

**Technological Advances in the Classroom: The Linguistic and Social Adaptations for
English Language Learners (ELLs)**

by

Olivia F. Boniello

August 2023

Supervised by

Dr. Mahmoud Altalouli

A master's thesis capstone project submitted to the Department of Education and Human
Development of SUNY Brockport in partial fulfillment of the requirements
for the degree of Master of Science in Education in TESOL

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Abstract

English Language Learners (ELLs) who attend public schools in the United States, including Milford Central School District, face learning barriers through technology which limit their appropriate and necessary use in learning a new or second language. Research has identified the main barriers as a lack of educator preparation in technology, student preparation in technology use, properly using technology to aid in finding language models for students, setting up proper guidelines or safety rules for students using technology, limited knowledge on using technology for social communication, and finding ways to use technology as a tool to aid in overall student connection. To overcome these barriers, the Milford Central School District should host a minimum of three educator- community (families, students, or other noted members) meetings throughout the school year. These meetings will aim to discuss existing policies, identity needs, and gather suggestions on the effective implementation of technologies that can support ELLs in their language learning. Recommendations include further research on integrating technology into teacher preparation programs, establishing quarterly district meetings to review and adapt technologies and policies to meet the needs of ELL students, and implementing targeted technologies to aid in specific language learning goals.

Keywords: English language learners (ELLs), comprehensible input, second Language acquisition (SLA), professional development

Chapter 1: Introduction

Technology has changed and has been constantly adapted to use in the classroom. Its overall goal is to enhance the learning experiences for students including English Language Learners (ELLs) through different applications and interactive websites chosen by a school district. Many translation applications and interactive websites such as Blooket, GimKit, and Kahoot can help ELLs in understanding and communicating in English. However, ELLs are often given technology tools in the class they either have no previous outside experience (Stairs-Davenport & Skotarczak, 2018; Raju & Joshith, 2019) and educators may not be fully prepared to use these tools provided by the district (Siefert et al., 2019; Villegas & Garcia, 2022).

Educator preparation is a key factor in the use and impact of technology within a classroom setting (Stairs-Davenport & Skotarczak, 2018; Villegas & Garcia, 2022). Educators who are in training are not often recipients of a technology specific learning class; some may receive limited class time. This lack of preparation for implementing technology into their lessons can lead to using outdated materials by the time they get to their own classroom. When educators are not consistently trained or updated with the ongoing change in technology (both inside and outside of the classroom), they are not only overwhelmed, but are unable to properly train students in using them. Some educators may also assume students know how to use the technology within the classroom. Without this necessary training, students will not be able to utilize the technology as easily beyond the classroom or be able to as easily adapt to the new changes in technology themselves (Siefert et al., 2019).

The amount of technology used in and outside of the classroom further impacts ELLs second language acquisition. Most technologies adapted for classroom use have been able to be utilized outside and can be used to allow students to interact with peers in a non-academic

setting. One example of this is the use of Google applications, like a Google Documents or even Google Chat, where students can continue to collaborate and communicate through these tools. The positive aspect of this is that ELLs are provided with an interactive medium to practice their language skills and be given a possible peer model through these platforms; the negative side to this is the possible misuse due to lack of training from their teachers as well as misuse among peers, especially when the technologies are not being implemented consistently among content areas or when they are not being challenged to use them beyond the classroom (Altavilla, 2020; Shin, 2018).

When students can learn these technologies and techniques from their educators, they are able to use these technologies for higher thinking purposes and more frequent communication and language models. When educators can train their students, the proficiency in their language can be further enhanced with these multiple models and approaches to language learning; the language output is increased when using various technologies that allow speaking/vocal practice, improve listening and comprehension skills, as well as writing (Raju & Joshith, 2019). Through such usage of technology in the classroom ELLs language skills may increase beyond the lower-level thinking mindset into more complex thoughts and discussions (Bahrani, 2014). The practice in use of these platforms is necessary to properly make them beneficial in ELL language acquisition.

There is still the question at hand as to *what appropriate technology can be used to aid in language acquisition of English Language Learners (ELLs)?* With the vast amounts of technological tools educators can use, the districts using them need to be able to pinpoint what tools are beneficial for the needs and accommodations of their ELLs since language learning is not a one-size-fits-all approach. Thus, the purpose of this paper is to figure out how a district can

determine what is best for their students' needs. The question at hand is pertinent for the decision of using the best tools for educators to implement for ELLs because educators cannot assume a student knows how to use a specific device or application/software. Educators need to be able to implement training time into their lessons for ELLs for the common technologies as well. Once educators are able to guide students to practicing these technologies for academic and language learning, students can use these skills beyond the classroom (Altavilla, 2020; Chang & Hung, 2019; Villegas & Garcia, 2022).

This issue has become more prevalent in recent years, especially with learning post the COVID-19 Pandemic. Technology had the main goal of being able to hold classes and reach those in need during this time, but as we transition back into the classroom the role of technology has changed back to being an aid rather than a main source to learn from. During the pandemic, many had a new learning curve of using the technology for both educators and students alike. In my own experience, while substitute teaching at the Oceanside School District between 2021 and 2022, students were given a hybrid schedule; students switched between in class and at home instruction during this time. Students were inconsistently interacting face to face with peers, schedules limited teacher interactions, and ELL students not only had to learn how to use iPads and Google Classroom applications for academic materials as well as communication. The main issue for these ELL students at this time was using the school provided translation apps, mainly Google Translate. Educators did not use these applications often to aid in learning for these students and ELL students did not necessarily know how to use them, which hindered communication. This further showcased a specific need to have more teacher-based training for working with ELL students and implementing the technology, but also ensuring that educators

do not automatically assume students have the technology literacy skills simply because they live in modern times.

Having up to date educators can also allow ELLs to grow socially; students will be able to be trained in using the technology to build community-based communication and connections. For example, many middle and high school ELL students may be building these communications through social media use, which can be a skill for outside of the classroom, but also aid in consistent language interaction and practice at the click of a button. Educators may not use such applications in their lessons, but the technology skillset they learn in the classroom can be applicable to using these common applications. With more interaction and availability, students are provided with more models of language at any given time. The language learned through such channels may not reach the needs of ELLs to properly communicate with their communities as they may desire, but educator based technological training in the classroom should help balance this (Chang & Hung, 2019).

The outcome of this project is an educator-based PD. The aim of this professional development is to devise a clear district wide discussion and determination of what technology to adapt for classroom use. This technology adapted should be trainable for educators, appropriate for the grade level(s) it will be implemented in, beneficial for language learning, and consistently used throughout the district for the best possible outcomes of ELL language acquisition. Each school district that services ELLs should be able to use this data created to best pick what types of technology and what digital platforms can target learning language best.

Next, Chapter Two will review in more detail the pros and cons of integrating technology into the classroom, as well as its impacts outside the classroom for ELL students. Given the benefits of using technology, the idea of reviewing the research will help determine which

technologies to specifically practice. Chapter Three will describe a PD program that can help educators find what is applicable across content areas and grade levels to enhance school technology consistency as well as practicing skills students can translate to the outside world, beyond the classroom. Chapter Four will conclude with implications.

Chapter 2: Literature Review

Changes in technology include use of technology as a guide but also as a resource for many with the United States spending nearly \$13 billion on technology for education alone in 2015 (International Society for Technology in Education, 2018; Technology for Education Consortium, 2017, as cited in Altavilla, 2020, p. 18). The importance of using technology as a tool for learning is clear with the amount being spent on this, therefore, the need to provide proper training and practice for both educators and students alike is high and what is to be reviewed in the following pages.

This Chapter will focus in more detail on the pros and cons of integrating technology into the classroom, as well as its impacts outside the classroom for ELL students. Drawing on Krashen's (1982) Comprehensible Input, I will discuss a lack of teacher preparation with technology, ELL students learning of technology, language acquisition and technology use, and social impacts with technology. Krashen's (1982) Comprehensible Input provides insights into understanding how technology used in the classroom can facilitate second language acquisition. With this theory in mind, technology can be used more as a guide and a tool to make language accessible when learning, but not be used as a main source.

There are many technological tools and platforms provided for educators and students alike, such as VoiceThread, Freckle, Kahoot, GimKit, Blooket, NewsELA, and Quizlet (Stairs-Davenport & Skotarczak, 2018). Therefore, the idea of getting students to be proficient in a language but not necessarily fluent, and the role of technology, educators can allow students to not only continue technology use and practice in the classroom for language use but also for further social and community wide connections. This not only shows technological literacy for

students but can be a benefit for instances such as the COVID-19 Pandemic when students were to rely on their technology as a main source of learning and communication.

Krashen's Comprehensible Input Theory

Krashen's (1982) theory Comprehensible Input Theory is defined as "as one level beyond the current level of competence" for a student (p. 1682). To Krashen, language learners comprehend language when they are exposed to authentic and compressible input, which must be just above what the learner can comprehend to build language acquisition (Raju & Joshith, 2019). In layman's terms, it is to ensure that the language presented has part of what the learner knows of the second language, even if they do not understand *all* of what is being said or presented to them in that new language. Technology can offer tools that provide learners with access to authentic and comprehensible input. With all these tools, students who have the goal of becoming proficient in the majority language that surrounds them may be able to use this technology to enhance their SLA.

But with the overwhelming amount of information and language models provided, the proficiency of these students may be limited or not extend to the proficiency level they or their educators are targeting (Bahrani et al., 2014; Raju & Joshith, 2019). While on their devices, digital platforms, applications, or websites, not all learners will have proper information to truly aid in these students' proficiency, furthering the importance of Krashen's theory. Although overwhelming for some students, the idea that students have access to materials and content provides multiple models of language, but also more interactive content to make language acquisition at a faster pace. Through this fast and accessible abundance of materials, this can in turn motivate students through a different type of learning environment other than the classroom.

According to Diallo (2014), Krashen's influence between this theory and technology use enhances student language acquisition through the multiple mediums and platforms providing language models and interactive spaces for students (Diallo, 2014 as cited in Raju & Joshith, 2019). The type of technology being used will determine if a student will have a more natural way of learning a language or a more artificial one. For example, if a student were to use a website such as VoiceThread, the student has not only an interactive way of learning a language but can be provided with peer or educator models of voice-overs and slideshows to learn a new language. With this, their input would be enhanced quite well.

In comparison, were a student to use something more based with AI such as a voice assistant or voice-to-text tool, they are not having those same interactions with others or other models to truly enhance their skills. Due to the note that Krashen made about real language learning happening with a "versatile language experience" to ensure students are not restricted or limited in their approaches to learning, the key takeaway of his theory in connection to technology use is how "appropriate technology in the language learning... will enrich the platform for the language input which is able to experience by the learners," noting that no matter the approach students will learn their target language, even if they do not understand *all* of what is being shared through their learning (Raju & Joshith, 2019, p. 1685).

Although the theory touches upon the idea that not all language used will be understood by ELLs, this is not always the case. The increased use of technology or technology-based interactions with others does not mean that ELLs will be given proper or real-time interactions with others to enhance language. This notion can possibly hinder from providing space for higher thinking or using more complex thoughts since academic language is different than the social language used on many of these platforms (Altavilla, 2020, p. 21). The technology used

can further limit what is comprehended by students rather than always acting as a positive aid. When using technology, the idea behind this theory is to not only ensure what is being used is adequate in helping students, but that the type of input includes what lower-level language learners may need to reach those higher levels of language proficiency rather than hinder it and keep it simplified (Bahrani, 2014).

Barriers with Technology Use

Current technology use in the classroom is dependent on what each school district chooses to provide but can be on various devices and with many tools to connect students to peers, educators, and keep up to date with their class materials and assignments. Many tools, as the ones previously mentioned, are interactive and provide many opportunities for multiple practices of language and multiple language models. Nonetheless, these technologies implemented may include a learning curve for both educators and students alike, depending on what their school has specifically provided.

As beneficial as technology is the language learning of students and the classrooms of many, technology has some restrictions. As mentioned already, preparation for educators and students alike is necessary but not always done (or properly done so) impeding on classroom learning time, impacting student communication with peers and educators, and providing just general confusion for many. Other issues include the proper use of using technology to aid in finding language models or allowing students to use these to interact with these before setting up proper guidelines or safety rules to truly benefit when it comes to language learning. Another being that through an improper language model, students may also be limited with social communication and connection through a lack of knowledge of using the technology or even through some poor language models they have seen.

Lack of Teacher Preparation

A drawback when using technology for ELLs is the issue of teacher preparation with technology to aid in language learning. School districts across the United States alone implement varied use of specific devices and platforms but educators globally are always finding new and varied platforms to interact and engage students with that are not required (cite at least two sources). Sometimes, educators must also find a way to adapt lessons to these technological platforms, something that has occurred more often during and after the COVID-19 Pandemic.

When reviewing the preparation of pre-service educators, many found the programs provided to be lacking proper training. The three ESOL educators interviewed by Kim and King (2011) reported that the professional developments they were involved in were not enough after their preparation courses and were inconsistently presented. In their study, Raju and Joshith (2019) clearly connected that although there were benefits to technology in the classroom for language learners, even providing many great platforms to use, educators are bombarded with so many types of technology and accessibility to enhance learning that with a lack of training and such emphasis on using technology as a tool some may fail to use the technology as a supportive tool. It found that many educators were unaware or had a lack of knowledge for specific technologies ended up often overcompensating and overusing technology eventually “deviating from the real instruction and learning objectives” for the sake of using technology in their lessons (Raju & Joshith, 2019, p. 1685).

This issue was emphasized further when Park and Son (2020) interviewed six pre-service educators in Hong Kong and found that many did not feel prepared to implement technology in their teaching practicums. The interviews were conducted to determine educator confidence with technology to enhance language learning and found that out of the six pre-service educators,

common negative perceptions were to be that technology use in the classroom included a “lack of time [for implementing in a lesson], lack of support from senior teachers or principals and school policies” regarding technology use (Park & Son, 2020, p. 9). With a lacking preparation program, these barriers would be exacerbated.

Furthermore, when reviewing educators and their digital approaches, Tour and Barnes (2021) found that many educators were not able to connect the benefits of using technology in connection to their students’ learning, social-emotional state, or general connections. Tour and Barnes (2021) interviewed four preservice educators after observing their use of multimodal approaches in the classroom. Through these interviews and observations Tour and Barnes determined that many educators “lacked to mention the affordances of digital multimodal composing, such as learning about podcasts and trailers as digital genres, developing awareness of audience and social purpose, increasing semiotic knowledge, and developing voice and agency” which can further student confidence, language learning, and community connection (Tour & Barnes 2021, p. 250).

Since many educators are both overwhelmed with the need for technology in the classroom, the many possible uses, and platforms beyond what their district provides, and/or having an inability to connect the benefits of technology to learning for ELLs, many assume a student’s knowledge of the technology automatically in a modern classroom. In another study of 3 ESOL preservice educators, Kim and King (2011) found similar issues with educators not finding proper use or time to implement technologies. When reviewing the identity of the educator, they noted that educators can use platforms like Blogs or podcasts as instructional tools, ones that are particularly interactive for students, but have found a lack of research on providing educators the proper tools to do so; educators themselves will “rarely research either

how to integrate these instructional technologies into an assignment or how to integrate these tools in ESOL teacher education” more specifically (Kim & King, 2011, p. 8). Overall, educator preparation programs are not reaching the expectations placed on educators when it comes to implementing technology into language learning lessons. As explained by the four educators in their study, Siefert et al. (2019) found that the educators comfort levels with technology in the classroom was impacted by their preparation. One participant, a second-year educator named Hannah, did not find the technology and iPads in her classroom as resources until she began to take classes aimed at using technology to “foster language and content area learning with Els” (Siefert et al., 2019, p. 11). This showcases how important technology is in teacher preparation programs.

Many ELLs are found to be in a lower socioeconomic status, and have been found to have less exposure to these technologies that educators are not taking the time to explain or train students in. As Crosby (2018) shared in their study of educators empowering students through technology use, there was a high reliance on the expectation of student digital literacy, although this is a lacking area for many. Educators may believe easily that ELLs are more digitally literate due to the current digital climate, but the reality is that “they may not possess the digital literacy skills needed to be successful in the classroom and beyond” (Crosby, 2018, p. 3).

With the perceptions of these preparation programs, the assuming mindset for their student’s digital literacies, and overall lack of consistent support, ELL educators are set up for failure themselves. They may not be fully trained to use what is provided, have negative perceptions or interactions with the technologies before implementing them, and may be hindering the student’s language learning overall through these overwhelming technological expectations of the modern-day classroom.

ELLs' Learning of Technology

Like their educators, ELL students may not properly be guided or trained to utilize the technology they are being provided to the best of their understanding and usage. There are many disparities among ELLs and their peers in the technology they use and *know* how to use to adapt to their learning. Although the use of technology in and outside the classroom has increased during and after the COVID-19 pandemic, digital or *distance* learning has increased a disproportionate skill among ELLs and their peers, with a great divide among digital skills to adapt to learning (Altavilla, 2020; Villegas & Garcia, 2022). This was shown through the varied socioeconomic statuses of students, the general skills students had with types of technology and the recent issue of not having much face-to-face contact or help during the height of technological adaptations (Altavilla, 2020).

Not all tools provided were known or student friendly, and the uses of these technologies may not have been fully taught or practiced enough. The technologies and softwares provided are used to help them reach or close a gap between them and their monolingual peers. Nonetheless, “given the large amount of linguistic and sociocultural diversity among ELs, it seems unlikely that any one tool will be appropriate for all students” and to be greatly effective for students in a wider range of needs (Flores & Rosa, 2015; Solano-Flores & Trumbull, 2008, as cited in Altavilla, 2020, p. 19). To further this issue, Shin (2018), who observed a sixth-grade class that included ELLs, noted how this is important because these students and families may have limited digital literacies and practices that are not compatible to the modern-day classroom expectations. Shin made it clear in his study that trained educators should be addressing the technological tools and their use at “the beginning of the instructional designing stage to assure successful instruction” (Shin, 2018, p.16). With this encouraging setup, ELLs can be provided

more time to learn the technology and then practice it enough for the most beneficial aspects of its use.

To deepen this gap, during the time of at-home or distance learning, this lack of technological knowledge may be an issue of absenteeism other than just socioeconomic status. It was found in one study that that ELLs had a recent decrease of attendance in schools across the United States alone and that through this lack of presence, the digital literacy also decreases compared to their peers (Villegas & Garcia, 2022). With this issue being presented, not only are students behind in their social and overall academic needs, but they are also further behind in language learning due to having less access to models of the language they are targeting. Without a basic knowledge of the technology being used by ELLs the second language acquisition is to be negatively impacted if that is to be used in aid of their language learning (Chang & Hung, 2019). This was especially seen during the COVID-19 Pandemic, and with younger students, since the technology expectations were not met during this time with this group. In a study by Villegas & Garcia (2022), the interviews of 20 EL advocates, educators, and researchers noted how the younger ELLs had difficulties during at-home (or distance) learning because of “their limited experiences with formal education and shorter attention spans” and automatically being switched over to an online or digital platform (Villegas & Garcia, 2022, p. 6).

Language Acquisition and Technology Use

As noted in the last part of the previous section, other than the learning curve students have in the technology itself, there is the issue of how the technology used impacts a student’s language acquisition and overall learning. This may become a bigger issue if the technology is not used and practiced consistently among grade levels and cross-curricular content areas as well, because then it may be used inappropriately in accordance with language learning. Just

using technology does not mean that it makes learning more meaningful for students in their learning, nor does it mean that increasing the use of technology can enhance access to authentic or purposeful language learning examples and content (Siefert et al., 2019). Overall, language and literacy skills for ELLs cannot just be handled through websites and applications school districts provide, but rather in-depth scaffolding and modelling; these technologies cannot provide this and are usually a one-size-fits-all approach. Similarly, Chang and Hung (2019) found that the consistency among grade levels impacted second language learners due to access; in their study investigated kindergarten to postsecondary students found that postsecondary students had more access to technology compared to younger grade levels, impacting not only teacher assumptions of digital literacy but also of access to learning the technological devices and platforms provided for them (Chang & Hung, 2019).

According to one study, which was focused on one elementary school in the United States, many educators provide technology use for other content areas – other than strictly language learning- but use them for other purposes making some of these technologies a little too general in their use and not as adaptable to the specific needs or goals of learning a second language (Shin, 2018). It is also an issue for language learners when technology is used for a decent amount of the lessons being provided; with less variation within longer time periods in using technology they are only being provided the same techniques, but they are possibly getting less motivated if the lessons are repetitive enough. Several online tools and applications can be used to keep a lesson going and keep skill sets applied varied, but “limited use of technology may lead to language overload for ELLs and less attention to content learning” (Stairs-Davenport & Skotarczak, 2018, p. 3).

With the overload of technology used, especially with more reliance after the impacts of learning during the COVID-19 Pandemic, it segued more students into being absent more often and therefore learning less. During the Pandemic learning was more teacher-directed and less conversational based impacting negatively on the student's interactions and overall language skills; as Jorge Macias, chief of language and cultural education at Chicago Public Schools, noted, language learning really requires a variety of learning approaches and inputs, which increased a lack of interaction and presence among students (Villegas & Garcia, 2022) With a lack of in person models, the consistency of having virtual or audio versions of language online is not currently cutting it for language learners.

Overall, the issues with using technology to aid in second language acquisition are clear: students are either not prepared or underprepared to use the technology itself, educators may rely too heavily on using technology for lessons which can negate the proper use of using technology to learn, and through such reliance on technology students have begun to interact less with one another, as well as their classes altogether. Although many countries are putting immense efforts into supporting technology use, creating standards for technology use in the classroom, and financially supporting schools to purchase tools, this resource is not always being used in the most beneficial way. Furthermore, the technology being used by educators may be outdated at the point of use because technology is ever-changing (Shadiev & Yang, 2020; Siefert et al, 2019). If a technology has not already adapted to ELLs (like NewsELA providing translated news articles for students), or if it is not updated to the modern adaptations and uses then the language skills being targeted are not as fully being supported.

Social Impacts with Technology

Although a key element to most technologies and websites used in a school setting is interactive, if the technology is not used among peers, not only will there be a lack of peer-to-peer or student-educator support and connection, but also communication skills and inconsistent use. Without the practice of interactive technologies ELLs have less language models through peers and less connections overall.

One example of a technology that may be scrutinized in a school setting due to its use includes cell phones. Cell phones and personal devices can be beneficial for language learning, with the idea that students are interactive and being provided an outlet of writing beyond the classroom but may not be the best fit for the learning needs or style of ELLs. As shared in one study, held between 1990 and 2015 in the United States with students between kindergarten and postsecondary, the use of cell phones, or mobile devices, has made learning more accessible and adaptable to students using general worldly skills, but are not as effective as real-world examples of learning (Chang & Hung, 2019). Thinking back to Krashen's Comprehensible Input Theory, cell phones may not be providing the best medium of language, or the highest form of language students are to acquire and achieve. With cell phones and personal devices students are not expected to be using their most complex thoughts or to write out responses beyond what is known as slang, memes, or emojis most of the time. There may be misinterpretations, lack of understanding, and misused translations ELLs may not fully understand to aid in proper communication and connections.

Going back to the COVID-19 pandemic, the issue of lack of social interaction was clear, as students were on lockdown, but also for the connections made among families and schools. Not all families are well versed in the technologies used, as previously mentioned, but during this particularly noted time, many educators "were not always able to reach families due to

challenges in communication” alongside issues of translation services, deepening the gap for ELL students and their needs (Villegas & Garcia, 2022, pg. 18). Many families and students may not understand how to use the technology to communicate well with others, but it will continue to hinder them when the technologies being adapted and used are changing as well as the times.

Benefits of Technology Use in the Classroom

Although the noted issues and drawbacks have been presented, the various benefits of technology for the use of language learning are immense. In comparison to the cons presented, technology is something teachers do get professional development and training in, it provides more interactive and accessible models of language for ELLs to learn from, and it can help build communication among peers, school districts, and the overarching community students reside in. The other noted benefit of technology use in learning being that there are various platforms, devices, and accommodating settings to aid in each language learner’s journey.

Teacher Preparation

Although it may seem that many teachers are not as adaptive with the changes in technology, for school specific technologies, they are still being trained to use technology in preparation programs. Siefert et al.’s (2019), found those ESOL educators who want to add value to the technology in their classroom and who have a drive to be on top of changes presented in the field “are more likely to partake in technology related professional development programs” for which the study suggests more professional development be aimed towards (p. 4). Another study focused on one ESOL educator, Andrea, noted how the change in technology for the classroom was and how accessible tools have become for educators as the years go on (Stairs-Davenport et al., 2018). Andrea is a seasoned educator who noted how technology went from being teacher-centered to student centered in learning, but nonetheless there are both free

and membership based tools for educators to utilize to aid in their professional development and overall lesson planning (Stairs-Davenport et al., 2018, p. 3) Seeing how many tools have been mentioned by both studies in this section, there are a vast amount of ways educators can both learn new technologies to apply but also implement them into lessons for ELLs.

When it comes to technology in the classroom, notably after the COVID-19 Pandemic, education has adapted to nearly mainstream technology use and in the past few years has meant more teachers are becoming versed in the tools used to enhance student learning. For example, besides student feedback, educators can use platforms to review student work, like Google Forms to automatically grade a quiz, and receive feedback themselves to enhance their lessons for students; not only would this provide academic or linguistic feedback from students but also technological feedback - the educators would be able to see themselves where students would struggle but also where they can implement the aid of technology into their lessons (Shadiev & Yang, 2020).

Language Acquisition and Technology Use

When students know how to use the technology they are provided, whether they knew it already from outside of a classroom- such as a cell phone- students are getting more examples of language use and can use technologies to practice their use of a targeted language. Overall, although there are drawbacks to using technology for language learning, the benefits may be seen as fruitful.

When it comes to language learning, other than there being many adaptive technologies out there for students, having other models of language or ways for students to practice is the main benefit. Other than texting, using social media, educational game websites that allow interaction, students can use videos, visuals, typing and voice-to-text to provide many more free

and adaptable tools for students. Through these, students can use visuals to identify new language terminology, watch videos that also aid in audio learning, and even practice speaking aloud in their native or second language with voice-to-text or type out in their targeted language to aid in learning. For any grade level, technology was found to be beneficial “for all levels of L2 learners, but particularly and significantly for learners in postsecondary or higher education” and that cell phones were a significant resource due to its constant accessibility for students (Chang & Hung, 2019, pp. 13-14).

Among these noted positives, the use of technology overall was found to improve motivation, develop ELLs’ language knowledge, provide various resources for input, and continue to generally support and encourage feedback between themselves and others. Su and Zou (2020) found that the benefits of learning a second language using technologies included being provided with varied resource, getting students more involved and engaged, aiding in students’ “in-depth knowledge comprehension and peer reflection” furthering the use of language models, student centered thinking and peer feedback rather than just educator-based feedback (Su & Zou, 2020, p. 3).

Social Impacts with Technology

The immense use of technology in and outside of the classroom is important to not just language acquisition, but also social acquisition. With these tools, ELLs can use translators, emojis, and other applications and websites to communicate more than ever. To also be socially accepted by peers is huge for some of these students who are still adjusting to a new environment and acquisition of the language majority used by the community. Through these ways of speaking online, students will be able to communicate with visuals, their native language, or

practice using their targeted second language to speak with peers and other community members more often, enhancing their learning experience.

Being accepted by peers and gaining a new community when learning a new language is immensely important because it not only can further students' social and language skills, but it can also help build positive impacts among peers. Through technology applications, especially social media, this can be accomplished more often. As shared in Shin's (2018) study that focused on a varied sixth grade student which included ELLs, students can use these tools to "gather information, maintain friendships, and express multiple identities," and beyond that continue to practice their digital and linguistic skills consistently, showcasing the versatility and positive impact day-to-day media and technology may have for ELLs (Shin, 2018, p. 13).

Furthermore, it aids in the meaning-making process and overall composition when it comes to language learning. Through these increased collaborations, the practice of meaningful interactions and repeated use of the language will help enhance their language acquisition (Shin, 2018). With the social side of technology use for language learning, it provides many more opportunities for students to be given an improved "quality of input, making communication authentic, and providing timely and relevant feedback," ensuring that their acquisition of a second language is headed in a positive direction (Shadiev & Yang, 2020, p. 524).

Summary

To summarize the literature, there are many positives and drawbacks to utilizing technology for language learning. After reviewing Krashen's Comprehensible Input Theory, as well as connections of how technology use for ELLs has changed due to the recent COVID-19 Pandemic, the idea that technology is a benefit is clear. However, it may also be a great hinderance when not implemented properly. Assumed knowledge in the mindset of an educator

can also continue to create barriers. With the provided devices and platforms from school districts, educators must be able to effectively train their educators in what is being utilized. Without this necessary training, there is the trickle-down effect and students may be unable to utilize and take advantage of what is being provided, impacting their language development and proficiency.

Through the literature we see this as an ongoing issue since the shift in technology use influenced by the COVID-19 pandemic. Technology has taken more of a prominent stance in learning and yet it may not be truly known by all educators and students in a school district or consistently used. Ensuring that these tools are used not only for language but for social connections is also a key element to truly enhance their use for ELLs to provide those other language models and social adaptations within learning a new language. All these points to the educator preparation programs and district wide trainings to ensure that the beneficial tools chosen will be effectively known and used for the targeted language learning skills of their ELLs.

Chapter 3: Description of the Product and Tools

As shown by the research in Chapter 2, the barriers imposed using technology are vast and impact not only student language learning, but also educator and district cohesiveness. When educators and districts are not held to certain standards of incorporating digital literacy, as well as common technological practices, students learning is negatively impacted. Lack of educator preparation, lack of student preparation, language learning impacts and social impacts are all accounted for being held among a barrier through the research provided (Altavilla, 2020; Chang & Hung, 2019; Park & Son, 2020; Raju & Joshith, 2019; Siefert et al., 2019). Due to the various presented issues among the research, I propose a student-teacher survey and teacher based professional development meeting to inquire as to which technologies are already present and beneficial for the school population and which can be suggested and explored more so by educators.

The school to be inquired about and based upon this professional development is the Milford Central School District in Milford, NY. The school is a small prek-12 district with one location for all grade levels and has a total of three ELLs (as of June 2023). For ELLs, the school provides BOCES TESOL educators to work with in a push-in setting. The school provides each student with a Chromebook and Google account to access online materials, although most families in the area are provided with school implemented hotspots to access internet related resources outside of school hours.

Students involved should be around the ages of 13 to 18 years (between middle and high school levels to showcase consistent use or practice of the technologies already in place) and educators should have a common device or platform used for the past year or two to join in the conversation; with this, the supporting reasons will hold more weight than with younger students

(Chang & Hung, 2019). This format is created to be applied at any school district, given that school districts often have varied needs and sometimes different devices or platforms to reach their students.

Agenda of Events

This is expected to take place at three one-hour afterschool events, held after afterschool activities, or whenever is best for students and educators to arrive, with the first meeting held in September, a second one held in January, and the last held in May or June of that school year. These dates are to provide an optimal review time of the technologies used throughout the school year. These meetings will be held in a larger space, preferably an auditorium, to ensure all that are able can attend (including the public if necessary) (see Appendix A).

When attending the first meeting, participants are to complete a Google survey (see Appendix B) regarding what has been implemented and what feedback they have for these technologies based on student accessibility, aid in communication, aid in accessing content and materials, how well these technologies provided peer interaction, how well these technologies held in aiding engagement, and what they expect their learning to be like with current technologies in place. After the survey, participants are to review the school district technology policies and practices. When reviewing these and discussing, they are to leave any questions or possible edits behind on their closing remarks ticket (see Appendix C).

When attending the second meeting, the hosts should have reviewed and collected all data from the first meeting to showcase on a slideshow as to what the community is sharing about technology use in the district. This slideshow will cover the following topics based on the feedback: a) positive uses of technology currently, b) issues with the technology currently, c) goals of using technology in the classroom, d) expected or preferred devices and platforms for

the district, and d) an implementation plan from the hosts/administrators by the next school year. Once this slideshow is complete (this should probably take no more than 20 minutes), student and educator participants are to then provide further feedback to the same questions from the first survey. When leaving, participants will be provided with packets of proposed devices and platforms for the upcoming school year to review and give feedback on (see Appendix D).

When attending the last meeting, participants will complete the survey once more to finally review the yearly use of the provided technologies. After, participants will take the reviewed materials and pair together to see which pros and cons come with each for the district to consider purchasing. This will be best done with a student/educator or community member/educator as a pairing to see each side of how the technologies are used (see Appendices B and D). After all is done, and before the next school year, the school district is expected to review the feedback for each participant and see which technologies (e.g., devices, online platforms, softwares) fit best to the needs of their specific populations.

Activities

Through these activities and meetings held, the literature in Chapter Two is addressed through an open forum of communication, collaboration among students, educators, administrators, and other available community members – which can increase ELLs social connections as well by participating – the communication in person aids in providing further models of language for students who are ELL, and it allows educators to not only be given feedback and training time with the technologies expected to be used, but also provides them more of a blueprint of their student’s expectations and needs for the technologies themselves. Lack of preparation impacts these topics and has been shown to be across the board for the

participants mentioned in this plan (Kim & King, 2011; Park & Son, 2020; Raju & Joshith, 2019; Shin, 2018; Siefert et al., 2019, Stairs-Davenport & Skotarczak, 2018).

Throughout the three held meetings, participants are expected to be learning about the benefits of technology in the classroom, what ways communities can be built by using technology, and how to keep consistency among classrooms to ensure student learning is not hindered by needed to teach a new technology. Through this type of program, the student body and educators are being given a voice to share what has worked best for them, since they are the ones utilizing the technology on an everyday basis.

Summary

As previously mentioned, the goal of this professional development is to pinpoint the best technologies for a school district with feedback from both educators and students. Lack of preparation for both groups is a main driving issue, which furthered issues with language acquisition and social connections. By holding meetings with various groups involved with the school population, the more decisive the school will be when making purchases or editing policies surrounding technology for that district. It also provides further insight into the needs of the population, families, and educators who are involved in utilizing the technology from a day-to-day basis and can help target any needs of technology that need to be trained for all three groups.

When closing out the three meetings, paired participants in the last meeting will be expected to reflect on the materials reviewed and suggested for the following school year before the hosts/administration firmly decide on what is to be implemented in the following year. Pairs should be able to provide such reflection and feedback on an exit ticket or secondary survey that allows them to voice opinion and needed accommodation or concerns.

Chapter 4: Conclusion

This project has explored the lack of technological training for many educators and students throughout the U.S. school system, including the Milford Central School District. This issue results in not only a lack of educator preparation, but a lack of consistent use with technologies within school district, a lack of training and safety for students to use technologies provided, and issues with finding and using technology to best aid in language learning as a language model (Altavilla, 2020; Chang & Hung, 2019; Park & Son, 2020; Raju & Joshith, 2019; Siefert et al., 2019). This project also reviewed how through proper educator and student training with technology, technologies used can be used for language learning but furthermore to aid in social and community connections for ELLs and their families (Shadiev & Yang 2020; Shin, 2018; Siefert et al, 2019; Stairs-Davenport & Skotarczak, 2018; Su & Zou, 2020). To fully investigate the technology currently used within a school district it is necessary to review the current implementations, policies, and devices/platforms being utilized and whether they are reaching the goals of the ELLs present within a school district. Several research questions from these identified issues, and the anticipated benefits, included:

How does teacher preparation of technology used impact student language learning?

How does technology as a language model impact student language learning?

How does technology used impact ELLs social and community connections?

How does technology used engage and integrate digital literacy skills with academic and linguistic content for ELLS?

What technologies work best to aid in language learning?

In this Chapter, I will first summarize the major findings of this project reviewed. Next, I will examine the implications for student learning and implications for teaching ELLs. Lastly, this Chapter will conclude with recommendations for future research.

Summary

Several studies have explored teacher preparation programs and their perceptions of technology, the impact of technology on students learning, the role of technology in enhancing ELLs' social and community connections, and the effects of technology on ELL's language impacts. Overall, educator preparation programs were found to be ones that were either not updated or lacking in preparation beyond the needs of the modern classroom, leaving many educators to be utilizing tools they often find on their own or what their district provides (Crosby, 2018; Kim & King, 2011; Park & Son, 2020; Raju & Joshith, 2019; Siefert et al, 2019; Tour & Barnes, 2021). Additionally, research has shown that educators often assumed student's knowledge of technology without properly training them before incorporating technology into their lesson plans (Crosby, 2018; Kim & King, 2011; Villegas & Garcia, 2022).

This issue was compounded by the limited accessibility of technology for some students, and inadequate training and safety before its use. As a result, students faced challenges in using the provided technologies as proper academic or language learning tools, struggled to connect with others, and sometimes misused the technology's interactive social aspect (Altavilla, 2020; Chang & Hung, 2019; Shin, 2018). It became evident that proper training for educators in the use of technologies, whether previously used or newly updated, was essential in bridging the technology divide among all student within a school district and ensuring safe and effective technology use beyond the classroom.

In response to these findings, a professional development plan and tools were created. These products aim to determine the best fitting technologies for the specific needs and goals of any school district, since each district has a varied budget, student population, and varied ELL population of needs. This created plan and product has pointed to many implications and some recommendations.

Implications

Multiple implications and recommendations for educator created lessons and student learning centering or utilizing technology has been established. Through the provided product, strategies and implementations are in place for a focus on technology benefiting educators and ELL students in and out of the classroom. ELL students, along with families and other community members, will be given multiple opportunities to meet with their educators and school district to cohesively review and change the current technologies used in their school district, as well as provide any suggestions openly for new technologies to be implemented (see Appendix A). Additionally, students will be able to comfortably voice their current experiences and goals which can aid in educator training and the technologies implemented within the following school year for their district (see Appendices B, C, D). Having students work alongside the supportive educators, family members, and other community members who attend these meetings surrounding the topic can also aid in overall communication and connections skills, as well as being provided with other opportunities to have language models or use their native language to aid in their response and overall learning.

In addition, all educators who attend, regardless of position or current certification background, will benefit from the presented professional development and tools because they will be able to not only provide their voice but also provide suggestions of implementing tools,

they may already use beyond what is provided by the school. Being that they are the ones who will use the technologies daily in their lessons for students, they are the ones with direct contact to then train students who will be consistently using these tools in and out of the classroom. Educators can use the product to showcase what they know and what they may be struggling with in terms of meeting student goals, as well as technology state standards, by attending and responding to each questionnaire provided (see Appendix B). Furthermore, educators can be involved in the implementation program once the professional development is completed to enhance and ensure the current school district policy meets the technology needs of their students.

This professional development is particularly important on having school educators and other professionals in attendance because even those who are not certified to work with or have little experience working with ELLs can apply the same technology to meet the goals of their content area and students with the same strategies and platforms. A meeting every three months (about) is key for all involved to ensure their student's needs are being met and that the technology already in use is either still beneficial or needs to be revisited because an ongoing conversation can not only aid ELL students but all students within a school district; if changes are needed, then it is best to review what suggestions can be implemented first and what can showcase the best teaching practices for all.

Recommendations

The provided professional development plan is a great start for the Milford Central School District and can be applied to any other district to get their footing on this topic. First, an additional meeting may be suggested to be held over the summertime by those who can aid in the implementation and policy changes before the next school year; this way students, their families,

and educators alike can be provided time to review these newer technologies and policy changes before beginning a new year, as well as find time to train all involved. Additionally, educator and student feedback throughout the next year would be beneficial to see which changes suggested or made may be reconsidered or trained upon further for the best benefits of both groups. Consistent feedback and training, done in person or online, can best bridge any gaps and issues with the changes implemented.

Further research may be necessary to determine additional technologies to benefit language learning specifically. These should be based on the needs of the ELL students and their families within the district, as well as consider future ELL students who may have differing home languages and needs. Examples of research can be based upon how students utilize technologies outside of the classroom, adapt to specific language learning tools, and/or how engagement and interactions with others impact their language learning in and outside the classroom. Lastly, research can be further done on teacher preparation programs and how to prepare educators to work with technology and all types of students (i.e., ELLs, special education, alternative, transfers, etc.). Educators have voiced the training they currently receive as lacking and in time programs can be able to implement more tools, techniques, or accommodations of technology use in the classroom based on further research.

Final Thoughts

Technology is something that has been implemented across the United States and something that is ever-changing in daily lives of educators, students, and their families. Being able to use technology to connect, communicate, and learn is a key for all schools across the country, however the educator preparation, student preparation, safety and provided rules, as well as language models and interactions are making this tool a difficult one to implement to the

best of everyone's abilities. Additionally, ELL students' accessibility, engagement, and consistent use within a school district can further this gap of their language and academic learning compared to their English-speaking peers. Successful review, suggestions, and implementation of technology used will further allow both educators and students to remedy the issues laid out by the research in this project.

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Appendix A

Meeting Letter

Technology Implementation Meetings

What: Come join us to review and revisit our needs as a community when it comes to the use of technology. This includes, but is not limited to, review of devices, Google Suite, video platforms and more.

Whether you are student, parent, community member or educator your voice is to be included! Interpreters will be provided if needed.

Who can attend: A community member, student, family, or educator within the district boundary.

When: There will be three meetings held in September 2023, January 2024, and May 2024 – Dates and Times are TBD. Each building will be holding their own meetings and regrouping at a later date.

Where: The Milford Central School District auditorium (snacks will be provided; the cafeteria will be used as an alternative if needed).

If you have any questions or concerns, please contact the main office of the school building your meeting will be held in. We look forward to having you!

Appendix B

Reoccurring Technology Survey

Technology Implementation Meetings Survey

This survey will be consistently used to review the technologies within the school district and allow you to provide feedback on suggested technologies you have in mind.

1. Please share whether or not you are a current student, parent, or employee of the district

Check all that apply.

- Student
- Parent
- Community Member
- Educator
- Other

2. Please share, in your own words, what technologies you know are already implement in the school district (just names are fine).

3. What positives have you seen with the technologies you have previously named? Please be as detailed as possible.

- 4. 4. What concerns or negatives have you seen with the technologies you have previously named? Please be as detailed as possible.

- 5. 5. Have you had any issues with using the provided technologies to communicate with school district employees or access materials? Please share those issues in detail.

- 6. 6. How easy or difficult has it been to access class content materials on these technologies? Please share those thoughts in detail.

7. 7. What expectations do you have when it comes to technology use in the school district? Check off all boxes below that best fit your ideas.

Check all that apply.

- Positive student engagement
- Clear pathways for communication
- Easy access to materials and content
- Preparation for students and staff who may not have knowledge
- Other:

8. 8. What technologies can you suggest to replace or better our current implemented ones? Please share why in detail.

9. 9. What technology policies or rules would you suggest being implemented into our handbook?

10. 10. How much, on a scale of 1-5 with 5 being often, do you expect technology to aid in education?

Mark only one oval.

—
1
—
2
—
3
—
4
—
5
—
—

11. 11. What goals or ideas would you wish to share about technology in our school district when coming to these meetings?

Appendix C

Slideshow Template for Day 2

Slideshow Template for Day 2

Positive Uses of Technology Currently

*Will vary based on survey findings

Thank you for participating!

Whether you are showing up tonight for the first time or had come to our previous meeting, thank you for your participation. Your voice is one that matters in this district.

Your feedback from the last survey has been reviewed and will be shared in the following slides:

- a. Positive Uses of Technology Currently
- b. Negative Uses or Concerns of the Technology Currently
- c. Goals of Using Technology in the Classroom
- d. Expected or suggested devices and platforms for the district
- e. A proposed implementation plan from the district for next year

Negative Uses and Concerns of Technology Currently

*Will vary based on survey findings

Goals of Using Technology in the Classroom

*Will vary based on survey findings

A Proposed Implementation Plan for Technology and Policies

*Will vary based on survey findings

Expected or Suggested Devices and Platforms for the District

*Will vary based on survey findings

Appendix D

Questions to Guide Paired Review and Exit Ticket

Technology Implementation Meetings Questionnaire

Questions for Reflection: Review each provided printed copy (or link) of the devices, platforms, and websites our school may use next year. Talk to your partner about the general pros and cons as well as the questions that follow. Each material mentioned will follow the same sheet of questions to review.

Name of the device/platform/ tool: _____

Pros of this technology:	Cons of this technology:
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

1. Do you believe this technology can help build communication? In what ways (if possible)?

2. Do you believe this technology can help increase student engagement (if so, why)?

- 3. Do you believe this technology is able to be accessible at home or elsewhere if not at school?

- 4. Do you believe this technology is beneficial in sharing class content and lesson materials?

- 5. Exit Ticket Comment: What other comments would you like to share?

Appendix E

Professional Development Presentation Slides