asked whether students thought that schools should provide more technology for teachers and students to use in the classroom, 15 participants out of the 16 responded in the affirmative and commented about the affordability being an issue otherwise. They think lack of funding to be a barrier to educational technology in the classrooms in China. As supporting reasons, they mentioned that technology use in the Canadian context made their learning experience faster, convenient, resourceful, while students could be more attentive and have fun along the way. Some of the interesting comments in Survey 1 were, *“Yes, it will be more convenience for us, we can share the data immediately, and save many papers. And I think technology is more attractive than*



*book for students*” (Catherine), *“Yes, I think school should provide more technology. For teachers, using technology is more convenient. For students, Technology attracts students' attention”* (Naomi), and *“Yes, because more technology for teachers and students to use in the classroom will increase the efficiency”* (Ethan). The reasons were all rooted in the belief reflecting the role that technology played in efficiently developing their English language skills within the EAP 1 course. This kind of belief and understanding of the role of institutions in introducing technology for learning emerged through students’ positive, enriched and memorable English learning experience within the Canadian context.

### **Summary**

The findings depicted in this chapter reflect on how the learners came into the EAP 1 course with some of their past beliefs of having learned English in China that evolved upon encountering a completely different experience with technological tools used in the Canadian context. The impact of technological tools on the learning of English was positive, even for those who were initially apprehensive of its usefulness and necessity and this is reflected in many of their comments, Likert scale choices, and discussions. Also, some of the emerging beliefs, for example, more preference for using technology, a heightened understanding of the benefits of educational technology, were similar across all 16 participants. Chapter 5 will provide a more detailed discussion of specific factors that affected the development of the beliefs discussed here, with a focus on two specific participants who reported radical and even conflicted differences within their belief systems within the six week period of the study.

## **Chapter 5: Factors Impacting Students' Belief Change**

This chapter reports the findings of the second research question of the study, identifying factors that contributed in influencing students' belief systems. Two categories of factors seemed to have influenced changes and nuancing in students' beliefs towards the use of technology in learning English. Both contextual and pedagogical factors helped shape students' beliefs and brought about a change in their attitudes and behavior in embracing technology in learning English. These subsequently led to the development of belief related outcomes that encouraged students to search and use other technological tools on their own in learning English.

The contextual factors were the environment, the teacher and technology that students believe to have influenced their learning of English. In addition, participating in the research was quite impactful on the belief systems of phase II participants and this has been a key contextual factor that students themselves identified. The pedagogical factors highlight the methods, activities, apps and tools that the teacher, Pierre, designed and used to teach this specific cohort. The belief related outcomes were essentially the use of specific apps and tools that students found and were using on their own. These tools were either a result of the students' personal interest in technology, as with the Technophiles, or an interest that had developed through the technology use in their English course. The use of these individual tools was influenced by the contextual and or the pedagogical factors. The chapter will end with more in-depth information about two particular individual student's beliefs towards technology that evolved having undergone some significant tension and conflict over a period of eight weeks, length of the EAP course.

## **Factors That Shaped Students' Beliefs**

### **Contextual factors.**

The contextual factors that shaped students' beliefs towards the use of technology over time were the role of the environment that comprised of the physical surroundings and the classroom environment that was created by the teacher and the role of technology use in improving English. From analyses of online survey data and in students' DD posts 1 and 2 and subsequent SR interviews it surfaced that these were factors students' seemed to think played a role in enhancing their beliefs. That is why this issue was further investigated in their DD post 3, subsequent SR interview 3 (among phase II participants) and then also in FG interview 2 (among the rest of the class) as I wanted to gauge what all students felt. A key contextual factor that resulted from the research methodology was students' participation in the research and its impact on their beliefs towards technology use in learning English. This is very much a part of the context of this study and it was quite impactful on phase II participants and their subsequent English learning behavior.

### ***Ranking environment, teacher, technology and individual's attitude.***

Student participants of phase II were asked in their DD post 3 to rank environment, teacher and technology in accordance to their importance in learning English; 1 being the most important and 3 the least important. Later this question was asked to the non-participating students of phase II in their FG interview 2 as well. Generally, although the position of the environment and teacher changed, technology always came in third position in terms of importance. This result, coupled with students' understanding of the role of technology, illustrates that students' see technology as a

guide or a support for the teacher more so than as the one and only factor for developing or learning English.

Most of the student participants of phase II of the study believed that the environment in Canada forced them to practice speaking and listening and that practice helped a lot in developing their English language skills as opposed to the situation in China (Catherine, John, Eric, Oscar, SR interview 3). Amy in her SR interview 3 emphasized, *“The most important part is the English environment around you. And the attitude that you’re toward English it’s important. And I think the technology tools is kind of help you... It’s kind of a tool to help you to support you to...your learning.”*

Interestingly, the learning environment became part of the teacher component, as Pierre designed that environment with the educational technologies being used in and outside of the classroom. Therefore, by referring to environment, students meant the Canadian context or environment and not the learning environment that was on the one hand seen under the teacher’s role and on the other under the role of technology.

After the environment, these phase II participating students believed that a person’s attitude towards learning the language was important. The role of an individual’s attitude came up through discussion and was not initially part of the question asked. By a person’s attitude they meant, whether a person agrees to work hard, make use of all the resources available to him/her. As Oscar put it, *“if you don’t want to learn, so technology even cannot help you.”* (Oscar, SR interview 3). Finally, the technological tools they used in improving their language skills contributed to the development of their English language skills. As mentioned earlier, the technological tools always came in the

third position and were believed to provide them with support and convenience in their language learning process.

However, the FG interview 2 members spoke of the attitude of a person as a determining factor in the outcome of language development and was therefore the most important factor. After attitude, the environment was seen as important because they believed that if a non-English speaking person is put into an English speaking environment, s/he will surely learn the language (Tracey) and finally, the tools were seen as providing support and help in language learning (Kacey, Victor, Wesley, Jacey, Jake and Ethan). Similarly, Walter and Joanne (the two unique voices discussed later) both spoke of one's attitude as the first and foremost factor in the success of learning English.

*If you really want to learn it, whatever the app or the things you use, you will learn it. So the app is just a tool to help you. Yeah, like as I said, it's just helping you, but if you want to grasp English, it just depends on your attitude. Like if you want to really learn it, you have to just work hard.*

(Walter, SR interview 3)

Joanne on the other hand, mentioned in her SR interview 3 that her shy attitude towards speaking actually hindered her development of fluency compared to some of her classmates. As a result, she believes that her speaking skills did not improve during the course. So both believed that one's attitude, then the environment and finally the technological tools were important in improving one's English skills.

Naomi, one of the Technophiles whose tech literacy remained unchanged from Survey 1 to 2, was the only student who thought that the apps and tools one used were first of all extremely important in learning English. After the tools one's attitude and finally the environment were identified in her SR interview 3 as enhancing one's

language learning experience. She believed that certain aspects of the environment could be replicated by the tools one used,

*[b]ecause if you really want to study a language, so you can really improve and you are thinking about use those technology. And actually the environment is only help you to listening and communicate. For other two skill, it's not help a lot. And we can replace the environment factor by other things such as watch videos, watch the TV shows. You also can learn the accent or the pronunciation. So I think the environment is less important.*

Throughout the study she had talked very positively and had been proactive in exploiting and searching for new tools on her own to support her study of English.

Zara was another student who had rated differently from the rest of the class. She expressed in her SR interview 3 that all three aspects, the English environment around her, the technological tools used for learning as well as her positive attitude towards learning, contributed equally in pushing her to work harder and to do better and improve her language skills.

### ***Participating in the research.***

As noted above, nine students took part in phase II of the study: posting weekly digital diaries (DD posts) and attending the stimulated recall (SR) interviews with me, the researcher. These students described their experience in this research as extremely thought provoking and stimulating and also reported specific impact on their subsequent beliefs and language learning behavior. They believed that a lot of their awareness towards the tools, individual learning styles and unique language learning behavior emerged from participating in the study itself as well as through the researcher intervention in the SR interviews. This was specifically identified as a key factor in helping them understand and appreciate the usefulness of these tools more.

*I didn't think about that [benefits of using technological tools], I just used that technologies to finish my lesson and I didn't recognize that what is technology do for me. But when I do the interview or the post, when I think about that, I think yes, it's really helpful for me in those kind of ways. And when I try to think about that, I think there must have more technology tools that can really help me to organize my life, or help me to either to finish my work, and it let me more focus on those kind of technology tools.* (Amy, SR interview 3)

*when you [the researcher] say it, I have to recall my experience and recall the strategy I used. It's really helping me to think which one is better and which one is not. So it's help me to kind of review. Like it made me to realize I have a source of technologies to use. I have many source of it, so like when I have problems, I can use technologies instead of just thinking... Yeah. So it make me think the environment is really a great, big chance for me to learn English, so I need to use it.* (Walter, SR interview 3)

*I was aware, just I was thinking about what tools I'm using. I will think about what benefits will the tools give to me. And I will choose the tools from a lot of tools...Before I have the survey with you, I was think less about the benefit or the way that I use, but now I'll think about it. And if I think it's useful for me, I'll use it more frequent.* (Zara, SR interview 3)

The students believed that the recording of their everyday experiences in the DD posts, elaborating their attitudes, discussing about specific tools used in class (in the SR interviews) made them more aware and more conscious towards their learning process. Most of the students mentioned that although they were compelled by Pierre to use the tools for learning, it was not until their participation in phase II of the study that they started to understand what they were doing, how they were doing it and, eventually, why they were doing it. This reflection also led them to alter their attitude from neutral or even negative to being very positive and open to the use of technology, and to value its use and results. As Walter mentioned in his SR interview 3, “*Just start to realize maybe technology's really helpful, but before I think they're not.*”

They started to realize how convenient, time-saving, efficient it made their task of studying English. They realized for the first time that learning English could be fun and entertaining, also this realization that they had spent a lot of money coming to Canada and should maximize this opportunity was voiced by some. *“This is my opportunity to learn in Canada, and I want to improve my English skills as soon as possible. And I spend a lot of money in there, I want to make it valuable”* (Zara). These realizations even made them change their behavior, take ownership of their own learning and work harder, look for more apps/tools to reap more benefits, and optimize the use of the tools that were currently made available to them.

The DD post 1 where they were asked to reminisce their experience of learning English in China compared to Canada really got them thinking about the activities done in their EAP 1 course. Amy believes that she even changed her behavior and attitude towards learning English,

*... because when I do the diary, I will think about the questions and think about how it's helped me to improve my English skills. And when I recognize and we will remember that, I will think that, yes, it's a way that can really help me and why am I try more times to do this. And I will think about that, and I will try to practice more in the English environment to improve my English skills.*

Similarly, Eric also believes that he started to change his ways of language learning, *“I try to talk more with English speaker, because before, when I want to buy something, I always ask my friends to help me. Yeah.”* Also he used to use the Chinese to English dictionary, *“but now I also use English and English dictionary.”* This same section in the DD post made Zara believe, *“This is my opportunity to learn in Canada, and I want to improve my English skills as soon as possible.”*



John believed that participating in the study made him realize the usefulness of the technological tools in their EAP 1 course as he said, *“in this study [participating in the study] I know what tools I used, and what tools has improved my English study.”* Also, he believes that he changed his ways for example he was *“handwriting everything”* in class earlier, but now he started using *“Google Drive and Google Doc to share and made me save a lot of time in study.”* Zara believed similarly as John, *“Before I talk with you, I never talk such a long time with English speakers. I can talk with you in Hangout. I can talk with a lot of English speakers in some technologies to improve my speaking skills.”*

According to Naomi, *“your question is like, in week one and two, what do you learn, so I really tried to remember what did I learn in few weeks, and I just thought, oh, I remember that section, my learning is terrible, so I need to improve something. Make to remember those things I did, so it’s very helpful.”* In describing the impact of participating in the DD posts and interviews, Naomi gave an example of her reaction and realization, having compared her language learning in China to Canada, *“...So I think I need to work harder for using those resource, and it’s really a opportunity, and I need to catch it.”* She further added, *“Yeah, because after I talk to you, you know, the advantage of using technology tools, I feel it’s really good, so I also need use them. And it really helps me. So for me I strongly agree that.”* Oscar believes that, *“I was beginning to use it [the Google platform], but after talking [the interviews] I use it every time.”*

*“Just start to realize maybe technology’s really helpful, but before I think they’re not.”* (Walter). Walter was one of the few students who resisted the use of technology initially (although he did not identify himself as a resister on the DIT scale), but he says

that the DD posts and the SR interviews had changed his previous opinion about the use of technology for language learning, *“I just think, like now I think maybe I like technology, that maybe that can help me so I can change the opinion of technology before.”*

Oscar believed that participating in the study helped him to learn about his student-self as he commented, *“I learn how to use those kind of technology and which way is a good way to learn language and make sure it suits for me.”* Thus the recalling of past behavior and activities also made them aware of mistakes made, time wasted and opportunities lost. Overall, it seemed that they became more confident, conscientious and autonomous language learners through the use of technology, through the awareness raised by the research study, and through the interactions with the researcher.

### **Pedagogical factors.**

The pedagogical factors that seemed to impact students’ beliefs directly were shaped by their EAP 1 course teacher. These factors include the methods and classroom activities he had designed, the tools and apps he used and encouraged the students to use in and outside of the classroom. This section will also end with sharing data about how effective and useful students thought these tools were as well as their overall satisfaction about the use of educational technology in learning English.

### ***Teaching methods and classroom activities.***

In the case of methods used, we saw in Chapter 4 that the Chinese teacher-fronted classroom that encouraged the grammar-translation method mostly prepared students primarily to pass exams and get better marks by learning English through textbooks (Oscar, Amy, John, Eric), reading, writing (Naomi), memorizing words (Oscar, Naomi,

Eric), learning grammar (Oscar, Naomi, Eric), and doing homework everyday (Catherine, John). There was little to no option for critical thinking or creative communication. Even English was mostly taught through Chinese explanations and translating back and forth. Students had very little to no practice of listening or speaking skills in China. “As complete obedience of students is one of the classroom rules in China, students are confined to learning what teachers are interested in teaching or what appears on the test” (Zhang, 2011, p. 44). Therefore, the students who were never used to challenging their teacher’s beliefs or concepts before, were now being asked to argue and establish or defend their beliefs and thoughts critically and logically, either during making a point in debate, or in writing an argumentative essay, or in proving a point in their compare-contrast essay.

In contrast, in their EAP 1 course, for the first time not only were they practicing a lot of speaking and listening, but also doing so in authentic situations (for example, asking for help from the teacher, ordering food in the food court, conversing with their conversation partner, asking for directions from the locals, attending guest lectures, social events on or around campus) where they had to listen and speak English in and outside of the classroom. They were also doing presentations, debates where they were being challenged to think by themselves as well as collaborate with their peers, negotiate meaning and information, convince their team members and oppose the other team. They were using the Google Slide, Google Doc, Google Chrome, Google Drive in all these activities. They were writing essays, research papers not only in a different style from what they were conditioned to, but also where they were asked to conduct research on their own or in pairs or groups and create essays and papers collaboratively. A lot of

drills and work in isolation that students were used to doing was replaced with group work or pair work, not only because of the goals set in the curriculum but also because of the nature of the apps/tools that they were being asked to use by their teacher (refer to Table 4, in Chapter 4 for details on tools used and activities performed).

***Specific apps/tools used in the course.***

In reference to Table 4, this section will discuss in detail the activities that were specifically done using the mentioned tools of the G suite in the EAP 1 course.

***Google Drive.***

In their EAP 1 course Pierre, their teacher, used the Google platform extensively. Pierre would share important documents, like the curriculum, assessment rubrics (for essay, presentation), handouts, other teaching materials, test results, edited papers on their Google Drive folder to promote collaborative learning. He created separate folders for individual students on the Google drive and students were encouraged to submit assignment, homework or research paper for editing, sharing with the other members in a group and work collaboratively on the Google Drive. Thus Google Drive was used to save, share, exchange, and edit papers, ideas for their papers, essays, essay outlines, the annotated bibliography of the final research essay, research essay outline and getting almost immediate teacher and or peer feedback and evaluation of their work. Students learned to conduct Google searches for articles, readings, gathering information to provide support for their ideas “*technololgy makes our life more convenient and changed our life. must download google drive!!*” (John, DD post 3). Almost all the students thought that being able to share and exchange essays on their folders on the Google Drive helped them a lot in their writing. Eric, one of the students, mentioned that it was

especially useful when he could receive clarification from looking at other classmates work on essays in the shared folder, in this regard he said, *“when I feel confusing about my essay, so I can go to my friend’s document. I can see their essay as a example. So this Google is benefit for me.”* (Eric, SR interview 2). Kuteeva (2011) also found that in using wikis for teaching writing in an EAP course, the components of “access to others’ work, and learning others’ opinions” (p. 56) were extremely beneficial for learning, as some of her students believed that “interacting and seeing others’ texts” (p. 52) were actually the most important gains. According to Naomi, *“I will also use Google Drive, because I don’t need to carry my USB everyday...”* (DD post3). According to Zara, Google is very convenient,

*I use Google chrome to get some research about my homework. I also use Google drive to share my homework with my classmates, and print some articles about our report by using Google drive. It is more convenient than USB, and I don’t need to worry about losing any electronic materials by using Google drive.*  
(SR interview 2)

Oscar also believes, *“Google drive. Too easy to exchange information and store some homework or folder. also save lots of times”* (Oscar, DD post 3) and he will continue to use it in his next EAP 2 course because *“[he] can see feedback about [his] homework. That help [him] improve.”* (DD post 3).

*Google+ Community.*

Pierre also created a Google Community for the class where students’ had to post videos of their weekend or out of class activities and write about it while the other class members had to comment. Students had to do at least three such posts over the course of eight weeks and a certain percentage was allocated to this activity. These activities as well as the tools not only promoted collaborative work ethics, but also comradery among

the classmates and a sense of belonging to the EAP 1 community. Google+ Community on the other hand, is also regarded as a useful platform for improving English as one student said, “*Yes, because I have to... When I finish a conversation partner, I have to post some information about it on Google Community. So it helps me improve, sometimes improve my writing skill.*” (Eric, SR interview 2). So their teacher created a Google+ Community group for that class to give students more opportunities to write, video record and share their weekly activities and work on their spoken and written language skills and even share their language learning and Canadian life experiences outside the classroom within a more informal context other than an academic one.

#### *Google Docs and Google Slides.*

Students were also encouraged to use Google Docs and Google Slides for their assignments and presentations. “*The most useful thing is Google Docs, most useful.*” (Walter, SR interview 2). Students worked independently and collaboratively on assignments, class presentations, debates, homework or research paper using Google Doc or Slides from within their individual folders through the Google Drive. Catherine also believed that the sharing and editing component of the Google Doc actually helped her “*to write a better essay*” (SR interview 2). In sharing her beliefs regarding which technological tool she is likely to use in the EAP 2 course, Naomi said, “*I will continue to use Google Docs, because it is really useful, we can edit a paper with my paper [partner] in same time.*” (DD post 3). Another student, Amy said, “*I will continue to use the google doc, goole slide and google drive in the future, because these technology tools make the learning process easier than before.*” (DD post 3). In case of using Google Slide for class presentation, students appreciated the instant teacher feedback option and also being able

to post questions live using their cell phones during class presentations as very useful. According to John, “prestation [presentation], google docs teach me how to do a ppt [Powerpoint], receive some feedback by google drive” (DD post 3). All the participants agreed that they would continue to use the Google tools in their EAP 2 course because it was not only convenient to have access to the drive from anywhere but also time-saving in providing instant feedback and in writing collaboratively and simultaneously. Kessler, Bikowski and Boggs (2012) also found that tools like Google Docs lead to convenience and thus more engagement in the writing process due to the possibility of contributors being able to access and edit the same document at the same time (p. 105).

*Google+ Hangout.*

Google+ Hangout on the other hand was used widely to exchange instant messages, announcements or any last minute changes of class timings or tests. So students were compelled to check all messages posted on Hangout. Pierre made all the students download Google+ Hangout on their cell phones so that the class could stay connected constantly and students did not have to sign in every time in order to check any important messages or announcements. Google+ Hangout was used substantially for posting important announcements throughout the eight weeks. “*Google hangouts, teacher always remind us what do we need to take and some homework feedback.*” (Oscar, DD post 3). It was very functional and described as useful, “*Google HangOut and Google Document were very useful for me to do assignments with my partners.*” (Walter, DD post 3).

As has been discussed by Johnston and Lawrence (2018), technology itself can provide teaching presence through tools, such as Google Docs, and enhance learner

communication through video conferencing apps, like, Google+ Hangouts, or by sharing work on Google+ Communities (p.14). Therefore, the use of these tools can be easily established in classes and “help students develop autonomous language learning abilities” through collaborative work or projects (Kessler, et al., 2012, p. 105). These tools not only saved them time, but they also promoted some very good individual and group work ethics, as students continued to work towards their deadlines independently, in pairs or in groups.

***Effectiveness and usefulness of these tools/apps.***

Both the FG 1 and 2 members pointed out how they had never used Google before coming to this EAP 1 course. They thought that Google Doc, Slide, Drive Hangout and Google+ Community were all useful in developing their overall English language skills. Eric added, “*yes, before I never used those Google tools, so I start use those technology, its those tools are very convenient, so we can cooperate [collaborate] with our classmate and also we can asking some questions after class, can post something on Google community, so its surprise me, because its very convenient and I use them with um.*” Amy also pointed out that Google+ Hangout actually made them and their teacher respond more efficiently and timely and this also helped them to work faster and better on their assignments, homework. FG 2 members also talked about how useful the Google Chrome was as a search engine when they are researching any new concept or topic. Overall, Zara thought that, “*Use technologies in [EAP 1] course can help us to save a lot of time and we can share our work on Google Drive and so we can help each other and it also make the work more efficient, ya.*”



FG 2 students also talked about the usefulness of the features of sharing documents, exchanging ideas, writing and editing simultaneously on the Google Drive. According to Jacey, *“Aa, I like when we’re writing on Google Drive, it is so easy to share with classmates or [Pierre], we just need to go to our folder to see our changes or something and we don’t need to write it, we need to resend. We just fixing the Google document.”* The instant messaging option of Hangout was also appreciated by many, as they thought it saved a lot of their time and relieved the anxiety of having to wait for the teacher or a peer to check their emails and take time responding. This instant feedback and often real time text co-construction that takes place on these platforms during group or pair editing or writing is very much a normal daily part of the “hyper- collaborative participatory culture that has become ubiquitous across the Internet” today (Kessler, 2013, p. 307). The students also appreciated the use of Google+ Map and Google+ Community in specifically describing one of their second day out-of-class activities. Pierre had assigned each student a different place on the university campus that they were asked to find. Using the Google+ Map students were to find that assigned spot and take a “selfie”. Then they would have to post the “selfie” and share their experience with the rest of the class on a Google+ Community group that Pierre had created. This activity was discussed at length as they all recognized the benefits of technology on the one hand and their teacher playing a lead role in introducing and enforcing the use of technology in their EAP 1 course on the other. On this quest to finding the place, they were also encouraged to stop and ask by passers for directions. Theoretically, this would give students the opportunity to engage in limited, but authentic language use. This Google supported activity was “associated with meaningful and authentic language practices”

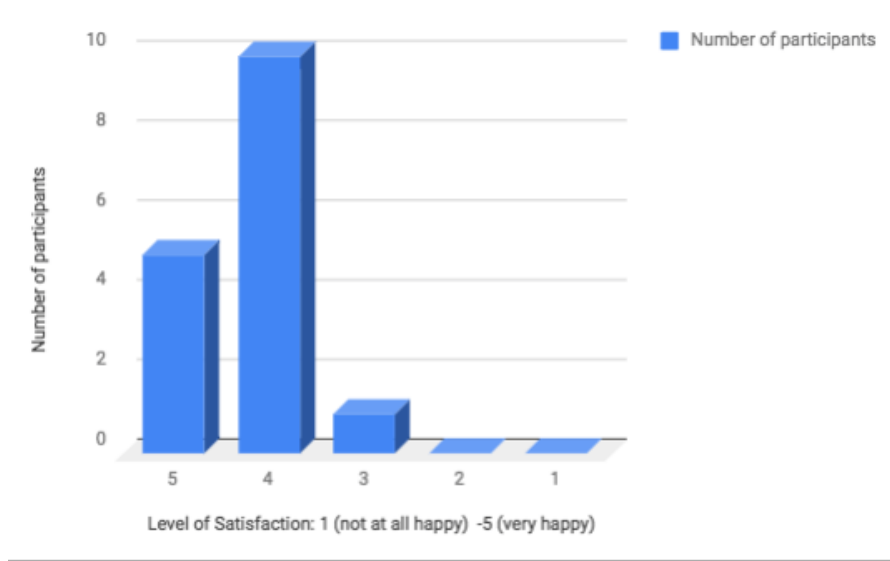
(Kessler, 2013) that language practitioners are encouraged today to incorporate in their pedagogy in order to “enhance the spectrum of language learning experiences for students” (Kessler, 2018, p. 214).

Students also talked about how on the first day of class their teacher made them download Google Chrome, open a Gmail account and download Google+ Hangout on their cell phones and laptops. He also taught them how to use all these newly introduced tools effectively and be constantly in touch. In this regard one of the student’s commented, “[*Pierre*] is a nice teacher and he told us many technology to help our education.” (Wesley). In discussing the effectiveness of these tools in their EAP 1 course, Kacey commented,

*Absolutely very useful, for example, we’re trying to do something, presentation, or writing article, finding information on the website because some websites can provide us with some information and also we use it everyday, also we look up the hard words, we look it up so I think technology help us a lot, so its very useful.*

In their final online Survey 2, students were asked to rate their level of satisfaction towards the use of technology in developing their English language skills overall. The following discussion also provides support for the effectiveness of this particular factor in shaping students’ beliefs towards technology use.

***Satisfaction using technology in developing English language.***



*Figure 5.* Satisfaction using technology in developing English language. Taken from Survey 2, shows 10 students chose 4, 5 students chose 5 and 1 student chose 3.

In rating their level of satisfaction on a scale of 5, out of the 16 participants, 10 described themselves as 4 (happy), while five chose 5 (Very happy) and one chose 3, i.e., in between 1 (Not at all happy) and 5 (Very happy). In explaining the reason for their choice, 10 responded saying that the Google tools used in their EAP 1 course were very useful, time saving, convenient for submitting homework, promoting collaborative work with teacher and their peers and that they would continue to use these in the next level of EAP 2 course. Three of the students commented, *“because it can save my time and cooperate with my classmates, i can learn a lot from them.”* (Catherine), *“thchological [technological] tools make my life more convirent [convenient], and i know how to use it in the future also in the [EAP 2] courses, and when i go to the university.”* (John) and *“When we use google doc we can easily to get feed back from teachers and easily to submit homework. Also, i always use chrome and enjoy it.”* (Oscar). The one student who

chose, 3, simply mentioned that he thought that he was not good at using technology (Jake). Thus, majority of the students were between happy to very happy in expressing their satisfaction in using technology in learning English.

### **Belief-Related TELL Outcomes**

The belief-related TELL outcomes are the tools students reported as finding and using of their own accord. These were influenced by students' technology use within the EAP 1 course and subsequent positive attitude towards tech use and behavior towards learning English. The use of these tools resulted from factors like curiosity or engagement toward TELL prompted by the contextual and pedagogical factors combined with students' beliefs of their digital literacy/comfort. This heightened consciousness and understanding of the benefits of educational technology encouraged students to search, find and use other apps/tools on their own for learning English. Subsequently, this also contributed in the development of some of the work ethics and behavior that led towards working with individual technological tools to develop their English language skills. These work ethics will to be addressed in depth in Chapter 6.

#### **Individual technological orientation: using other apps and tools.**

In phase II of the study it emerged that some of the students were also proactively using apps or tools like, Kindle, Grammarly, One Checker, Youdao and even Baidu (Chinese search engine) to search, translate, correct their grammatical mistakes and improve both reading and writing skills in addition to the Google platform introduced by their course teacher. As these are tools students used on their own accord that led to more confidence and change in nuancing of students' belief towards educational technology, I discuss these under individual technological orientations.

The introduction and subsequent use of the educational technologies in the classroom and the benefits they reaped, got some of the Technophiles (see Table 5 for participant detail) to search for more apps/tools. The Mass Followers and Late Adopters in class adopted this knowledge of other tools from the Technophiles and used to help them in an array of activities, like, translating from Chinese to English, correcting grammar mistakes and practicing reading and writing skills. All of them seemed to use more educational technology than they ever had from back home in China or previously in studying English and this further enhanced their beliefs towards technology use.

***Kindle.***

From discussion in their SR interview 3 and 2, it was revealed that Kindle was very important in practicing reading (Naomi and Eric) outside of their English class. It's easy to carry, and travel with (Eric), saves money compared to buying 10 books, easy to use, and improves one's reading skills. In this regard Naomi said, *"And when I tap it, it can show the meaning and I also can highlight some important word."* This was being used by these few for practicing additional reading outside of the classroom.

***Grammarly, One Checker and Youdao.***

Among grammar checking apps, Naomi advocated for One Checker that she found by herself in the Apple store. She believes that it helped reduce her grammatical mistakes significantly. As she described, *"it's really helped me because when I finish my essay, I just need to use the app to check my grammar. And yeah, it's really good application, and they even can suggest some better, stronger vocabularies, and you can change. If you think it's good, you can just change it."* (SR interview 2). Oscar on the other hand used "Grammarly" an app similar to One Checker to help him identify

mistakes in a paper he had written and it used the dictionary to translate or find synonyms of a word in the case of developing vocabulary (SR interview 2). Zara also reported in her SR interview 2 of using the same app for correcting her grammar and thought it was useful in checking her grammatical errors before submitting her essay. Oscar mentioned using Youdao on his cell phone specifically for checking grammar. Amy who used it both on her cell phone and laptop, mentioned how useful Youdao was for translating from “*English to Chinese or Chinese to English... it also can translate sentence*” (SR interview 1).

***Audio books.***

*I think I listen this book maybe twenty times. I don't know, but a lot of time whatever you are doing. Sometimes I do my homework, I'm listening, and I work hard, I'm listening. It doesn't matter what I'm doing, you don't need to focus on to listen to things, it's just like music, you can... And it's really improved, I mean, really. And I told my friend this tips, and after they listened and they think it's also a really good tip and they are still using. I'm still using right now.”*

(Naomi, SR interview 2).

A few of the students had the experience of using audio books and mentioned it as very useful in improving listening skills and developing vocabulary.

***Baidu.***

“Baidu”, is an internet search engine that can be regarded as a Chinese-equivalent of Google; however, it has its drawbacks. Many of the participants mentioned using this in China, but not for educational purposes. Also, as intranet is heavily controlled by the Chinese government, they were not able to access global news or any other sites, for that matter, outside of China. Amy, said, “*Because in China I didn't have the academic homework seems like to research for the academic articles writes [?] my homework. [so*

*did not need to or did not use apps/tools, not even Baidu]*” (SR interview 2). Some of the students studying at the international schools in China reported having used Baidu for IELTS practice, working on all the four skills, i.e., reading, writing, speaking and listening. Some of the tech enthusiasts or international school attendees used it to conduct search on their own for their personal interests and reasons. Eric reported using it still at times, *“Maybe sometimes I cannot understanding the English article, so I can find some Chinese article on Baidu and I translate it in English to use them in my essay.”* (SR interview 2). Joanne and Walter also mentioned in their SR interview 2 of using it sometimes in their EAP 1 course to translate or do some search or research work for class.

### **Tensions and Complexities**

As mentioned in the introduction of this chapter, out of the nine student participants who took part in phase II of the study, I have chosen two specific voices to discuss in depth as they stand out from the rest in their contrasting and at times self-contradicting views in regards to their beliefs around technology use in learning English. It must be further noted that it was also these two participants, Walter and Joanne, who displayed a tension between tech-tools as being distractive versus a vehicle for enhancement of EAP study. This tension was noted in Chapter 4 earlier under students’ beliefs towards the value of technology in EAP. These two voices also seemed to reflect significant alteration in their beliefs from Survey 1 to 2 as well as within the three week period that the DD posts and SR interviews (Phase II of the study) were administered. For example, both the participants chose “No opinion” on the Likert scale in reply to the statement as to whether they got distracted when their teacher used technology or

multimedia tools or apps. Both seemed to understand the benefits of educational technology, however, Joanne said, “I prefer study with teacher” (Survey 1) in reply to sharing her thoughts about the prospects of educational technology. Walter, on the other hand, when asked if schools should provide more technology for teachers and students to use in the classroom, said, “No. Too much fund” (Survey 1). These two individuals underwent significant alterations in their beliefs towards educational technology that surfaced specifically through their participation in the research that seemed to influence their views towards technology use and this is precisely why they stand out from the other seven. A brief profile of the participants will help understand their background, past and present experience with technology use in learning English and how their beliefs were shaped as they proceeded through the EAP 1 course and altered through the research process. These alterations were at times revealed through clarifications made to the researcher or further explanation and discussion in the three SR interviews pertaining to the choices and comments made in their three DD posts.

### **Individual Voices: Walter**

#### ***Profile.***

Walter is between 20-25 years old and is older than the average students who were between 18-20 years in his class. Unlike most of the students who had come into this course having completed their high school in China, he had been in Canada for five years before coming into this EAP 1 course. He completed his last two years of high school in Canada and enrolled in an Engineering program at a university here where he was not happy. With the intention of switching programs when he applied to the Economics program at another university, he realized that his language test results had



already expired and he was required to complete the EAP 1 and 2 courses before enrolling into that particular institution.

He lived with a family, in a homestay arranged from China during his high school years in Canada and believes that he had picked up a lot of his conversational English from his homestay guardian during this time. Initially he believed that his level of English language was Intermediate (Survey 1), however, in Survey 2 he changed it to Lower Intermediate with only his speaking skills being at the Intermediate level. In terms of marking his level of satisfaction using technology in developing English, on a Likert scale of 1 to 5 (very happy), he chose 1 (not at all happy) and mentioned the reason as, *“I could not understand the full messages in my courses sometimes”* (Survey 2).

***Previous experience with computers/technology.***

Walter played games on the computer and mobile phone in the Chinese language and chatted in Chinese on an app called WeChat, however, he did not learn English using any kind of educational technology. In Survey 1 he defined himself as a Mass Follower on the DIT scale identifying his computer literacy and gave the reason, *“I can use technology but I am not really good at it”*. In Survey 2 he changed his views and identified himself as a Late Adopter and stated the reason as, *“I am not really good at technology, and I do not enjoy to use it”*. He never used any of the social media apps like, Whatsapp, Snapchat or Instagram and said, *“I do not like use Facebook”* (Survey 1). He had very little experience playing games on Virtual World environments/platforms and thinks that it is addictive and therefore, *“time wasting”* (SR interview 1). He had used Google as a search engine earlier upon coming to Canada, but not for educational

purposes and never the extensions on Google+ and not to the extent that they were using these in this course.

***Beliefs around technology use in language learning and teaching.***

Walter generally believed that technology is for playing games and for entertainment, not for learning language as he comments,

*I think the traditional way [teacher fronted classroom] to learn is the fast way because we have thousand years experience, we know how it work. We just have technology for some any years so its not...I'm here because teacher asked me to have computer [so was forced to use it in class]. Like, entertainment in computer I don't mind, but for learning, I can read books.*

That is why he was a strong advocate for learning in the traditional way as explained in his above comment. He viewed technological apps/tools as instruments of entertainment and appropriate for personal use only and not for educational purposes. A similar digital mindset was found among K-12 Philippine language teachers who viewed “web-based applications only for personal use and not for professional use” (Cementina, 2016, p. 72) and this was reflected often in their low tech teaching practices.

Walter further believes that academic language is different from conversational more so because the former focuses mostly on reading and writing. So the language one picks up from watching TV or movies can have slang and contractions that are acceptable in conversational English, but not in academic English. Although in Survey 1 he ranked his confidence level in using the Google Drive as being 50- 80% and in using Google+ Hangouts as 100%, in Survey 2, his confidence in using the Google apps came down to 50-80%. The reason could be detected on the Likert scale where he had been asked to rank his perception of the usefulness of these tools and here he expressed the belief that Google+ Hangout was only 10-30% useful in improving his listening and speaking skills,

while Google Doc was 30-50% useful in improving his writing skills overall. So finding them not being useful, he refrained from using them and that maybe the reason for the decline in the level of confidence in using these tools for developing his EAP skills. So although he thought that the technology he used in EAP 1 course was time saving, he mentioned that, “[d]eveloping English should be relied on the attitude toward learning English” (Survey 2). As conversation continued in his SR interview 2, he explained that the effort to improve and the desire to learn and develop has to come from the person and the tools can only increase one’s efficiency and save time. This is reflected earlier in this chapter in his quote in talking about rating the three components in order of importance in learning English. Although he believed that teachers should teach students how to use technology in learning English because it made work easier to complete, attracted students attention, schools should not provide more technology in the classroom because it was “*too much fund*” (Survey 1). He believed that the way his Canadian course teacher handled the use of technology was “*really, really efficient*” (SR interview1), however, “*if a teacher always use technology to a student like for teaching, I think it’s distracting because not every student can just focus on the learning.*” In explaining this point/belief further he talked about his previous extremely large Engineering class with lots of students where following lectures and responding using one’s cell phone would be abused in cases where students were seen surfing the net and chatting instead of listening to the teacher’s lecture. So even in SR interview 1 he expressed strong opinion against the use of technology in the classrooms and believed that the traditional way, using the blackboard and just lecturing was the best way to teach. He also believed that “*...if we*

*have a conversation or a class face by face, I think it's sort of like, it's a connection that technology doesn't have."*

*Alteration of beliefs around the use of technology and learning English.*

In SR interview 2 he mentions that, "[b]ecause [he is] not really a technical guy" he believes that his environment, previously living with his home stay guardian, and being forced to use English in conversation in different contexts helped him to develop his language skills and not technological apps/tools. As conversation continued within the same interview, he said, "*The most useful thing is Google Docs, most useful.*" and for improving his listening skills, TED talks. Then in his SR interview 3 he started describing week by week the tools that were used in class, the activities that were done, and he seemed to gradually come to the realization of the benefits of the tools used. For example, he talked about being able to check the definition, meaning of a word fast and also he said, "*...if you write a sentence wrong, you can just correct it really fast and really accurate.*" Also he talked about technology being useful in providing more practice. For example, he agreed with the researcher's idea of being able to pause, rewind, forward, repeat using technology, if not comprehensible at times, also "*the boring [component] can getting more interesting because of I use technology.*" (SR interview 3).

In the FG interview 1 he commented, "*I've never been innovative. I don't really like technology, I just prefer to write by hand, learn by hard copies. I think its like, make me read more easily, technology make my eyes damage. I think so. The screen damage my eyes.*" This he further supported by adding how reading from the computer screen was painful for the eyes. However, he also talked about how participating in the research

actually helped him to realize and think about the benefits of using technological tools for studying English.

*Areas of conflict, “no opinion”.*

Following are the explanations Walter provided in the SR interview 3 in response to the “no opinion” choices made in his DD posts earlier. Through the SR interviews it became evident that within the study (the surveys and DD posts), whenever Walter was conflicted with a statement on the Likert scale he chose “No Opinion”, for example:

- Apps and tools help to concentrate and pay attention in class.

He chose no opinion: *“Yeah. Like sometimes, like I said, it distract [?] to listen to this class, but sometimes they are not, because if you use technology, maybe a phone, you can use a phone too like to chat with your friend, do other things if you don’t want to listen this class anymore, the technology helps you do it.”* (SR interview 3)

- Apps and tools make you a lazy language learner.

He chose no opinion: *“So that makes you like you learn English, like rely on the technology. And once you don’t have technology, you don’t want to learn.”* (SR interview 3)

- Apps and tools can waste a lot of our time.

He chose no opinion: *“Yeah, because they are saving our time, but same time, if we’re using those technology to play while you are studying, that is time wasting.”* (SR interview 3)

These comments and explanations from him were all clarified in the SR interviews where he consented to the fact that because the statements seemed conflicting to him as he both agreed and disagreed with them, he chose to respond with “no opinion”.

***Participating in the study: impact.***

Walter agreed to the statement that the researcher's questions and prompts in the diaries made him really think about his language learning and there seemed to be development in his beliefs and thinking. So he says, "... *when you say it, I have to recall my experience and recall the strategy I used. It's really helping me to think which one is better and which one is not. So it's help me to kind of review.*" (SR interview 3).

When asked if participating in the study made him aware of his activities in class and then asked to elaborate with examples, he mentioned that he questioned himself as to how he was improving in his presentation skills and "...*what tools and what strategies I should use for these to improve my presentation.*" (SR interview 3). In terms of awareness leading to behavioral change, he said that he now "...*read online articles more frequently. That really helps with my logs.*" and also it "...*made me to realize I have a source of technologies to use. I have many source of it, so like when I have problems, I can use technologies instead of just thinking....now I realize I can use Google more easily.*" He also mentioned that when asked to compare his learning of English in China to here in Canada he realized "*the environment is really a great, big chance for me to learn English, so I need to use it [more].*"

Interestingly, participating in the study made Walter realize the benefits of using technology in language learning on the one hand and made him critical on the other, in that, before he thought technology to be a mere distraction and waste of time, however, "*Now I changed my mind, I think...maybe I like technology, that maybe that can help me so I can change the opinion of technology before.*" (SR interview 3).

## **Individual Voice: Joanne**

### ***Profile.***

Like Walter, Joanne is between the age of 20-25 years. Enrolling into the EAP 1 course had brought her to Canada and it was her first time outside of China. Unlike her classmates, Joanne had an undergraduate degree in Business Administration from a university in China and while working with an agricultural bank in China she realized that she needed to improve her English language skills for further career enhancement and that is why having learned about this program from her parent's friends, she decided to enroll (SR interview1). In addition to passing exams Zhang (2011) has also identified a higher salary and more job and studying opportunities among reasons for ESL learning and teaching in China (pp. 42-43). This career enhancement goal for learning English was unique to Joanne and not shared by any of her classmates in the program.

It must be mentioned here that unlike any other, Joanne had a poor self-esteem of her English language skills. She pointed out in her SR interview 1 that most of her classmates came from international high schools in China and were much more fluent in English than herself. She believed that her level of English language is the same, i.e., Intermediate level, between Survey 1 and 2. In terms of ranking her satisfaction of improvement in English language on a Likert scale of 5 (very happy), she chose 2 (1 being not at all happy) and mentioned the reason as, *"I'm not happy about my current improvement. Only base on this English level, I cannot live comfortable in Canada. When I want to ask something, I must think how to express my words clear. Also, I must listen to others' speaking very carefully."* (Survey 2).

### ***Previous experience with computers/technology.***

As far as the use of technology goes in learning English, Joanne mentioned, *“I have a lot of course [at university in China] use the Powerpoint, but before I go to the university, in English class they seldom use it.”* (Survey 1). According to Joanne, her English language learning was in the grammar translation method involving lots of memorization of word lists, grammar rules and drills. She had used Skype on only one occasion when she had a job interview over Skype earlier. Currently, she did not use any social media, like, Facebook, WhatsApp or Instagram. Although she identified herself as an Early Adopter and quite adept at using, liking and spending time with useful apps/tools in Survey 1, having gone through the use of educational technology in her EAP 1 course, made her feel like a Mass Follower by Survey 2. The reason she states as, *“I use technology when I found that my friends or teachers use it. I seldom spend time on learning how to use new technology because I'm not sure it is useful for me.”* She mentions that she had no prior experience using the G suite before this course and was helped by her classmates in learning to use it. Therefore, having gone through the course using technological tools, made her realize that she was not as adept in her computer use and skills compared to her classmates.

### ***Beliefs around technology use in language learning and teaching.***

First of all, she clearly stated that she used the G suite as her teacher compelled them to submit homework and work collaboratively on writing or assignment with her classmates. However, she preferred to be taught by teacher writing on the blackboard versus using technology as she explains, *“My eyes is very tired and I can't see it clearly because the screen is far from me.”* (SR interview 1). She used computers strictly for



doing her homework. She pointed out that she felt very stressed working collaboratively on any schoolwork because her classmates were at a higher level than herself and added, “*Maybe one day I can master the English I want to work together, but not these days.*” (SR interview 1). She also mentioned that because of her language barrier and low-tech literacy, she found it hard to search on the Google engine for information using key words. In her SR interview 2 she shared her preference for writing by hand to typing on the keyboard of a computer or laptop as it did not save time for her.

*Conflicts or change of opinion.*

Initially, in SR interview 1 she mentioned that she did not like speaking impromptu as they had to do in debates in class because she felt that she had to think and organize or even write down and then speak in order to avoid making mistakes and subsequent embarrassment. She also felt that she did not improve in her speaking skills because she used mostly Chinese with her classmates and said, “*I think I seldom speaking.*” (SR interview 2). However, she mentioned in the same interview towards the end that she thought presentation skills can help one to improve their speaking skills and she actually liked presenting as it was also good practice for the professional life.

In case of her listening skills, although she started by saying that she only improved a little (in SR interview 1), when asked to reflect and compare from her initial arrival in Canada to that point of time, she realized, “*I can’t understand [first two weeks] everything when [Pierre] speaking, but nowadays I can. I can understand him, what he’s speaking, everything.*” In allocating percentage when asked, she said that her English comprehension before was only 20%, but now it was 100%. Gradually speaking to me, she seemed to change her mind about technology use in learning English. In terms of

ranking her classroom activities, the environment and the technological tools and apps, towards the end of SR interview 2, she agreed to having improved overall in her language skills and gave the credit first to the activities done in class, then the apps/tools used and finally the English speaking environment. This ranking changed though in her SR interview 3, where she mentioned that one's attitude was the first factor in helping one to develop their language skills, followed by the environment and finally the apps/tools used. However, TED talk and Youtube videos were accredited to improving her listening and understanding and the use of online dictionary in improving her vocabulary (SR interview 2).

In terms of the role of a teacher in the use of technology, Joanne said, *"I think that's real teacher, like in China. I prefer teacher teach in class and no technology and I prefer the technology after the class."* (SR interview 3). She strongly believes that students can use technology for more practice outside of the classroom on their own, but showing videos or flipping through slides in class was a waste of her precious class time. However, towards the end of SR interview 3 she agreed that technology use helped save time, provide more practice and therefore *"Yes, may be I agreed. There should be a teacher in class and use some technology."* (SR interview 3), so in other words, she believed that a blend of technology use in a teacher fronted classroom would benefit one in improving their language skills. Her Likert scale choice in DD post 3, where she chose that she was not able to concentrate when her teacher used technology, changed in a subsequent SR interview to *"Oh. Yes, I can pay attention"*.

### ***Participating in the study: impact.***

Joanne mentioned that having participated in the study and especially when asked to compare her learning in China to her current context, made her realize that “*Canada, have more opportunities. Yes, because I use English everyday in Canada*” (SR interview 3) so she felt that she should make more use of her environment and try to practice more speaking. In case of taking an active role in her learning, she said that the conversation with the researcher made her think about the usefulness of the educational apps/tools, and so in her words, “*I should have some time to think it [benefits of using apps/tools for learning English], never have thought before.*” For Joanne particularly, these SR interview sessions played a pivotal role in obtaining information pertaining to her beliefs. Because of her level of English, the researcher had to probe, explain, and elaborate and provide examples for many of the queries a lot more compared to her peers.

### **Summary**

The findings of Chapter 5 provide a deeper and richer understanding of factors reported in Chapter 4 that shaped learners’ beliefs towards educational technology. The factors became more prominent in phase II of the study when I, the researcher, was in close contact with the students through regular class observations, their DD posts and the one-on-one SR interviews. As discussed, the student participants exhibited a variety of existing beliefs, however, it is the nine individual learner voices that provide a deeper understanding of the attitude, behavior and subsequent transformation of beliefs. The transformed beliefs were influenced by the contextual, and pedagogical factors and the individual technological tools that students started to use on their own. There were those students who had experiences with educational technology, who actually welcomed the

use of more and varied technology use. There were also a few who were apprehensive and not as positive at the beginning, but who realized and embraced its use and ended up appreciating its role in helping them develop their English language skills as they continued to experience technology use in their EAP 1 course. The conflicts in Joanne and Walter's cases are also reflective of the fact that beliefs can be fluid and are not so straightforward in forming, or gauging, or understanding. Therefore, studies or research examining belief systems should always incorporate the use of multiple tools, voices, sources, and different timelines of data collection. Chapter 6 will provide a summary of findings specific to the two research questions asked. It will further illuminate the connections this unique, small study has made with some of the existing theories and research in TELL and discuss the impact that technology use subsequently had on the student participants' learning of English in this study.

## **Chapter 6: Impact, Implications and Conclusion**

This chapter begins by summarizing the key findings and themes that emerged in this study, beginning with an interpretation of the findings in an attempt to offer answers to the research questions guiding this study in light of other research and studies.

Benson's (2011) learner autonomy framework is then used to analyze teacher and student participants' practices within the course researched. Implications for teacher educators and stakeholders within the EAP education programs are discussed and this is followed by implications for future research within this area. The chapter concludes with some final thoughts on this research.

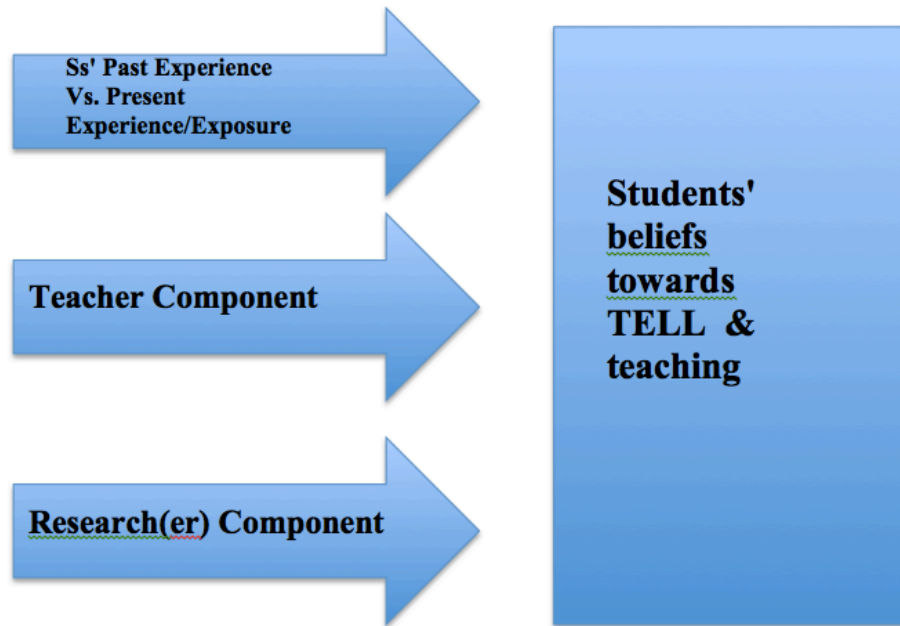
### **Summary of Key Findings**

This study was designed to answer the following research questions:

1. Do EAP students' expectations and beliefs regarding TELL evolve through a course and if so, how?
2. What contextual, pedagogical and or individual factors shape EAP students' beliefs over time?

An analysis of the data revealed that two major components shaped students' beliefs as they progressed through the EAP 1 course and that impacted their belief involvement - the teacher component and the research(er) component. A discussion of the two research questions in light of these two components that transformed students' beliefs and their subsequent use of TELL tools in the EAP context will follow. As reflected in Figure 6, students came into the EAP program with past beliefs shaped by experiences they had. These beliefs were then very much influenced, and molded by their EAP experience and exposure to technological tools and then the teacher and the

researcher component that subsequently challenged some of their existing beliefs towards TELL components and learning English. Therefore, students' expectations and beliefs towards TELL, as asked in research question 1, do evolve through the EAP course. Furthermore, these newly shaped student beliefs lead to the development of emerging thoughts about themselves as users of educational technology, thoughts about the role of the teacher and the role of technology use in EAP. An in-depth discussion of these two individual components, the teacher and the research(er), will help us realize how they are deeply connected and very much an integral part of the contextual, pedagogical and individual factors that shaped students' emerging beliefs. These factors and components together contributed in forming a heightened awareness that transformed students' into becoming critical towards their language development, digital literacy, language learning behavior and strategies used within a TELL context. Consequently, this critical awareness steered students towards TELL practices that evolved into 21<sup>st</sup> century skills (Dede, 2010) and learner autonomy (Benson, 2011) beyond any expectation one would believe possible within an eight-week period timeline. The following discussion of the two components will reveal how this short period of time was able to produce such impactful thoughts and practices leading to an evolution in students' belief systems and of how these two components were very unique to this specific EAP context.



*Figure 6.* Components that shaped students' beliefs towards TELL incorporation and use within the EAP 1 course. Note that Ss refers to students.

### **The Teacher Component**

As mentioned earlier in Chapter 3 the teacher was not only a key part of the pedagogical and contextual factors underlying students' beliefs in this study, but he was also the architect in shaping students' beliefs towards tech-integration and use as elaborated further in chapters 4 and 5. Pierre's educational background and teaching experiences lie at the core of integrating and exploiting the various online teaching approaches and the way he did in this specific course. These factors shaped the teacher's beliefs and desire for change and transformation in the education industry that impacted his teaching methods, techniques and strategies and thus created a unique language classroom environment within this EAP 1 course. This is not at all surprising as Knobel and Kalman (2016) in talking about teacher education and digital literacy place the sole responsibility of student and curriculum development on teachers as they believe that the

“education system is only as good as its teachers” (Bokova, 2014:1, as cited in Knobel & Kalman, 2016, p. 2). They rightfully quote Bokova, the Director General of UNESCO, in considering teachers (by many policymakers and pundits) to be “the single most influential and powerful force for equity, access, and quality in education” (Bokova, quoted in UNESCO, 2015a:1 as cited in Knobel & Kalman, 2016, p. 2). Kern (2011) also stresses the fact that “[s]uccess in technology-mediated projects has been repeatedly shown to depend largely on teachers’ efforts in coordinating learners’ activities, structuring language and content, and helping learners to reflect critically on language, culture and context.” (p. 210). Kessler (2018) in talking about technology and the future of language teaching places the language teacher at the center of “planning, instruction, assessment, and facilitation of any language course, leveraging technology to support language learning” (ACTFL, 2017, n.p., as cited in Kessler, 2018, p. 214). Similarly, Johnston and Lawrence (2018) identify instructor pedagogy and proactive scaffolding as a key factor in successful collaboration in EAP writing specifically in these various interactive online spaces (pp. 3-4).

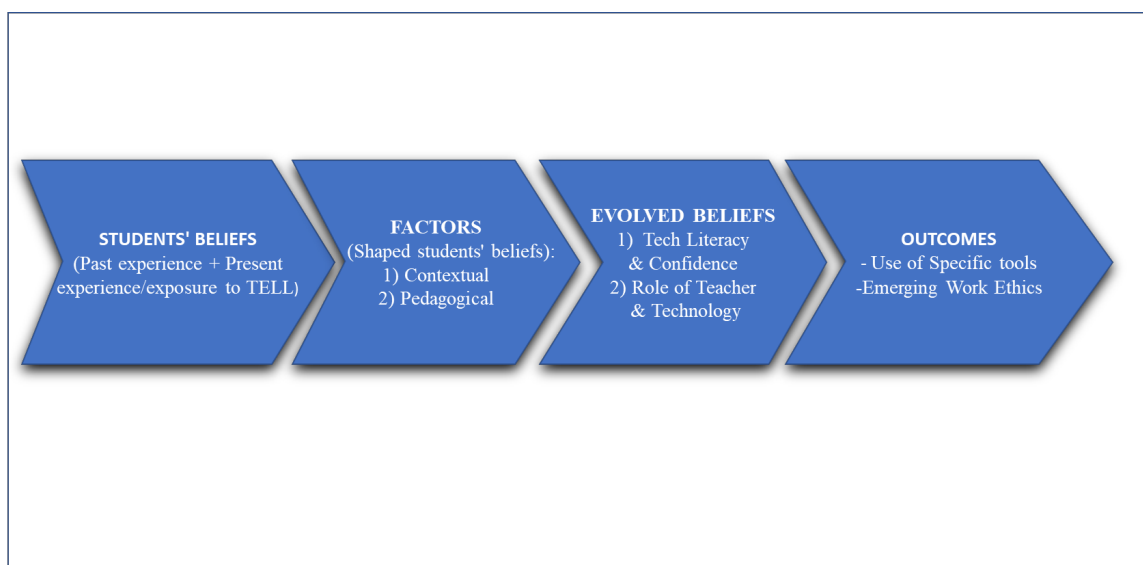
### **The Research(er) Component**

Within this particular component both the researcher and the research design or the study itself comes into play, hence the title research(er) component. As described in Chapter 1, my journey with TELL teaching as well as my experience of researching students’ perspectives (Ahmed, 2004) fueled the research design of this particular study. However, I was not aware until I started to analyze the data of how the study itself impacted the students in heightening their awareness of the activities done and attitudes towards tech tools in their EAP 1 course. Chapter 5 provided a detailed discussion of how



this component raised students' awareness towards tech use in learning English. This awareness led to students' questioning their existing beliefs, students' becoming more critical of their language learning behavior and subsequently moving towards an enhanced belief of the tech benefits in EAP.

Against the backdrop of these two components that fueled students' beliefs, the following beliefs emerged as outlined in Figure 7 below. This figure details the final result of this research where students came into the EAP 1 course with their past experiences of learning English and this was impacted by their present experiences and exposure to TELL components used in their course. Students' beliefs are then seen to have evolved in the areas of their own tech literacy and confidence and towards the role of teacher and then the role of technology use in their learning of English. As noted, these were impacted by the contextual and pedagogical factors that arose from the teacher and research(er) components. These belief enhancements resulted in certain belief related outcomes that included ongoing uses of technology, and that led to a heightened awareness and realization of technological benefits. This heightened awareness and realization of technological benefits led to the emergence of certain work ethics (detailed description to follow) that students adopted in enhancing their English learning experience.



*Figure 7.* Students’ beliefs being influenced by factors, subsequent evolved beliefs leading to outcomes of language learning behavior as found in the research.

The above Figure 7 depicting students’ beliefs and outcomes is informed by this research and is very telling of such transformative power of technology and its impact on teaching/belief systems. Lawrence (2000), who looked at teacher beliefs towards computer-mediated language learning, also found past experience playing a significant role in influencing core beliefs about the potential of an innovation (p. 25). However, with continued exposure and use from week one to week eight, students seemed to become more self-critical and began to appreciate what they still need or want to learn (Lawrence, 2010) and this is reflected in their belief related outcome and then the emergence of certain work ethics in learning English.

### **Beliefs that Evolved Through the EAP 1 Course**

This next section will discuss some of the key findings in this research related to the two research questions. In the following discussion we will see that students’ expectations and beliefs regarding TELL evolved as reflected in their perception of tech

literacy and competence, in their perception of the role of a teacher, and in their perception of the benefits and constraints of TELL tools. In case of the factors that shaped students' evolved beliefs, we will find that the contextual, pedagogical and individual factors discussed in Chapter 5, led to the emergence of certain work ethics that can be attributed to further developing students' EAP skills and study. It must be mentioned that the three factors were shaped by the teacher and research(er) components, hence the role of these components in shaping students' beliefs.

### **Tech literacy and competence in using tools/apps.**

As discussed in Chapter 4, E.M. Rogers' "Diffusion of Innovation Theory (DIT)" scale was used in both the surveys where students were asked to assess their tech literacy and identify with one of the five categories described on the scale, i.e., from technology Innovator to a Resister. As detailed in Table 5, students' perceptions about themselves as being more or less tech savvy changed excluding the 5 Technophiles who remained unchanged. Except for the Technophiles, the majority of the students categorized themselves as either Early Adopters or Late Adopters, differing only in their approach to using technology where the former spends time learning how to use new technology while the latter likes using technology once its usefulness has been proven.

All four categories of students, Innovator, Early Adopter, Mass Follower & Late Adopter, reported to have understood the usefulness of technology and even students who were unsure about its use at the beginning of the course, did not identify themselves as resisters. Zhang's (2011) study also found a significant difference between students' attitudes toward CALL and the frequency of computer usage and number of CALL-based ESL courses taken by students earlier. She found that students who used computers more

frequently as well as students who took more CALL-based courses, were more confident and had a more positive attitude towards CALL compared to those who did not (pp. 84-86).

Although the students in the EAP 1 course were compelled by their teacher's positive attitude, the nature of the tasks set and the method set by the teacher to complete an assignment or task using technology, they did not resist it. In fact they adapted by "do[ing] something differently than what they had previously, i.e., purchase or use a new product, acquire and perform a new behaviour, etc." (Boston University School of Public Health, 2016). Studies (Deyoe, Newman, & Asaro-Saddler, 2014; Zhang, 2011) have reported that a teacher's attitude towards computer technology impacts that of the students, so "if there was a lack of motivation or an unfavorable attitude on part of the teacher, this attitude would be directly transmitted to the student and the system would fail" (Davies & Crowther, 1995, as cited in Zhang, 2011, p.4).

The students in this particular research had little to no experience of using technology in their English classes in China. The closest some of them were to using educational technology in learning English was presenting using Powerpoint, and this was specific to students coming from international high schools in China. Students coming from regular high schools were not allowed to use cell phones let alone laptops in Chinese classrooms. However, they had adapted to bringing and using laptops everyday in almost all tasks they performed in class here in their EAP 1 course. In talking about computer literacy not being emphasized by educators in classrooms in China, Zhang (2011) says, "Because computer literacy is not a core or even an elective course, this subject is not considered important." (p. 44).

FG interviews revealed that on the first day of class students were feeling nervous (Wesley), embarrassed at not having a laptop (Jake), surprised at being told how they would be using technology (Jacey, Joanne), afraid of not being able to adapt to this course (Eric), as well as perceiving the course to be very difficult (Catherine, Zara, Walter and Oscar). Many of the students did not even have a Gmail account and the first week of class was thus dedicated to opening accounts and getting oriented to the use of Google add-ons, like, Hangout, Community, Google Doc, sharing the Google drive. Having undergone that experience, on the last day they expressed feeling confident with this increased use of technology (Naomi, John, Tracey, Wesley, and Victor), feeling happy (Wesley) and good (Jacey, Jake, and Kacey) and reported having learned a lot (Catherine). Bueno-Alastuey and Lopez Perez's (2014) study also found that students with an increased use of technology in their courses realized the true potentials of its perceived usefulness. Zhang (2011) found a correlation between students' usage of computers to their confidence in CALL; in other words, students who used computers at least once a week were more positive towards CALL use than those who never used computers (p. 84). In Stepp-Greany's (2002) study, students reported to have gained more confidence with the general use of technology (p. 165); similarly, we see in this small study that overall students' beliefs towards technology use became more positive from the beginning to the end of the course with increased exposure, use and competence. This answers research question 1 in the affirmative in that students' beliefs evolved through the EAP 1 course progression. However, in order to understand how students' beliefs evolved, we have to answer research question 2 that introduces the factors that shaped these evolved beliefs and that is revealed in the following discussion.

### **Beliefs regarding the benefits or disadvantages of technological tools/apps.**

Students' overall beliefs regarding the benefits and disadvantages of using tech tools in learning English evolved greatly from the time that they started the EAP 1 course to their last day of classes. We have seen that students' beliefs rooted within their experience of learning English in China evolved significantly having undergone the experience in the Canadian context and they learned to appreciate and adopt some 21<sup>st</sup> century skills – digital literacies, teamwork, developing online community/ online interaction - in learning English (Dede, 2010).

#### ***Past experience: limited use of technology.***

*He English [EAP 1 course teacher, Pierre] use Google tools to help us to learn. When I was in China, my teacher never teach us to use apps or some other tools on the Internet. I think it can help us to save lots of time, and we can share our works to our teammates.*  
(Zara, SR interview 1)

As reflected in the above quote, from limited to no use of educational technology, students learned to appreciate the benefits they were reaping with the intense use of technology in their current EAP 1 course. The contrast in the learning environment, from low tech to high tech use of educational technology contributed in the kind of transformation in students' beliefs that was found in the study. From past experiences of giving or receiving Powerpoint presentations and listening on the recorder, students were expected to extensively use educational technology for learning English, “*Never used it, never familiar with this app use.*” stated Amy in her SR interview 1. So students like Jake, Walter, Oscar, Joanne who were initially apprehensive about the use of technology in learning English changed their minds. They considered tech use earlier to be a waste of time, distracting, making learners lazy and preferred to write on paper versus typing on

the laptop or personal computers. With course progression in EAP, they started to see the value of technology in promoting collaborative work, getting instant, more frequent feedback from both peers and teacher, more opportunities for practice and research on their own outside of the classroom. This enhanced belief in the benefits of educational technology was of course prompted by the course teacher and the research(er) components. For example, Jake, who mentioned in Survey 1 because of his disinterest in using technology at the beginning of the course, he was regarded as a “*trouble maker*” in class by their teacher (FG interview 2), describes his experience on the last day of class as “*Ya, I feel good, because, I improve my many kind of English language skills in [EAP 1] program and I think I’m able to adapt [EAP 2] program better.*” (FG interview 2). Even the most reluctant of all technology supporters, Walter (SR interview 1), who viewed technology as damaging the eye sight from too much reading online and distracting students by asking them to use their phones or laptops in class (details of Walter in Chapter 5), agreed at the end of the course that a boring lesson can become interesting, enjoyable and comprehensible through mere use of, for example, video (specific quote in Chapter 4). Aubrey (2014) similarly reported students’ reacting very positively towards features like, the instant feedback option, working collaboratively as time saving, quick and efficient for writing on Google Docs (p. 76).

### **Impact of Enhanced Beliefs**

The impact brought about from enhanced beliefs in the areas of the role of teacher and the role of technology use in learning English, influenced these “postmethod learners” (Kumaravadivelu, 2001) to develop academic autonomy on the one hand and the emergence of some of the 21<sup>st</sup> century skills through the activities using tech-tools in

the course on the other. Phase II participants are seen to have become conscious of their language learning strategies and styles through exploiting some of the opportunities (Kumaravadivelu, 2001, p. 546) afforded by dint of participating in that specific phase.

They are found capitalizing on some of these learning opportunities with a view to

- identifying their language learning strategies and styles through recording their language learning histories (for example, when in their DD posts they recorded and compared their English learning in China to that in Canada)
- evaluating some of their ongoing learning outcomes and successes with certain technological tools/apps (recorded week by week in their DD posts and subsequent discussions in the SR interviews)
- reaching out for opportunities for additional language reception or production beyond what they get in the classroom (for example, the apps/tools they found and were using on their own; seeking out opportunities to practice English outside of the classroom)

Hence there seems to be a move among these students towards achieving academic autonomy (Kumaravadivelu, 2011, pp. 545-546).

From being used to accepting the teacher's opinion without challenging (Zhang, 2011) and being acclimatized to a teacher-dependent English learning environment, students in this study started to learn to critically think, ask and challenge peers and teacher-taught concepts. They seemed to have developed a voice and to have vocalized their own ideas through peer discussion in debates, group presentations, writing research papers, and through conducting and exercising individual research skills. Thereby



emerged some work ethics among the students that embrace some of the 21<sup>st</sup> century skills of a language learner. Thus we see from the discussion above that the teacher, environment, context, participating in the research, using educational tools on their own - all led to an enhanced awareness towards students' language learning behavior and style and gave birth to some of the work ethics and 21<sup>st</sup> century skills that further complimented and developed their learning of English.

### **Work ethics emerging from the use of technology.**

Upon use of technology, all the phase II participating students' mention the development of certain work ethics that they had not experienced earlier. These are connected to 21st century skills as described by Dede (2010).

#### ***Working collaboratively.***

*When I used google sides and google doc, my partners can edit while I edit, which is great. I can get the feedback from teacher very quickly, because he can see that I am typing.*  
(Naomi, DD post1)

The use of technology in EAP learning made students' lives more convenient as they could do collaborative work, editing each other's work, and checking out other classmates work for clarification. Kessler, et al. (2012) also found that collaborative spaces like Google Docs helped increase student participation and focus students' attention on the accuracy of their texts and their revision of practices; students perceived the collaborative process as a positive and productive experience. Similar results can be reported from synthesizing participant comments from this research data. According to Zara, "Google slides can help my group mumber [members] share our works with each other." (DD post1). They were able to do all this from the comforts of their homes, not going to class or even over weekends as well, "When I have the homework that must

*finish with my partner, google doc and google slides will allow us to do that together and no matter we are in the different place.”* (Amy, DD post1). The G suite aided them with tools that were time saving, useful, and effective in language learning. The use of these tools promoted the development of 21<sup>st</sup> century skills, like, “collaborating with peers”, building on negotiated feedback, “mediated interactions with peers”. All “these digital literacies not only represent skills that students should master for effective 21<sup>st</sup> century work and citizenship, but also describe the learning strengths and preferences people who use technology now bring to educational settings” (Dede, 2010, p. 61).

Furthermore, the tech tools provided students with more opportunities to practice at their own pace in and outside of the classroom as well as made them want to do so willingly because of the fun component in it. This particular aspect came up time and again in the comments and Likert scale choices made in the surveys as well as their DD posts and SR interviews. Aubrey (2014) also reports an overwhelmingly positive attitude of Japanese students of EFL in the use of a variety of activities done on Google Docs (p. 77), especially the editing, peer and teacher feedback part was found to be “motivating” and a “useful learning activity” (p. 75). Collaboration is also mentioned to create a level of involvement that is in line with Vygotskian and Bakhtinian views on the dialogic nature of language use and the importance of social integration in learning (Johnston & Lawrence, 2018, p. 5). Kessler (2018) in talking about technology and its future in language teaching shares Reinders and Hubbard’s (2012) belief that opportunities created through technology use “for students to collaboratively co-construct knowledge and collectively build communities support them in developing autonomy over their own

learning and can increase their motivation and also contribute to their engagement” (p. 207).

Specific to the use of G suite tools, studies discussed above and also this research show teacher-student, student-student mediation, negotiation during learning, problem solving within a social, scaffolded environment taking place on these digital platforms. All these are aspects of the social constructivist approach where the EAP students were scaffolded into co-constructing EAP skills through the use of TELL approaches. Shintani and Aubrey (2016) found that the interactive nature of the synchronous corrective feedback (SCF) mode of Google Docs provided “optimal scaffolding for learners” and resulted in a gradual reduction of scaffolding. The later discussion of Benson’s framework (2011) will help us see how this can lead towards the development of autonomous learners.

### ***More practice.***

Students believed that both the environment and the classroom teacher driven by the use of tech-tools in this course enforced more practice in language learning. Activities like, the conversation partner, TED talk videos, going shopping, eating out, ordering food, use of the Google platform provided them with ample opportunities for practicing their speaking, listening, reading and writing skills both in and outside of the classroom. “*That’s help us to improve our reading skills by practice more and more, and do more practice, and read more.*” said, Amy (SR interview 3). Oscar also mentioned that the use of apps made him practice more and was “*good for review[ing]*” a work and this also helped them to improve their language skills. The teacher’s reviewing process on Google Docs was also much appreciated and alluded to a successful experience by students in a

writing classroom “to solve motivation, collaboration and revision problems” (Aubrey, 2014, pp. 76 -77). Such contexts created by the use of these tools that optimize learners’ experiences of a “hyper-collaborative” participatory culture (Kessler, 2013) supports the promotion of “negotiation of meaning and uptake of corrective feedback” (Bower & Kawaguchi, 2011, as cited in Kessler, 2013, p. 316). This subsequently leads to students’ development of authority over their learning process (Bloch, 2007, as cited in Kessler, 2013, p. 316).

### ***Engagement.***

The use of technology in language learning got the students to want to learn more, and be more interested in the topic and thus facilitated learning through being more engaged. Some of such instances that got the students working spontaneously on their assigned work were, working collaboratively on an essay or sharing on Google drive and getting frequent feedback from the teacher and peers. In talking about the use of tools like Google Docs in teaching academic writing, Kessler et al. (2012) discuss how being able to collaboratively access and edit the same document at the same time can lead to “more engagement in the writing process” (p.105). As Amy thought that when a person is having fun as opposed to being forced to do something “...*you really like those kind of things, and you can pay more attention and pay more time on it, and it really can help you a lot*” (SR interview 3). Studies have shown that CMC tasks and use of technological tools in language learning can promote motivation, engagement and collaborative work among students throughout a course (Lee, 2016; Chang, 2014; Aborisade, 2013; Anwaruddin, 2013; Prihatin, 2012). John strongly advocates for the enjoyment factor to be present in order for learning to happen, so he says “*If you are enjoy, you can love this.*

*If you are not enjoy that, you will hate this*” (SR interview 3). Naomi in her SR interview 3 in talking about one of her statements in the DD post said,

*the technology tool is like a thing like makes us happy and makes us feel that learning's not only boring, it's also a little bit funny. So we are not against the learning, we just accept to learning it because there have a lot of fun technology tools. So I describe as funny tools.*

Eric believes that it is the teacher's responsibility to introduce technology into the classroom and make lessons more interesting for students, in this regard he mentioned in SR interview 3, *“if teacher use some technology, they can show some pictures and some videos in class, so this can make the class more interesting, because if teacher just reading the words on the book, yeah, of course, student will not like this way to teach.”* Stepp-Greany (2002) also found that her Spanish learners perceived to have learned from components they had enjoyed the most.

### **Benson's Framework of Learner Autonomy**

This brings us to the notion of autonomous learners. As mentioned earlier in Chapter 2, a perceived relationship between educational technology and learner autonomy exists (Motteram, 1997, as cited in Benson, 2011, p. 145) and that has incited the need to gauge the EAP students' technology practices and its impact on their belief systems. Benson's learner autonomy framework is thus believed to provide a research lens that will assist in understanding learner interaction with tech-tools and subsequent language learning behavior in a BL environment. In addition, it will provide more support and credibility to the reported emerging beliefs of students' towards educational technology and language learning. Benson (2011) proposes practices associated with the development of autonomy that can be classified under six broad headings. Reflecting

upon students' and teacher's practices within this EAP 1 course through Benson's framework will aid in understanding whether and to what degree technology use assisted in fostering learner autonomy within this eight-week period. We will map the students' activities and teacher's practices reported in this research on to the approaches Benson (2011) proposes in his framework that had been earlier introduced in Chapter 2. The aim is to try to understand the reported student activities and the extent to which they seemed to have developed learner autonomy in EAP skills. We must be reminded here though that all the development and changes that are presented here against Benson's framework are from learners' self-reported data, their perception of development, or lack of. It must be further noted that students became more aware and conscious of the tools they were using and the why's, how's and then the consideration of taking those skills further towards more development in their English language learning, having participated in the research. Reported are the efforts made and the tech-friendly environment created by their teacher, however, there were no formal tests conducted or assessments done by the researcher in any way to measure the actual development or progress that was being reported by students.

**Benson's (2011) framework within the EAP 1 course.**

***Resource-based approaches.***

Benson's resource-based learning serves as a cover term for approaches such as self-access, tandem learning, distance learning, self-instruction, and out-of-class learning, that share a focus with the learners' independent interaction with physical, human, and digital language learning resources. According to Benson (2011) these approaches offer opportunities for learners to self-direct their learning and develop the skills and

dispositions associated with autonomy through experimentation and discovery (p. 127).

Within the EAP 1 course, students were given tasks like homework assignments, research essays, presentations where they had to access the Google drive to watch an online video, access a link shared by their teacher, work independently, or even in groups in and out of the classroom (refer to Table 4 for an overview of activities done in the course).

Students specifically commented positively on the off-campus access to tasks and folder sharing that saved a lot of their time and energy. Students also reported working on their language skills on their own via means of physical and human resources, for example, ordering food at the campus food court or at a restaurant, going to the grocery, shopping, asking for directions, and meeting with their conversation partners. The videos that they had to post on Google+ Community as part of their homework were very practical (as depicted in Table 4 and detailed example discussed in Chapter 5). Each student had to post at least three videos over the course of eight weeks and had to comment on each other's posts. The videos could be on any activity that they had done over the weekend or even visiting their conversation partner on campus. These activities not only generated authentic interaction and unexpected, unplanned conversation, but also gave students opportunities to be creative not only with the activity itself, but also with the use of the target language, English. Thus encouraging "independent interaction with learning materials" (Benson, 2011, p. 125) towards fostering learner autonomy.

The nature of tasks set by their teacher also enabled peer and teacher feedback and students were in constant contact with the whole class as well as the teacher if required through Google+ Hangout. Students had access to their peer's folders through the Google drive for clarification or even self-correction. In this regard, Eric said,

*“...when I feel confusing about my essay, so I can go to my friend’s document [posted on Google Drive and folders shared with the whole class]. I can see their essay as a example”* (SR interview 2). Catherine also believes that, *“If I do not understand, I can review it [on the Google drive, i.e., lessons, videos, or posts shared by their teacher]”* (SR interview 3 and 1). Aubrey (2014) also reported students benefitting by getting new ideas from watching their peers write as well as learning from each other’s mistakes (p. 75). Although there was not any tandem learning going on among the classmates, given that they all shared the same L1, Chinese, they did appreciate as well as criticize this aspect as on the one hand it allowed them to explain and understand one another easily using their L1, but on the other hand, it took away some of the opportunities of using the target language, English. However, they were aware of this and tried to seek out opportunities to engage in the target language in and outside of the classroom through activities with their teacher, the researcher, and their conversation partner.

Enabled by the use of a community based learning system through the Google Drive, the tasks were designed to foster collaboration and a sense of presence and involvement of other members, teacher and/or peers, in the language learning procedure. We can safely deduce that having gone through the experiences of working on tasks with tech-tools collaboratively and independently, students learned to take charge of their language learning and evaluate their learning processes, styles and strategies as they had communicated on a couple of their SR interviews. This reflects the onset of learner awareness and movement towards learner autonomy to some extent. Benson (2011) concedes that technological developments expand the domain of resource-based learning by creating new possibilities in which different modes of learning complement each other



(p. 144). This specific viewpoint strengthens resource-based learning by providing conditions like collaborative work, support and a range of skills that different modes of resource-based learning can accommodate under which learners can develop control over their learning (p.144).

***Technology-based approaches and learner-based approaches.***

Benson (2011) mentions that although technology-based and learner-based approaches can clearly be classified under resource-based learning, he decided to separate technology-based approaches to mainly focus on CALL and online approaches.

Technology is now an integral part of self-access, tandem, distance, self-instruction and out-of-class learning, therefore, Benson believes that as “new learning technologies are constantly in search of new homes”, by separating technology-based learning he would be able to see how the “new technologies, themselves, as opposed to approaches into which they are integrated, may be supportive of autonomy” (p. 145).

In the EAP 1 course, the teacher introduced students to the Google platform and they were using it in developing and practicing all the language skills. However, notice that students were further motivated to use other apps/tools independently to enhance their language learning experiences. Initially many were using the different tools introduced by their teacher, but having realized the benefits of the use of educational technology, students were using tools referred by peers/friends, or having searched and found on the net of their own accord. This suggests a meta- awareness of strategies and tools that aided language learning and this is reflected in their SR interviews as well as in the FG interviews. For example, Eric talks about his English speaking skills improving, *“I’m very happy to finish this course because um, we use a lot of technology tools to help*

*us to study English and improve our English level and I think, it meet my expectation because um, my English skills improve a lot especially um, speaking, speaking.*” (FG interview 1). The students mentioned that they would continue to use the Google platform in their EAP 2 course as well as in university studies as they attribute their success in all the skills to the use of technology. It helped them to concentrate, make their lessons more interesting, and easier to understand (Naomi, Oscar, John, Eric, Catherine, Amy, Joanne, FG interview1), improve overall English language skills (Jacey, Tiffany, FG interview2), enrich their learning experience (Wesley, FG interview2) and help them adapt better in EAP 2 in the next semester (Jake, FG interview 2). Overall, Kacey believes that their language development is “*deeply connected with technology*” use (FG interview 2). According to Johnston and Lawrence (2018) technologies like Google Docs and wikis enable a multifaceted interaction among EAP learners leading towards developing a high degree of interdependence, and autonomy (p. 2). Kuteeva (2010) found that interaction and peer collaboration were perceived by the students as most important gains in using wiki for writing and contributed in “developing effective and transferrable writing skills” (p.55) leading towards building writer autonomy and voice. Therefore, within the eight-week period, we do see as reflected in the students’ comments some movement and propensity among the Technophiles and a few others for more independence and self-sufficiency in their use and choice of tech tools. Researches have shown that certain “CALL based applications”, like “word processors” encourage “creative manipulation of text” that can “intrinsically [be] supportive of cognitive and metacognitive autonomy” (Kenning, 1996, as cited in Benson, 2011, pp. 146-147). However, Benson (2011) cautions that “the effective use of electronic tools and resources

assumes certain prerequisites and that unless learners already have certain attitudes, skills, and strategies, they are unlikely to derive much benefit” (Kenning, 1996, as cited in Benson, 2011, p. 147). That is why even upon realizing the benefits of TELL not all students were at the same level in their beliefs, understanding, sense of satisfaction and perceptions of their language development.

A discussion on the learner-based approach will now follow. According to Benson (2011), learner-based approaches directly attend to learner development or behavioral and psychological change within the learner (p. 154). Learner development on the other hand, involves increasing awareness of oneself as a learner and an increasing willingness and ability to manage one’s own learning (Benson, 2011, p. 154). This awareness within the EAP 1 learners is evident in the individual technological orientation that seemed to influence learners’ beliefs towards technological tools they used on their own as well as participating in phase II of the research study. The benefits and results of using the G suite encouraged students to try out apps/tools on their own for correcting grammar, pronunciation, practicing more reading, searching the web, translating from Chinese to English. Participating in phase II of the study and the posting of weekly digital diaries gave rise to thoughts that compelled them to revisit, reminisce and review their behavior, strategies and tools used and subsequently alter certain beliefs and attitudes toward developing their language skills. In case of altering their behavior, students mention an array of activities that demonstrate the realization of the importance and benefits of TELL approaches in learning English. These behaviors include using subtitles while watching a video clip (Zara, SR interview 3), using an English to English dictionary instead of Chinese to English and talking more with native speakers instead of

Chinese speakers of English (Eric, SR interview 3). Participating in the study also led them to compare strategies, and ways of learning language (from before to now) and use the one that is more successful (Walter, SR interview 3), find the most suitable tool in learning language (Oscar, SR interview 3), work harder in and outside of class, and try to make the most of the resources and available tools (Naomi, SR interview 3). John also adds that participating in the research made him realize the importance and convenience of using technological tools in studying English (SR interview 3). Amy points out that she would just use the apps required by her teacher without thinking about its benefits and usefulness, however, “*when I do the interview or the post [Phase II: DD posts and SR interviews], when I think about that, I think yes, it’s really helpful for me in those kind of ways...I think there must have more technology tools that can really help me to organize my life, or help me to either to finish my work, and it let me more focus on those kind of technology tools*” (SR interview 3). Thus the comments and activities discussed highlight a move among the phase II participants towards an increased critical awareness and a propensity to adopt tech tools and autonomous language learning behavior in developing and enhancing their EAP study.

### ***Teacher-based approaches.***

In teacher-based approaches to fostering autonomy the emphasis is placed on the teachers’ role, on the teachers’ approaches to teaching and learning and on the field of teacher education from a focus on the teacher as a conduit for methods devised by experts to a focus on the teacher as a self-directed learner and practitioner (Benson, 2011, pp. 185, 187). Within the EAP 1 course, Pierre, the course teacher, is described by his students as a guide who “*told us how to use the technology and how to make the study*

and technology together to make our study more better, more convenient” (John, FG interview1), “a mentor” (Wesley, FG interview2), “a ruler, a guide” (Ethan, FG interview 2), and “the main ingredient to help you improve your English” (Oscar, FG interview1). In talking about the teachers’ role in a tech-enhanced environment, all the 16 students valued the role and importance of their teacher in introducing them to the apps/tools and enforcing its use throughout the course in reading, writing, listening and even speaking. All communication in and outside of the classroom was done using the different extensions, like Google+ Hangout, Google drive, Google Doc, Google Slide, Google+ Community from then onwards. They believed that technology is a tool, a system that provides the teacher extra support in delivering and exchanging messages with the students in class conveniently, easily, saving time and effort. This kind of belief was influenced by their teacher’s role and attitude towards technology use. Thus the students preferred the teacher to use some form of technology in teaching English as it would help them understand better and clearer (Kacey, FG interview2). Due to the nature of an assigned task, students were compelled to check their Google+ Hangout every day in order to receive information on any changes made. As John puts it, “*You know, if [Pierre] not teach us to use the Google, teach us to use the Google Drive, Google Doc, and we never know how Google meaning*” (SR interview 1). They all appreciated the instant feedback by Pierre and the notion of being constantly connected and being able to ask for help whenever required through Hangout. They also benefitted from working collaboratively on assignments, with peer as well as the teacher. They enjoyed the authority of assessing each other (or groups, depending on the task) in classroom debates and presentations using rubrics provided by Pierre, having a say in marking and the

knowledge of the components that are considered in evaluating their own development. In class observation, I also noticed that Pierre would share the rubrics of all assignments and papers on the Google drive so that students knew and could prepare according to what was expected of them within a task. The requirements for all marked homework and class work were made known to the students at all times. During group presentations, Pierre asked other observing groups to post their questions and feedback live using their cell phones. All in all, Pierre seemed to fit the profile of this framework by being a facilitator, helper, coordinator, counselor, consultant, advisor, knower, and resource (Benson, 2011, p. 185).

In case of teacher education, as discussed in Chapter 3 and Chapter 5, Pierre was very much informed and driven by tech-mediated practices founded in theory. His discontentment with conventional practices at various stages and levels of language teaching over the years, motivated him to search for answers not only by pursuing graduate studies and research but also learning web designing, graphic designing- much of which were self-taught. This fervor, commitment and enthusiasm for change within teaching and learning processes and practices are reflected in all the methods, strategies and tools he used in the EAP 1 course. Thus, many of his approaches and tools encouraged and pushed students towards self-directed learning and aimed to promote autonomy in language learning, in choices made and decisions in resources used, and in assessing and evaluating individual and peers. Thus Pierre's extensive degree of autonomy is reflected in his TELL teaching approaches, methods and tools used that were not required by the institution, so rather he did it of his own accord. Benson (2011)

believes that this autonomous drive of the teacher helps foster learner autonomy (p. 185) among his students.

***Classroom-based and curriculum-based approaches.***

The classroom-based and curriculum-based approaches assumes the learner to be involved in planning classroom learning, evaluating classroom learning, the key factor in development of autonomy being the opportunity for students to make decisions about their learning within collaborative and supportive environments (Benson, 2011, pp. 163-164).

In regards to learner control over the planning and assessment of classroom learning, students within this EAP 1 course were involved in peer assessment (as mentioned earlier) in specific areas, like debates, presentations, peer editing essays, and assignments in a controlled/limited way. In other words, students were only involved in assessment in instances that the teacher asked them to, using specific rubrics provided by the teacher, so not doing so of their accord. However, given the target language level of this particular group it would seem inappropriate for them to be involved in planning teaching materials or even curriculum for that matter and none of that was observed among the students.

Benson (2011) cautions us on the complexities that lie in trying to capture the kinds of improvements that are to be expected with the development of autonomy. According to Benson (2011), autonomy related gains in learners' ability to learn languages involve questions like, whether the learners are able to interact with authentic target language texts, whether the learners are able to create situations of learning for themselves and whether the learners are able to monitor and self-assess their own

performances (pp. 210 -211). Although reliable testing instruments to measure abilities of this kind is yet to develop, “evidences of ability to learn can often rely on direct observation of learners’ at work, on analysis of records of work and learning outcomes, or on learners’ self-report” (p. 211).

Thus, from the above discussion we can say that there are evidence and glimpses of events, situations, and conditions reported as well as from data triangulation done that reflect Benson’s (2011) resource-based, technology and learner-based and teacher-based approaches exercising components of autonomy development to have taken place to some extent within this EAP course. However, the students in the current study were not quite at the level in the target language to attempt or even be able to function at a higher level of the language and to manipulate, manoeuvre and guide their own learning to the extent where the teacher is just present as more of a guide and supervisor. Therefore, the EAP 1 course students cannot be reported to have gained full autonomy over their learning, though evidences of the awareness and need for more autonomous learning strategies are present. However, it must be mentioned that given the students’ past experience with little to no use of educational technology, it is compelling to find the level of learner autonomy that was gleaned from the data within this short eight-week period.

Finally, to answer research question 2 from the above discussion we can see that the contextual, pedagogical and individual factors together impacted in shaping students overall positive attitude towards the use of educational technology and students’ belief that technology use overall enhanced their learning and developed their EAP study. Both the physical and the learning environment, students’ perceptions of the role of their



teacher, the role of tech-tools used, the role of participating in the research study and how that seemed to impact their learning- all played a part as components of the contextual factors. The teacher's methods, classroom activities, tech-tools used in learning English as well as students' perceptions of the effectiveness, usefulness and satisfaction in using those tools were all pedagogical factors that influenced their beliefs towards the benefits of educational technology use in learning English. These factors together impacted students' beliefs specifically towards their digital literacy, beliefs regarding the benefits and constraints of technology and beliefs about their past experience of limited use of technology. Findings highlight a heightened awareness of learners towards their language learning behavior. The awareness led phase II participants to question, compare and contrast and alter some of their past beliefs rooted in their past language learning experiences, and language learning behavior. With students' realization of tech-tools saving their time, improving efficiency, developing language skills and making the language learning process easier, they sought out more tools and altered their language learning behavior towards enhancing and maximizing their learning experience within the EAP course. This subsequently led to the emergence of certain work ethics and 21<sup>st</sup> century skills that further enhanced their beliefs towards the benefits of tech-tools and fueled the building blocks of learner autonomy.

### **Implications**

Based on the findings and participant voices from this research, I have briefly outlined some implications and recommendations in incorporating TELL teaching within the EAP context. As the language educator is the impetus to a successful tech integration

in TELL teaching, the following implications are all centered in raising the teacher's awareness towards certain aspects and features that emerged from this research study.

### **Educating teachers in TELL pedagogy.**

It appears that the key to developing successful EAP programs is when language integration is driven by pedagogy-informed technology use. For this to happen, teacher education lies at the center of it all. The key participant, the teacher in this study and his educational background, his teaching experience and interests, his keenness in e-learning and tech-tools and constant dissatisfaction with the system got him into exploring new avenues in search of a satisfactory system and answer. As discussed at the beginning of this chapter, the teacher became an integral component, the driving force directing the pedagogical and contextual factors that shaped students' beliefs in this study. Pierre's theory-informed pedagogical approaches and strategies leveraged the affordances and also cautioned him of the constraints in adapting and modifying educational technologies used within the EAP 1 course. Kessler, et al. (2012) reiterates the importance of pedagogical reflection promoting guidance towards more extensive preparation and subsequently that being an essential for future tech-driven teaching approaches. These authors believe that the "co-evolution of technology, pedagogy, and the nexus of the two" will create opportunities for wholly new environments and experiences (p. 106) that teachers and educators must be prepared for. Johnston and Lawrence (2018) also state that "instructors can benefit from adopting a theoretically-informed pedagogical approach" in teaching that can facilitate "an empowering, supportive learning community that fosters identity investment, facilitates multimodal interactions and develops supportive, social, teaching and cognitive presence" (p. 4). Kessler (2018) calls for the

“world language teachers of the 21<sup>st</sup> century” to have an awareness for the potential of adopting digital tools and artifacts from real-world language practice so that they can be adapted for the language classroom” (p. 214) as he quotes the ACTFL position statement in 2017 in strong support of technology integration by language teachers. Therefore, it is important for EAP teachers’ TELL practices and beliefs to be grounded in theory as that will direct the teacher to adopt specific tech tools that leverage the EAP course requisites, goals and outcomes to be met within the stipulated timeframe.

Furthermore, a community of practice can be deemed necessary to enable teachers, teacher-educators to share their successes and pitfalls either at the institution level or at the regional level so that shared practices can further benefit the EAP community. “[T]eachers’ personal and professional online networks can facilitate the sharing of technology skills, lesson plans and collaboration across disciplines, which enable more effective use of technology in the EAP classroom.” (Yim & Warschauer, 2016, p. 604).

### **Teacher intervention in educating students: what, why, how.**

One of the other important implications that came out of the findings is the need for educating students about the specific technologies that are being used by the teacher, why they are being used and of course how to maximize their use in learning language. Levy (2015) calls for “planning a classroom intervention” in highlighting “complexities involved in closing in on the learner’s experience” (p. 566). Aubrey (2014) stresses the importance of teachers adequately training students on how to use the different features of technological tool/s prior to implementation for successful and complete use (p. 77). Kumaravadivelu (2001) in talking about postmethod pedagogy calls for implementation

of learner training for both language learners and teachers as it would “make learners more active participants in their language learning while at the same time mak[e] teachers more sensitive to learner diversity and learning difficulties” (p. 546). Kessler (2018) convenes all language teachers for a refocus of education with the learner as the point of leverage “by attending to students’ learning styles or helping learners to develop awareness of how they best learn” (p. 209).

The researcher intervention in phase II of this study, revealed not only the gaps or confusion among students as to why certain tools, for example, G suite, were being enforced by their teacher, but it also helped to mitigate some of the stress and anxiety among the more linguistically challenged students experiencing low self-esteem, and helped proceed towards successful integration of technology in learning English. So students like Walter, Joanne and Jake, who failed to see the benefits of the G suite initially, came to reflect through prompts in their DD posts, subsequent SR interviews and FG interviews of how beneficial, time saving these were in reality and how they could accelerate their progress in learning English by using them. The researcher intervention part, in phase II of the study, can be replicated and facilitated by the teacher. At the very beginning of the course the teacher explains the benefits and need for using certain tools/apps and can continue to support students by holding fairly regular weekly meetings/conversations. This can result in successful tech integration and development of academic autonomy. Particularly with EAP programs, as some of these are high stakes, in terms of finances and time spent by students, on the one hand, and a load of academic goals to be completed within a very short period of time by the teacher on the other, makes it a very challenging and tedious program as well as unique from other general

ESL or EFL courses. Therefore, the integration of technological tools can definitely alleviate the stress by saving time and energy spent by both teacher and students toward successful course completion. Developing such collaborative autonomous language learning abilities within students will also prepare them for new and unanticipated opportunities (Kessler, et al., 2012, p. 106) that may rise in these tech-mediated environments.

### **Leveraging students' digital resources.**

Another important implication of this study has been the fact that success in tech integration can be achieved by leveraging student-found tools. As reflected in the belief related outcomes of the study, where some of the students are found searching and using tools/apps on the web of their own accord and realized the benefits experienced. They were also introducing those to their classmates, having benefitted from tools like, Youdao, Baidu, Grammarly, One Checker. This can lead to successful integration of tech-tools that have proven to be beneficial and relevant to their EAP course through practice by both teacher and students. As Yi (2013) reiterated, "EAP teachers and researchers are also advised to consider students' naturally-occurring technological practices and discover ways to incorporate them into their curriculum and instruction. This will help teachers better understand how technology relates to both the personal and academic lives of L2 learners, and thus enhance student engagement" (as cited in Yim & Warschauer, 2016, p. 603).

### **Ongoing critical and reflective practices.**

Ongoing critical and reflective practices can be beneficial for any teacher integrating TELL practices as they continue to upgrade the tools used as well as strategies

and methods employed. In terms of an EAP teacher's expected role in TELL integration, Yim and Warschauer (2016) said, "EAP teachers should embrace their multiple roles as co-inquirers, researchers, and instructors during the process of utilizing digital media in instruction" (pp. 603-604). Pierre's agreement to participating in this research can be viewed as his being a conscientious EAP teacher. Teachers can do a type of reflective research or action research in different forms on their own as well. Participating in research studies when presented with the opportunity, or even holding weekly meetings with individual students and learning from their perspectives can be very informative. Teachers can continue to maintain a journal recording outcomes, initial reactions, successful or unsuccessful attempts at introducing a new tool from conducting online surveys/feedback of students and incorporating their suggestions when or where possible. These can be beneficial to teaching in especially these constantly evolving tech-enhanced environments. Video recording of particular sessions in the class and going through the recorded clips later for identifying pitfalls or successful moments with the new tool being used can be of great value in providing accurate information of tool integration. In being a teacher, one must be ready to respond to surprises, unexpected events and be adaptable to emerging situations in tech-mediated approaches. Thus, the need for this specific aspect surfaced from the one-on-one interactions between students and myself (the researcher, specifically in phase II) where I recorded the SR interviews using Screencastify (an extension of G suite) and used those as springboards to a richer understanding of students' beliefs. The issues, concerns and questions that arose in the phase II of the study made me realize how at times misinformed and misinterpreted or even completely ignored a teacher's intentions or goals for using technology can be. In

order to continue to remain conversant with evolving tech-tools, their functionality, benefits and constraints, to be better equipped in understanding how “to meet our students in [the] new participatory environments” (Kessler, 2013, p. 215), ongoing critical reflections on one’s teaching practices is much needed.

### **Call for More Research**

While this research has shed some insights into students’ beliefs towards TELL integration, its impact on their attitudes toward technology use in an EAP context, there are many more questions that remain unanswered and that are in need of further investigation. As mentioned in the limitations of the study section in Chapter 3, a longitudinal study following this same group of students into their higher EAP 2 course and observing their use of tech tools would have been beneficial in drawing a more comprehensive understanding of emerging technologies and their use. Kern (2011) also suggests “[t]racking language learning through year-long or multi-year studies” as that can help mitigate concerns about how the novelty of technology might affect learner outcomes on the one hand and provide a more adequate basis for understanding on the other of how language learning might transfer across skill areas and across multiple contexts of use (p. 210). I also regret not being able to begin Survey 1 in week 1 of their class as I do believe that it would have been a greater contrast in terms of students’ identified percentage of satisfaction, tech literacy, language development reflected in Survey 2. Given that students were much more amateur in their computer skills back in week 1 as well as less developed in their understanding and familiarity with surroundings, this could have highlighted a greater contrast between Survey 1 to Survey 2

results and choices. The results thus may have altered because of the starting time (i.e., administering time of Survey 1) and due to a shorter time gap between Survey 1 to 2.

Apart from these logistical challenges, it would be interesting to replicate this study with a different demographic of English language learners or even L2 learners of other languages and see if other factors different from this study emerge that shape learners' beliefs towards the effectiveness of tech mediated approaches. This study has also shown that clearly beliefs are not static, given the cases of Joanne and Walter, therefore, administering a study employing multiple tools, or sources to elicit the same information or inquiry at different time lines within a study or action research by a teacher can be beneficial for future studies. As we have seen, even within the same SR interview some of their beliefs, thought process, opinion dramatically transformed. I believe that this study done at other levels of EAP would also reap varied results, especially in the case of learners' autonomy in curriculum and classroom-based approaches (Benson, 2011). As technological tools are constantly evolving, research in this area in the near future will be required to keep abreast of the forever changing TELL tools, theories, methods and environments.

An interesting approach would also be to explore teachers' and administrators' beliefs and contrast these with the students' to identify the gaps and areas that need further investigation and or development.

### **Concluding Remarks**

In order to understand and be a member of the new landscape of world language teaching and learning dominated by technology, both teachers and students must be literate in information and communication technology (ICT) (Dede, 2010). Fluency in



ICT does not transfer to being adept in technology use only. It is essentially the 21<sup>st</sup> century content knowledge and life skills that enables the “use of technology to learn content and skills- to know *how* [italicized in the original] to learn, think critically, solve problems, use information, communicate, innovate and collaborate” (Dede, 2010, p. 55). These are essential life skills that teachers are expected to incorporate into their pedagogy and according to Dede (2010) good teachers have always done so (p. 55). Coupled with the knowledge of ICT, EAP teachers have to integrate tools that motivate and engage learners in their language learning process at the same time. At the TESOL 2018 International Convention & English Language Expo in Chicago, Illinois, Dr. Zoltán Dörnyei gave a keynote lecture entitled *Engaging ELLs (English Language Learners) in the 21<sup>st</sup> Century* where he talks about finding ways of generating student motivation and engagement against unprecedented variety of distractions in today’s globalised, digital age. He defines student engagement as being “actively involved in the learning process”, more explicitly in education, as being “involve[d] in school related activities and academic tasks”. This emphasizes the need to listen to students’ voices and seeing them in action in their learning process, hence the need to see things from students’ perspectives. He calls for the need to match the syllabus to students’ needs, to personalize teaching materials, involve learners in building their own syllabus, a criteria of Benson’s learner autonomy framework, and last but not least designing learning tasks, harnessing the power of technology. That being said, the need to engage learners with aspects of the learning environment, language learning tasks and the target language was outlined by Dörnyei in a comprehensive framework of strategies that he presented. This endorses the need for research from students’ perspective as well as the need to deliver an engaging,

contemporary education system that students are very much citizens of. Naomi, one of the student participants in her FG interview 1, clearly envisioned the use of virtual reality (VR) in the immediate future in the following quote:

*I think, its [use of VR] good because we don't need worry about distance, saves money travelling and also we can get more resource of learning and meet different people and even go out [of] [y]our classroom. I've never tried, but I think it will be popular in the education system.*

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## **Appendix A**

### **Course Syllabus**

#### **EAP 1 Course Outline**

**\*Notice any areas/section with the institution name has been deleted to protect identity.**

**Instructor:** Pierre (pseudonym used)

**Classroom:**

**Office:** **Telephone:**

**E-mail:**

**Program Coordinator:**

**Class Schedule:**

Morning classes: 9:00-1:00 (Break –11:10 – 11:30)

Afternoon classes: 1:15 – 5:15 (Break – 3:10 – 3:30)

**Textbook/ Materials: (bring all daily) Pakenham, K. J. (2008). *Making***

**Connections. New York: Cambridge University Press**

- A Learner's Dictionary (Book-English/English), **Or an electronic use of devices** without instructor's permission.
- A binder for all prints distributed by the instructor **and** letter-size loose-leaf paper

#### **Course Description**

This course is designed to help students increase their reading and vocabulary skills through reading and analysis of pieces of academic writing. The course also aims to develop students' writing skills with emphasis on clear, effective writing, free of errors. Students will also have opportunities to improve their speaking and listening skills, and to perfect research skills.

#### **Course Outcomes/Objectives**

By the end of this course, the student should have attained the following skills:

##### **Reading and Vocabulary:**

- Recognizes the organization of different essay types (cause and effect, comparison and contrast, and argumentative)
- Shows good ability to analyze content and context; can outline main points
- Can pose critical questions about readings
- Recognizes tone, bias, implicit and explicit positions
- Recognizes key vocabulary and can use context to derive meaning

**Writing:**

- Can write an accurate summary
- Can write comment papers
- Can paraphrase information from printed sources
- Can cite references
- Is able to write proper paragraphs and write a basic essay, cause/effect and a compare/contrast.
- Shows increasing ability to understand and produce more complex grammatical structures, accurately
- Can use multimedia technology for research purposes; word processes major assignment

**Listening:**

- Comprehends main ideas and most details in all material presented in class (lectures, documentaries of 30-60 minutes in length, classroom explanations, oral presentations)
- Can listen to a lecture or documentary and produce a summary and critical analysis
- Recognizes different registers of the language (formal, informal, slang, idioms)
- Recognizes tone and bias

**Speaking:**

- Demonstrates confidence in seminar-style discussions and presentations
- Communicates with some difficulties that do not seriously impede comprehensibility
- Uses situational-appropriate language (non-sexist, non-racist, etc.)
- Is aware of and working on pronunciation problems
- Participates in class discussions
- 

**Sociocultural and Sociolinguistic Skills:**

- Is aware of cross-cultural issues
- Is aware of the different socio-academic constructions of knowledge
- Shows respect and openness to the points of view of others
- Participate in out-of-class social and cultural experiences

**Course Requirements**

Attendance, participation, assignments, tests, and quizzes

**Evaluation**

You will be evaluated throughout the course in the following categories:

- listening
- reading and vocabulary
- writing and grammar



- speaking

The above will be based on the following tasks:

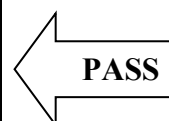
- listening exercises, reports, responses, and test(s)
- reading (and vocabulary) exercises, summaries, responses, and test(s)
- essays (which include a research paper and a final in-class essay)
- grammar exercises (in-class and homework)
- oral presentations (individual and group)
- class and group discussions
- participation in class

Note: You will be advised of any changes to a particular assignment.

You will be given regular assignments throughout the course. It is important that you complete all assignments. If you miss a class, it is *your* responsibility to find out and complete any assignment like everyone else. Also, you must make arrangements to get copies of any handouts you missed from a classmate. All homework is to be submitted at the beginning of the class of the due date. Afterward, it is considered late. Any late submission will be penalized 5% of the original value of the homework per day up to 4 school days.

- Assignments will be graded on the following scale:

<b>A+</b>	<b>90%-100%</b>
<b>A</b>	<b>80%-89%</b>
<b>B+</b>	<b>75%-79%</b>
<b>B</b>	<b>70%-74%</b>
<b>C+</b>	<b>65%-69%</b>
<b>C</b>	<b>60%-64%</b>
<b>D+</b>	<b>55%-59%</b>
<b>D</b>	<b>50%-54%</b>
<b>E</b>	<b>40%-49%</b>
<b>F</b>	<b>0%-39%</b>



Note: Pass scale: A+ (90%-100%) → Distinction  
 A (80%-89%) → Honors  
 C+ to B+ (65%-79%) → Pass

Notes:

1. To pass level EAP 1, you must achieve the following:

- attain a mark of 65% or better in each of reading, listening, writing, and speaking.
- earn passing marks in the research project component (essay and oral presentation).
- pass the final in-class evaluation.

2. In the event of achievement inconsistency between out-of-class writing and in-class

work, your in-class writing will be used to determine your final writing achievement.

- **Assessment for major assignments**, like **essays**, will be proportionally greater than everyday homework assignments and weekly tasks. Students must complete a satisfactory research project in order to pass the course.
- Assessment for the speaking portion of the course will be based on students' day-to-day classroom performance, reading/listening log group presentations, as well as longer, formal presentations near the end of the course.
- Assessment for the listening portion of the course will be based on day-to-day classroom performance, lectures, video and audio based units of study.
- There will be a combination of at-home assignments and in-class assignments. In-class writing assignments (i.e. / essays) will be used to measure accuracy in expression (vocabulary; grammar). It should be noted that **students must achieve a minimum standard on this in-class work** (and not just the essays and assignments completed outside class). Low scores on these writing samples may prevent a student from passing the course.
- Students pass/fail decision will be made collectively to ensure fairness and reliability.

Notes:

- Students are encouraged to become “active” learners as they progress through the course. This means that students, with the help of the instructor, are expected to identify their strengths and weaknesses, and to adopt strategies to address them.
- **Please do ask questions to your instructors about your progress and assessment.** Each instructor ensures that this course not only helps students to be ready but also be successful in their university programs. Students need to be proactive in their learning. Assessment criteria may vary from instructor to instructor due to the individual needs and requirements of the class established through initial assessment in week 1. However, all classes have common goals and outcomes.

To support student success, one major role of the instructor is to adapt to the needs of every student in their class, so certain assignments seem to be different while others seem similar. This is done to accommodate student learning styles and needs established in the diagnostic tests. Additionally, instructor may focus on one aspect of the class that needs more support or have different criteria of marking due to the varying difficulty of the task

## 1. Academic Honesty

(institution name) students – and all (institution name) students – are responsible for following a policy of academic honesty. Cheating on tests and assignments will not be tolerated. Instructors will give a failing grade for any assignment or test where a student is found to have cheated, and this may lead to the student's failing the course. Any student who cheats will have a record on his or her file. They will have to sign a document and meet with the Program Coordinator. Any student who cheats on more than one occasion will be interviewed by the Associate Director or the Director, **which will almost certainly result in the student's immediate dismissal from the Academic Program. Students who are dismissed for cheating are not permitted to register in future Academic Program sessions.**

## 2. Plagiarism

Plagiarism – copying someone else's words and/or ideas without giving credit to the author – is a serious offence in the academic world and will not be tolerated either at or (institution name). Instructors will treat plagiarism very seriously. This includes any

situation where students have another person write, in full or in part, an assignment for them, or copy materials from other students, printed materials and/or the Internet. Where the words or ideas of others are represented, students must make it clear that these are the words or ideas of others – not their own. This is generally done by way of citation and quotation, and you will be taught how to cite and quote as part of your core class program.

Instructors will give a failing grade for any assignment or test where they see that any student has plagiarized material and this may lead to the student's failing the course. Any student who is guilty of plagiarism will have a record on their file. *Any student who is guilty of plagiarism on more than one occasion is required to have an interview with the Associate Director or Director, which could result in a penalty ranging from an official warning to expulsion from the Academic Program.* Students who are dismissed for plagiarism are not permitted to register in future Academic Program sessions.

### **Attendance Requirements**

Students are responsible for being on time. Classes run from 9:00a.m. to 1:00p.m. and from 1:15p.m. to 5:15p.m., Monday to Friday. If a student is late for a class, s/he will be marked late. Three "lates" are equal to one 2-hour absence. If a student is more than 15 minutes late for any class, s/he will be marked absent, for a period of 2 hours.

Attendance at (institution name) Academic Program classes is required. Students who have attended classes and completed, to an acceptable standard, all homework and in-class assignments and tests will receive an evaluation and a certificate, stating what level within the Program they have achieved. It is important to note that poor attendance and/or performance in the seminar will influence an instructor's decision to promote a student to the next level.

Students will NOT receive an evaluation or a certificate if they are absent for more than:

- **20 hours** of core classes

**Students who do not receive an evaluation and a certificate will not be allowed to move on to the next level in the program.**

### **Evaluation**

#### **Reading**

<b>Task</b>	<b>Value</b>	<b>Final Score</b>
3 Homework assignments (summaries, and commentaries) (10%, 15%, 15%)	40%	Avg: *40%
3 Tests (20% each)	60%	Avg: * 60%
		<b>Score:</b>

### Writing

Task	Value	Final Score
3 In class essays: Compare and Contrast 1 (10%), Cause and Effect 2 (15%), and Opinion 3 (20%)	45%	Avg: * 45% =
2 Grammar tests	10%	Avg: * 10% =
1 Research paper (Final)	35%	Avg: * 35% =
Research process: Topic submission (5%), outline submission (5%)	10%	Avg: * 10% =
		<b>Score:</b>

### Listening

Task	Value	Final Score
3 Listening logs (summaries and commentaries) (10% each)	30%	Avg: * 30% =
3 Tests ( including final test) (20% each)	60%	Avg: * 60% =
U-Life Activities	10%	U life workshops and Conversations partners = 2% each  (At least 2 must be U life workshops)
		<b>Score:</b>

### Speaking

Task	Value	Final Score
Class discussions/participation	15%	Avg: * 15% =
2 Minor activities (mini presentation, debate, student-led discussions, and etc... ) (25% each)	50%	Avg: * 50% =
Major formal presentation on research paper	35%	Avg: * 35% =
		<b>Score:</b>

*In the event of unusual achievement inconsistencies between out-of-class writing and in-class work, your in-class writing will be used to determine your final writing grades. Do not ask anyone to help you with out of class assignments that are to be submitted.*

*Please go to the following website and watch the slide show before our next class.*

<http://www.scc.rutgers.edu/douglass/sal/plagiarism/intro.html>

## Reading Summaries/ Commentaries

You will be assigned two or more texts to read and/or listen. You will summarize 1 of these articles **in your own words** in one paragraph. Also, you will analyze the relationship between/ among the other(s) and respond in 1 paragraph **in your own words**. All together there will be 2 paragraphs.

You will be graded on how well you demonstrate your understanding of the article you have summarized, and how well you have understood the other text(s) that accompany it for a **reading grade**.

**Vocabulary:** You should include 5 (five) words that you had to look up from the text(s), copy the sentence, give the definition of this word in context, and include other related Parts of Speech.

## Listening Summaries/ Commentaries

You will be assigned a documentary or a lecture to listen to. You will follow the same instructions as described above for Reading Summaries/ Commentaries. You do not need to include the vocabulary section for these assignments.

### Signing up for turnitin.com

You will be asked to submit a number of your assignments to **turnitin.com**. See the instructions below and **sign up this weekend**.

If you have used turnitin.com before, you can use the same email address and password to sign into your account. Pay attention to the Class ID, Password, and Class Name given below.

If you do not have a turnitin.com account already follow the instructions given below:

- 1) Google turnitin.com and click on **New Students Start Here**.
- 2) Go to **Create an Account**.
- 3) Give the email address you will be using and type in a password (please use the email account you use most often).
- 4) Click student.

Use the following information where necessary:

Class ID:

Class Enrollment Password: (institution name)

Class name: **EAP 1**

Fill in the following information and answer questions: your first name, your last (family) name, your email address, and your password. Choose a secret question, answer the question, and check “I am at least 13 years old.

Then click I agree.

**When you need to submit an assignment, go to [turnitin.com](https://turnitin.com) and upload the document from your computer. *Always backup your work* on your computer and a USB key and/or as an attachment on an email account.**

**You will be given assignments due on specific dates. You will be required to submit a double-space hard copy to the instructor (No emailed assignments unless previously discussed with the instructor. You will still need to hand in your own hard copy).**

**NO ASSIGNMENT WITH A TURNITIN REQUIREMENT WILL BE GRADED UNLESS IT HAS BEEN SUBMITTED TO TURNITIN.COM FIRST.**

Here are some websites you may find useful. They have many kinds of exercises to help you improve your English.

**General:**

**Academic Listening Practice:**

**Writing and Research:**

<https://owl.english.purdue.edu/owl/section/1/>

**APA:** <https://owl.english.purdue.edu/owl/resource/560/01/>

**Research Tutorial:**

**PLEASE MAKE SURE YOU UNDERSTAND THIS DOCUMENT! ASK IF YOU DO NOT!**

## Appendix B

### Phase II Data Collection Tools

#### Digital Diaries (DD) Posts & SR Interviews Prompts & Goals

Prompts					
DD- 1	SR- 1	DD- 2	SR- 2	DD- 3	SR- 3
<b>Part 1:</b> student's demographic information: name, city, age learning English, how English was learned <b>Part 2:</b> Weekly- English learning experience specific activities/tech apps/tools enjoyed, was useful, , additional thoughts on apps and tools	reasons for/ description of using app/tool mentioned, like/dislike app/tools mentioned, enjoyed or not enjoyed, reasons, specifics of apps/tools mentioned	<b>Part 1:</b> role of tools/apps used in <b>Part 2:</b> use of Baidu (Chinese equivalent of Google) <b>Part 3:</b> Weekly English learning experience using tech-apps and tools.	beliefs regarding development of skills, app/tool (if any) responsible, weekly report of app/tool used, usefulness, reasons for using, etc.	<b>Part 1:</b> advising a new EAP 1 student <b>Part 2:</b> weekly report of app/tool used, <b>Part 3:</b> reflection on participating in the research	clarification of any of the questions answered (in DD post), reasons for such choice/s or views and experience with specific tech-tools/apps,
Goals					
DD Posts			SR Interviews		
Record weekly activities in/outside of class using tech apps/tools; Personal opinion- specific apps/tool usage liked/disliked-reasons, benefits, usefulness/constraints, etc.			To corroborate the accounts of episodes of technology use recorded in the DD posts as well as to clarify and understand in-depth their belief system regarding TELL use as they were progressing through the course		

#### Details of DD Post Prompts & SR Interview questions

##### **Background Information:**

I'm..... (name) and I'm from... (city, country). I've been learning English since (time from childhood or when ever, age?). I've enrolled in this EAP course because.... (what is the goal for improving your English). I will need to use or will be using English (places, where? outside work, at work? specify?)

##### **Specific Information:**

Describe how the EAP class went. What activities did you do using technology? What activities did you do without technology? What did you think about those activities? How would you think it would have been more useful? Please feel free to share your thoughts. Here are some prompts to guide you:

- I enjoyed learning English today because.....

- I didn't like doing .....I don't think it helped me to learn English because.....
- I thought this (activity, tool) was very useful in learning English because..... (reason?)
- Today, yesterday, or mention the date/day.... we did..... I thought it was very helpful in learning English (describe how it was useful?).
- We did this (describe the activity) and I don't think this.... really helped in learning English because..... (why not?)

**Students' Stimulated Recall Interview Questions (Based on ss DD)**

1. What kind of activities in this course that use technology are helping you to learn English? How are they helping?
2. You said this... in your digital diary, can you please elaborate? Why did you feel this way? Why did you say this? Please explain or elaborate. **(This question may be repeated a couple of times depending on instances written on their digital diaries)**
3. What did you think about the **X** lesson (technology integrated & observed by the researcher) in class? Did you think it was useful in learning English?
4. Did the **X** component (technology integrated & observed by the researcher) help you understand the lesson? Was it helpful/challenging, how so?
5. Describe what it is like to use technology in this EAP class.



## **Appendix C**

### **Letters of Information and Consent Forms**

#### **Informed Consent form for Teacher**

**Study Name:** *Examining the potentials of TELL: Learner Voices*

**Researcher:**

Researcher Name, Doctoral Candidate, Graduate program in Linguistics and Applied Linguistics, Email: Address

**Purpose of the Research:**

This study aims to explore learners' beliefs and its effects on motivation, subsequent language learning of EAP (English for Academic Purposes) students in a TELL (technology enhanced language learning) environment. The study will employ a mixed methods research methodology, integrating complementary quantitative and qualitative data collection/analysis approaches in online student Surveys 1 and 2 and students' individual and then group interviews. All interviews will be audio taped and pseudonyms will be used at all times while presenting and reporting data.

**What You Will Be Asked to Do in the Research:**

You will be asked to orient the researcher to the class, provide samples of materials, such as, the course guidelines, course outline, schedule, materials/resources, books or handouts used in class. You will be asked to allow researcher to come into your class to introduce herself to the students, present the study to them and collect student consent. All interview times are to be set based on the student's convenience and agreement.

**Risks and Discomforts:**

While I will elicit personal information related to the course materials, the study is descriptive in purpose and does not aim to evaluate your teaching practices in any way. I will preserve confidentiality in documenting the data and will conceal your identity as well as specifics of the class in reporting on the research; there is no risk of the information becoming known beyond the present investigator.

**Benefits of the Research and Benefits to You:**

Yours is an important role in determining students' beliefs towards TELL, and your help and cooperation in the study will contribute new knowledge and in-depth understanding of students' beliefs of TELL. I can provide you with a summary of the findings upon the completion of research, which you may find informative. Hopefully you will find it to be a useful addition to a learner-centered TELL integration into curriculum at the post-secondary level.

**Voluntary Participation:**

Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer will not influence the nature of your relationship with the university either now or in the future.

**Withdrawal from the Study:**

You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researcher, the university, or any other group associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed.

**Confidentiality:**

All information you supply during the research will be held in confidence and your name will not appear in any report or publication of the research. All materials you provide will be safely stored in a locked facility and only the researcher will have access to this information. I will destroy all these materials 5 years after the research is complete. The findings will be reported in scholarly journals and at academic conferences. Confidentiality will be provided to the fullest extent possible by law.

**Questions about the Research?**

If you have questions about the research in general or about your role in the study, please feel free to contact me, the researcher at my email address.

**Legal Rights and Signatures:**

I \_\_\_\_\_, consent to participate in the study:  
*Examining the potentials of TELL: Learner Voices*, conducted by [Researcher Name]. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

**Signature** \_\_\_\_\_  
Participant

**Date** \_\_\_\_\_

**Signature** \_\_\_\_\_  
Principal Investigator

**Date** \_\_\_\_\_

## **Informed Consent form for Student Online Surveys 1 & 2**

**Study Name:** *Examining the potentials of TELL: Learner Voices*

**Researcher:**

Researcher Name, Doctoral Candidate, Graduate program in Linguistics and Applied Linguistics, Email: Address

**Purpose of the Research:**

This study aims to explore learners' beliefs and its effects on motivation, subsequent language learning of EAP (English for Academic Purposes) students in a language learning environment using technology. The study will use students' pre and post online survey, individual student interviews and group interviews to develop an understanding of students' beliefs about technology and language learning. Anonymity will be maintained at all times while presenting and reporting data from all sources. All comments and information you provide will only to be used to complement, detail and expand understanding of the potentials of technology in an EAP context.

**What You Will Be Asked to Do in the Research:**

**Survey 1:** Between weeks 1-2 of your EAP course, you will be asked to participate in a survey to answer questions about your personal background and experiences with the use of technology specifically and then in regards to English learning language following the link provided by the researcher. In some of the questions you will be asked to respond to statements or sentences while others will just be multiple choice or simply checking boxes. Only the researcher will have access to the information provided by you. This will take no longer than thirty minutes.

**Survey 2:** In week 8 of your EAP course, you will be asked to participate in a similar kind of survey as the pre-survey and answer questions about your experiences with the use of technology specific to your English learning experiences in the current EAP program. This will take no longer than thirty minutes.

**Risks and Discomforts:**

While I will ask personal information related to your language learning experience, the study does not aim to evaluate your teacher's practices or your learning in any way. At no point of time will any information you provide be shared with anyone else, i.e., your teacher or other classmates. I will preserve confidentiality in documenting the data and will not conceal your identity in reporting on the research; there is no risk of the information becoming known beyond the present investigator. You also have the right not to answer any of the questions in the interviews.

**Benefits of the Research and Benefits to You:**

You will be helping by contributing new knowledge and in-depth understanding of students' beliefs of technology use. Your contribution and cooperation will be useful and informative to technology integration into curriculum at the post-secondary level. I can provide a summary of the findings upon the completion of research, which you may find

informative. Also, you may use this session as an opportunity to practice your understanding and writing of English.

**Voluntary Participation:**

Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer will not influence the nature of your relationship with your teacher or college either now or in the future.

**Withdrawal from the Study:**

You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researcher, your teacher, your college, or any other group associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed.

**Confidentiality:**

All information you give during the research will be held in confidence and I will use pseudonyms at all times in any report or publication of the research. The data will be safely stored in a locked facility and only the researcher will have access to this information. I will destroy all the transcriptions and software used in collecting and storing the data, 5 years after the research is complete. The findings will be reported in scholarly journals and at academic conferences. Confidentiality will be provided to the fullest extent possible by law.

**Questions about the Research?**

If you have questions about the research in general or about your role in the study, please feel free to contact me, the researcher, by email.

**Legal Rights and Signatures:**

I \_\_\_\_\_, consent to participate in the study:  
*Examining the potentials of TELL: Learner Voices*, conducted by [Researcher Name]. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

**Signature** \_\_\_\_\_  
Participant

**Date** \_\_\_\_\_

**Signature** \_\_\_\_\_  
Principal Investigator

**Date** \_\_\_\_\_

## **Informed Consent form for Digital Diary (DD) Posts and Student Stimulated Recall (SR) Interviews**

**Study Name:** *Examining the potentials of TELL: Learner Voices*

### **Researcher:**

Researcher Name, Doctoral Candidate, Graduate program in Linguistics and Applied Linguistics, Email: Address

### **Purpose of the Research:**

This study aims to explore learners' beliefs and its effects on motivation, subsequent language learning of EAP (English for Academic Purposes) students in a language learning environment using technology. The study will use students' online Survey 1 and 2, individual student interviews and group interviews to develop an understanding of students' beliefs about technology and language learning. The interviews will be audio recorded and pseudonyms will be used at all times while presenting and reporting data from all sources. All comments and information you provide will only to be used to complement, detail and expand understanding of the potentials of technology in an EAP context.

### **What You Will Be Asked to Do in the Research:**

1. You will be asked to write your thoughts and feelings on a private online platform created by the researcher. There will be restricted access to your folders and your updates of any information related to your feelings and understanding of the use of technology in your EAP course. This will take no longer than fifteen minutes per week between the third and fifth week of classes. You will be doing this in total three times over the course of the three weeks which should require no more than a total of 45 minutes of your time.
2. You will also be asked to participate in three individual interview sessions with the researcher which will be video-recorded for transcription purposes. The questions of the interviews will be related to your thoughts and feelings shared online. Each interview will take no longer than twenty minutes per week between the third and fifth week of classes. You will be doing this in total three times over the course of the three weeks which should require no more than one hour of your time. Interviews will be scheduled at a mutually convenient time and will take place online.

### **Risks and Discomforts:**

While I will ask personal information related to your language learning experience, the study does not aim to evaluate your teacher's practices or your learning in any way. At no point of time will any information you provide be shared with anyone else, i.e., your teacher or other classmates. Each participant will have a password to his/her folder and no other participant will be able to access that folder except the researcher and the participant him/herself. I will preserve confidentiality in documenting the data and will not conceal your identity in reporting on the research; there is no risk of the information becoming known beyond the present investigator. You also have the right not to answer any of the questions in the interviews.

**Benefits of the Research and Benefits to You:**

You will be helping by contributing new knowledge and in-depth understanding of students' beliefs of technology use. Your contribution and cooperation will be useful and informative to technology integration into curriculum at the post-secondary level. I will offer you a \$25 gift card upon completion of this phase also I can provide you with a summary of the findings upon the completion of research, which you may find useful. In addition, you may use these sessions as an opportunity to practice your English writing and speaking skills.

**Voluntary Participation:**

Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer will not influence the nature of your relationship with your teacher or college either now or in the future.

**Withdrawal from the Study:**

You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researcher, your teacher, your college, or any other group associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed.

**Confidentiality:**

All information you give during the research will be held in confidence and I will use pseudonyms at all times in any report or publication of the research. I will be using pseudonyms throughout (in making any reference in findings/discussion) provided by myself at the very beginning of the study. Interviews will be video recorded and then transcribed. Your data will be safely stored in a locked facility and only the researcher will have access to this information. I will destroy the video-clips immediately after I transcribe them, and I will destroy the platform for your digital diary writing and all the transcriptions and software used in collecting and storing the data, 5 years after the research is complete. The findings will be reported in scholarly journals and at academic conferences. Confidentiality will be provided to the fullest extent possible by law.

**Questions about the Research?**

If you have questions about the research in general or about your role in the study, please feel free to contact me, the researcher, by email.

**Legal Rights and Signatures:**

I \_\_\_\_\_, consent to participate in the study:  
*Examining the potentials of TELL: Learner Voices*, conducted by [Researcher Name]. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

**Signature** \_\_\_\_\_  
Participant

**Date** \_\_\_\_\_

**Signature** \_\_\_\_\_  
Principal Investigator

**Date** \_\_\_\_\_

## **Informed Consent form for Students' Focus Group Interviews**

**Study Name:** *Examining the potentials of TELL: Learner Voices*

### **Researcher:**

Researcher Name, Doctoral Candidate, Graduate program in Linguistics and Applied Linguistics, Email: Address

### **Purpose of the Research:**

This study aims to explore learners' beliefs and its effects on motivation, subsequent language learning of EAP (English for Academic Purposes) students in a language learning environment using technology. The study will use students' pre and post online survey, individual student interviews and group interviews to develop an understanding of students' beliefs about technology and language learning. The interviews will be audio recorded and pseudonyms will be used at all times while presenting and reporting data from all sources. All comments and information you provide will only to be used to complement, detail and expand understanding of the potentials of technology in an EAP context.

### **What You Will Be Asked to Do in the Research:**

You will be asked to participate along with seven other classmates in a 90 minute long group interview with the researcher between weeks 6-7. In the interview, questions will be asked about your thoughts, feelings and experiences in using technology in your English language learning. The interview session will be audio-recorded for transcription purposes.

### **Risks and Discomforts:**

While I will ask personal information related to your language learning experience, the study does not aim to evaluate your teacher's practices or your learning in any way. I will preserve confidentiality in documenting the data and will conceal your identity in reporting on the research in conference presentations or in any written reports or publications. Codes will be used to replace your name and the confidentiality of your responses will be ensured. Please note that while I will ask the other focus group participants who interview with you to maintain the confidentiality of the discussions, I will not be able to guarantee that my request will be honored by all involved. You also have the right not to answer any of the questions in the interviews.

### **Benefits of the Research and Benefits to You:**

You will be helping by contributing new knowledge and in-depth understanding of students' beliefs of TELL. Your contribution and cooperation will be useful and informative to TELL integration into curriculum at the post-secondary level. I can provide you with a summary of the findings upon the completion of research, which you may find useful. Also, you may use this session as an opportunity to practice your English speaking skills with your classmates and the researcher.



**Voluntary Participation:**

Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer will not influence the nature of your relationship with your teacher or college either now or in the future.

**Withdrawal from the Study:**

You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researcher, your teacher, your college, or any other group associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed.

**Confidentiality:**

All information you give during the research will be held in confidence and unless you specifically indicate your consent, your name will not appear in any report or publication of the research. The researcher will be using pseudonyms in reporting data at any point of time. The interview will be audiotaped and then transcribed. Your data will be safely stored in a locked facility and only the researcher will have access to this information. I will destroy the audio-clips immediately after I transcribe them, and I will destroy all the transcriptions and software used in collecting and storing the data, 5 years after the research is complete. The findings will be reported in scholarly journals and at academic conferences. Confidentiality will be provided to the fullest extent possible by law.

**Questions about the Research?**

If you have questions about the research in general or about your role in the study, please feel free to contact me, the researcher, by email.

**Legal Rights and Signatures:**

I \_\_\_\_\_, consent to participate in the study:  
*Examining the potentials of TELL: Learner Voices*, conducted by [Researcher Name]. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Signature \_\_\_\_\_  
Participant

Date \_\_\_\_\_

Signature \_\_\_\_\_  
Principal Investigator

Date \_\_\_\_\_

## **Appendix D**

### **Phase I Data Collection Tools**

#### **Semi-Structured Teacher Interview**

1. Tell me a little bit about yourself.
2. Please talk a little bit about your educational background from undergrad to now and about any teaching certification that you'd completed prior to or as you were teaching?
3. How long have you been teaching English? Please give me a little detail about the different institutions and different courses that you have taught so far.
4. How long or since when have you been teaching English using technological tools or apps or devices?
5. Please share your 3 week long experience with this current group of students? How do you find them, tech savvy or into technology use for learning English or not, themselves interested or you're encouraging them to use, etc.
6. In using technological tools or apps in teaching EAP, were you particularly inspired or driven by any course/s or language learning theories that you'd encountered as a student?
7. Is there anything more you would like to do (in terms of tools, methodologies, apps, etc.) than what you are currently doing in teaching EAP? Why or why not?
8. If you were to envision a futuristic EAP classroom, what do you see? How do you see it all evolving from current ones, in terms of tools, methodologies, theories, etc. being used or not being used. Please elaborate.

## **Online Student Survey 1**

### **Section 1: Personal Background**

**Name :** \_\_\_\_\_

**Gender:** \_\_\_\_\_ **Age:** \_\_\_\_\_

**Originally from (country):** \_\_\_\_\_

**First Language:** \_\_\_\_\_

### **Section 2: Language Learning Background**

**Tick the appropriate box/es & type as/where required:**

1. What is the highest level of education you have achieved.

- ☐ High school
- ☐ College/University
- ☐ Graduate School (Masters, PhD)
- ☐ Other, please specify

2. How long have you been learning English in school?

- ☐ Up to 1 year
- ☐ Between 1 and 2 years
- ☐ Between 2 and 3 years
- ☐ Between 4 and 5 years
- ☐ Over 5 years

3. Currently, my level of English is. Please tick the appropriate box:

- ☐ Beginner (Level 0-2)
- ☐ Lower Intermediate (Level 3-4)
- ☐ Intermediate (Level 5-6)
- ☐ Upper Intermediate (Level 7-8)
- ☐ Advanced (Level 9-10)

4. Where do you use English mostly? You can choose more than one.

- ☐ Social Contexts (Face-to-face or online chatting or video conferencing with friends here and in other countries)
- ☐ Online Contexts (Shopping online, reading online reviews, watching online movies, etc.)
- ☐ Academic Contexts (In class, researching for assignment, doing homework, academic presentations)
- ☐ Entertainment/travel Contexts (Online games, chat sites, touring other countries)
- ☐ Professional Contexts (At work with colleagues, job search and interviews)
- ☐ Other

If you use English in any other context, please tell me what you use English for.

---

5. Why are you studying English? What are your goals? Choose more than one.

- ☐ Academic goals (To complete a degree at a Canadian university)
- ☐ Social goals (To make friends online, be able to hang out with people from other countries)
- ☐ Professional goals (To get a better job in my home country or in other countries of the world)
- ☐ Immigration/travel goals (To immigrate overseas and travel to other countries of the world)

If your reasons for studying English are different, please tell me why you want to learn English.

---

### **Section 3: Technical Literacy and Confidence**

1. Regarding overall technology use, please select one from the following category that best describes you now?

- ☐ **Innovator** (You like looking for new technology apps, games, software, extensions); (You spend time learning how to use new technology); (You like sharing new technologies with your friends)
- ☐ **Early adopter** (You like using new technology apps, games, software, extensions that are useful); (You spend time learning how

to use new technology only when you think it will be useful to use)

- ☐ **Mass follower** (You like using new technology apps, games, software, extensions only when others have used and found it to be useful); (You spend time learning how to use new technology only when you have time); (You like adopting the technology to benefit you only)
- ☐ **Late adopter** (You like to start using new technology once many people have used and reported its usefulness); (You like using new technology apps, games, software, extensions once its usefulness has been proven you want to see a lot of others using a new technology first, then cautiously start using it)
- ☐ **Resister** (you are highly critical of new technologies and would prefer to do things as you've been doing them)
- ☐ **Other (please describe):**

Why did you make that choice? Please explain more.

---

If you did not see a label that describes you, please tell me about yourself as a user of technology.

---

2. When I encounter a technical problem or difficulty, I ...

- ☐ Immediately give up
- ☐ Ask my partner, teacher or expert right away
- ☐ Try to learn on my own and then ask someone if I can't do it
- ☐ Look online for how-to videos
- ☐ Ask a question on a technical blog or forum
- ☐ Other

### 3. How confident are you in using these technologies?

	Never use it	0-10% Confident	10-30% Confident	30-50% Confident	50-80% Confident
Teleconferencing tools, like Skype and Google Hangouts					
SMS platforms, like WeChat or WhatsApp					
Cloud-based tools, Dropbox or Google Drive					
Social media platforms, like Snapchat or Instagram					
Internet browser tools (apps & extensions), like Chrome or Safari					
Virtual worlds, like Second Life, World of Warcraft, etc.					

#### **Section 4: Use of Technology for Language Learning**

1. Do you agree or disagree with each statement?

<b>Statements</b>	<b>I strongly disagree</b>	<b>I disagree</b>	<b>No opinion</b>	<b>I agree</b>	<b>I strongly agree</b>
Computers and mobile devices help me learn English more easily and faster.					
English teachers should integrate technology into their classrooms and courses because technology makes my learning experience better.					
Lessons that use multimedia tools, like videos and slides, are more effective than when my teacher just uses the board to explain things.					
I get distracted when my teacher uses any technology or multimedia tools or apps.					
I prefer working with classmates face-to-face in class.					
My teacher's attitude towards technology influences my opinion towards technology in class.					

2. Do you ever practice your English writing by blogging on Tumblr, tweeting on Twitter or posting on Facebook?

1 (Never)	2	3	4	5 (Always)

Explain briefly what you do: \_\_\_\_\_

3. Do you ever work with a classmate on a writing project using writing tools, like Google Docs or Dropbox?

1 (Never)	2	3	4	5 (Always)

Explain briefly what you do: \_\_\_\_\_

4. Do you ever use social media, like Snapchat, Instagram or Facebook, to form groups to continue practicing English together outside of class?

1 (Never)	2	3	4	5 (Always)

Explain briefly what you do: \_\_\_\_\_

5. Do you ever watch online videos like, Youtube or Tedtalks to practice your listening?

1 (Never)	2	3	4	5 (Always)

Explain briefly what you do: \_\_\_\_\_

7. Do you ever audio or video chat using GoogleHangout, Whatsapp, Viber or Facetime to practice your speaking of English?

1 (Never)	2	3	4	5 (Always)

Explain briefly which ones and what you do: \_\_\_\_\_

8. Do you think teachers should teach students how to use technology to learn English more? Why or why not?

\_\_\_\_\_



9. Do you think schools should provide more technology for teachers and students to use in the classroom? Why or why not?

---

10. What technology will help students learn English in the future? How do you think it will help them?

---

11. Do you have any additional thoughts you'd like to share on technology use in English language learning and teaching?

---

## **Appendix E**

### **Phase III Data Collection Tool**

#### **Focus Group Interview Questions**

1. What is the role of technology in learning English in your current EAP class?
2. What is the role of a teacher in an English language class that uses technology?
3. In your opinion, what is the role of a student in an English language class that uses technology?
4. a. How would you describe your experiences using technology in English language learning?
4. b. Please give some examples of activities or lessons using technology that have helped you in your EAP course. How do you think it is helping you/has helped you to learn English?
5. a) How would you describe your experiences of learning English without technology back home or earlier?
  - b) Which would you say helped you more to learn English, with or without? Explain.
6. Can you think of any other way that technology can be used to help you learn English? Please elaborate.

## **Online Student Survey 2**

### **Section 1: Personal Information**

**Name :** \_\_\_\_\_

**Email Address:** \_\_\_\_\_

(You will only be emailed if any enquiry is required regarding your answers)

### **Section 2: Rate Your English Improvement**

1. What do you think your current level of English is, overall? Please tick the appropriate box:

- ☐ Beginner (Level 0-2)
- ☐ Lower Intermediate (Level 3-4)
- ☐ Intermediate (Level 5-6)
- ☐ Upper Intermediate (Level 7-8)
- ☐ Advanced (Level 9-10)

2. What do you think your current level of spoken English is? Please tick the appropriate box:

- ☐ Beginner (Level 0-2)
- ☐ Lower Intermediate (Level 3-4)
- ☐ Intermediate (Level 5-6)
- ☐ Upper Intermediate (Level 7-8)
- ☐ Advanced (Level 9-10)

3. What do you think your current level of listening is? Please tick the appropriate box:

- ☐ Beginner (Level 0-2)
- ☐ Lower Intermediate (Level 3-4)
- ☐ Intermediate (Level 5-6)
- ☐ Upper Intermediate (Level 7-8)
- ☐ Advanced (Level 9-10)

4. What do you think your current level of reading is? Please tick the appropriate box:

- ☐ Beginner (Level 0-2)
- ☐ Lower Intermediate (Level 3-4)
- ☐ Intermediate (Level 5-6)
- ☐ Upper Intermediate (Level 7-8)
- ☐ Advanced (Level 9-10)

5. What do you think your current level of written English is? Please tick the appropriate box:

- ☐ Beginner (Level 0-2)
- ☐ Lower Intermediate (Level 3-4)
- ☐ Intermediate (Level 5-6)
- ☐ Upper Intermediate (Level 7-8)
- ☐ Advanced (Level 9-10)

6. How happy (satisfied) are you with your current improvement in overall English?

1 (Not at all happy)	2	3	4	5 (Very happy)

Explain the reason for your above choice.

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### **Section 3: Now: Using Technological Tools/apps for Studying English**

1. In overall technology use, which of the following best describes you now? Choose only one.

- ☐ **Innovator** (you take risks and explore a new technology before others, and spend the time needed to figure technology out, sharing your discoveries with others)
  - ☐ **Early adopter** (once the benefits of a specific technology start appearing, you jump in)
  - ☐ **Mass follower** (once the benefits are proven and you have time, you adopt a new technology)
  - ☐ **Late adopter** (you want to see a lot of others using a new technology first, then cautiously start using it)
  - ☐ **Resister** (you are highly critical of new technologies and would prefer to do things as you've been doing them)
  - ☐ **Other (please describe):**
-

Why did you make that choice? Please explain more.

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If you did not see a label that describes you, please tell me about yourself as a user of technology.

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2. How confident are you in doing these?

Activities	Never use it	0-10% Confident	10-30% Confident	30-50% Confident	50-80% Confident
Teleconferencing using Google Hangout					
Chatting and responding to teacher on Hangout					
Saving and sharing work on Google Drive					
Writing essay and editing using Google Doc					
Looking for articles and information on Google Chrome					
Posting Videos and pictures on Google Community					
Listen to lectures and videos and take notes on Google Chrome					

3. How useful were the following activities and tools in improving all your skills?

<b>Skills &amp; Activities</b>	<b>Not at all useful</b>	<b>0-10% Useful</b>	<b>10-30% Useful</b>	<b>30-50% Useful</b>	<b>50-80% Useful</b>	<b>80-100% Useful</b>
My listening and speaking skills: Using Google Hangouts teleconferencing.						
My thinking and writing: Chatting and responding to teacher/classmates on Hangout.						
My reading and thinking: Looking for articles and information on Google Chrome						
My thinking and writing: Posting Videos and pictures on Google Community						
My listening and note taking: Watching lectures and videos on Google Community or listening log						
My reading and writing: Doing the reading logs.						
My writing and thinking: Writing essay and editing using Google Doc						
My thinking, reading and speaking: Searching for information on Google for debates and presentations.						
My thinking, reading and writing: Writing and editing essays on Google Doc and saving and exchanging essays on Google Drive						
My thinking and understanding: Using the instant question posting after presentations using Google.						

4. Do you agree or disagree with each statement?

Statements	I strongly disagree	I disagree	No opinion	I agree	I strongly agree
I understand better when my teacher uses multimedia tools, like videos and slides.					
I enjoy and learn more when lessons are taught using multimedia apps/tools.					
I get confused when lessons are taught using multimedia apps/tools.					
Interesting and useful apps/tools get me interested and I learn better.					
I get bored listening to lectures only without videos or pictures.					
Google saved a lot of my time and helped my writing skills					
Before my EAP1, I didn't understand the importance of using technology to improve my English.					
Now, I know how useful technology can be in improving all my skills; speaking, listening, reading and writing.					
Before my EAP1, I was already using apps/tools to improve my English skills.					
I will continue to use Google Chrome, using all the extensions and apps to work on my learning English.					

Anything else you would like to add in regards to your English skills development and the use of technology? \_\_\_\_\_

5. How happy (satisfied) were you with the technological apps/tools used in developing your English in the EAP 1 course?

1 (Not at all happy)	2	3	4	5 (Very happy)

Explain the reason for your above choice \_\_\_\_\_

#### **Section 4: Future: Technological Tools/apps I Will Continue to Use**

1. Google search, to look for information and articles for my research in the DY course?

1 (Never)	2	3	4	5 (Always)

Any other activities you will do or comments about Google search?

\_\_\_\_\_

2. Google Docs, Drive; to work on writing?

1 (Never)	2	3	4	5 (Always)

Any other activities you will do or comments about Google Docs or Drive?

\_\_\_\_\_

3. Google Hangout (audio, video), to continue to practice speaking English?

1 (Never)	2	3	4	5 (Always)

Any other activities you will do or comments about Google Hangout?

\_\_\_\_\_

4. Google search, to find online videos like, YouTube or TEDtalks to practice your listening?

1 (Never)	2	3	4	5 (Always)

Any other activities you will do or comments about Google search?

\_\_\_\_\_



5. Google Community, to post videos or pictures with descriptions to practice reading and writing?

1 (Never)	2	3	4	5 (Always)

Any other activities you will do or comments about Google Community?

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6. Google slides, to prepare and present

1 (Never)	2	3	4	5 (Always)

Any other activities you will do or comments about Google Slide?

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7. Did you use any other technological apps/tools other than the ones mentioned above? Describe what activities and skills you used them for.

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8. Do you have any additional thoughts you'd like to share on technology use in English language learning?

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