

Technology and English language learners: Can digital technology enhance the English language learning experience?

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Abstract

This article focuses on the topic of technology and its role in elementary classrooms. Specifically, technology's use in supporting English Language Learners is researched, yielding results that are important for those working in the field of education, including pre-service teachers. Questions that are acknowledged in this article include: How can ELL students' learning be enhanced with the use of technology? What technologies are best for supporting language learning needs? What advantages and challenges may arise with the use of technology? Both online survey and interview methods are used to collect data which are analyzed and collated using Google Spreadsheets and the word cloud software, Tagxedo. Results from research show that technology can be very beneficial in supporting ELL students upon a number of conditions being met: 1. The technology is intuitive and user friendly. 2. The technology/program does not replace the role of the teacher. 3. Teachers feel comfortable using the technology themselves to best support the learner. This may mean more training for teachers in the field of technology is necessary. 4. The technology enhances the child's learning, rather than replaces a traditional practice that is just as effective. This research highlights professional roles and responsibilities, an important aspect of teaching, and is significant for educators striving to improve their teaching practice.

Introduction

Technology is becoming increasingly more available in schools and it is important teachers are able to make the most of these resources. While technology can aid all students in learning in one way or another, meeting specific needs of students such as those of ELL learners has become an area of interest for many teachers and researchers.

As I progress through my undergraduate studies, I have become increasingly interested in language acquisition and how I can relate this knowledge to my role as a teacher. Throughout this study, I will be researching how ELL students' learning at the elementary level can be enhanced with technology. This question is very important to me as it complements my Teaching English as a Second Language minor and will help me to be successful in my future teaching. Upon graduating, I am hoping to teach internationally and possibly even specialize my work in teaching English. As technology will continue to become even more common in classrooms, it is important to me that I know the best ways to incorporate it into my teaching and students' learning to enhance their language and literacy skills.

Background

In order to gain an understanding of previous research done on the topic of technology and ESL learners, I focused a literature review on five different sources. Each source helped me to understand the current state of knowledge as well as guide my own research through survey and interview methods. Certain sources focus on identifying the benefits and challenges of using technology with ESL students while others closely look at which technologies and tools seem to be the most beneficial. Dialo (2014) and Liu et al., (2014) both identify technology as a useful addition to student learning but recognise the time requirement for teachers as a negative characteristic.

Focused on a literature review, Dialo (2014) highlights the benefits and challenges of integrating technology into ESL students' learning. With the use of technology, the improvement of language and literacy skills is apparent and allows for a wide variety of differentiated instruction tools to be used. Dialo highlights significant challenges which prove to be the cost and maintenance of technology and the teacher training required to use it effectively.

Liu et al. (2014) discusses the results from a study in which ELL students and their teachers were provided their own Ipad Touch to enhance learning. Though the Ipods were beneficial for developing students' language skills, providing meaningful instructional support,

and allowing learning to be done at home, it was time consuming for teachers to integrate the technology into their planning and much time was spent solving technological issues.

Cole (2015), Lacina (2005), and Lopez (2010) concentrate on different technologies that can aid ESL students in their learning. These works broadened my view in terms of the tools that may enhance student learning by acknowledging services I had not considered such as online journals and chat rooms.

Cole et al. (2015) notes how ELL students' writing skills can be developed through the use of technology. Specifically, online journals and discussion boards are deemed beneficial because students can focus on developing content and ideas without worrying about spelling mistakes.

Lacina (2005) describes many different forms of interactive technology, such as online discussion boards and chat rooms, and the benefits that they provide to English language learners. Lacina's work includes an interview of two teachers and highlights how they use technology in their own classrooms to enhance ELL students' learning. It also stresses the importance that technology can help to meet the needs of all sorts of students, not just English language learners, and that teachers should be well versed in different technologies to help meet these needs.

Lopez (2010) conducts a study to analyze the effects of interactive whiteboard technology on ELL students' learning at the grade 3 and 5 level. The study proved that the use of this technology can improve students' learning and even close the achievement gap between ELL and non-ELL students.

Previous research provided me with a framework to guide my own research and deepen my understanding of the technologies that are most beneficial for aiding ELL learners. It also influenced my research by encouraging me to include other types of online resources such as chat rooms in my survey questions.

Research Context

The data I gathered while conducting my own research was retrieved from Mount Royal University education classrooms as well as an elementary school placement. Any data from the school placement was collected through casual conversations with my mentor teacher and observation. This data largely encouraged initial brainstorming for further research. I had fifteen people participate in my research study who consisted of education students, education

professors, and elementary teachers. I also conducted an interview over email with an expert in the field of technology and ESL learning to clarify some aspects of data retrieved from my online survey. Before conducting any research, I completed the Government of Canada Human Ethics Research Certificate which largely focused on how to protect research participants. To ensure my participants would be protected from harm and risk, a name was not required to partake in my survey making it confidential. No identifiable factors were necessary either which ensured complete anonymity.

Methods of Investigation

The methods of data collection I used included observational notes, an online survey created on Google Forms, and an interview conducted through email. Upon receiving data from these methods, I attempted to identify common themes between participants' online survey answers as well as the other two data sets. Certain strategies were used to organize and analyze data as it was collected to help streamline this process such as the use of a field observation journal and online records of interviews. My survey results were also collected in an alternative document and Google Spreadsheets was used to analyze the data. Because there were a variety of open-ended and close-ended questions included in my survey, a variety of charts and figures were used to display this data in the most approachable format. Key themes were also represented in the format of word clouds, created using the online application Tagxedo.

Findings

In this section I explain some of my key findings and prominent themes from my study. Data from my online survey and online interview is closely examined and I consider the ways in which it can be used to influence future support for ELL students. Frequently used technologies and their ease of use is closely looked at as well as advantages and disadvantages of using technology. Lastly, data collected by means of an online interview with a university professor is analyzed and compared with survey results.

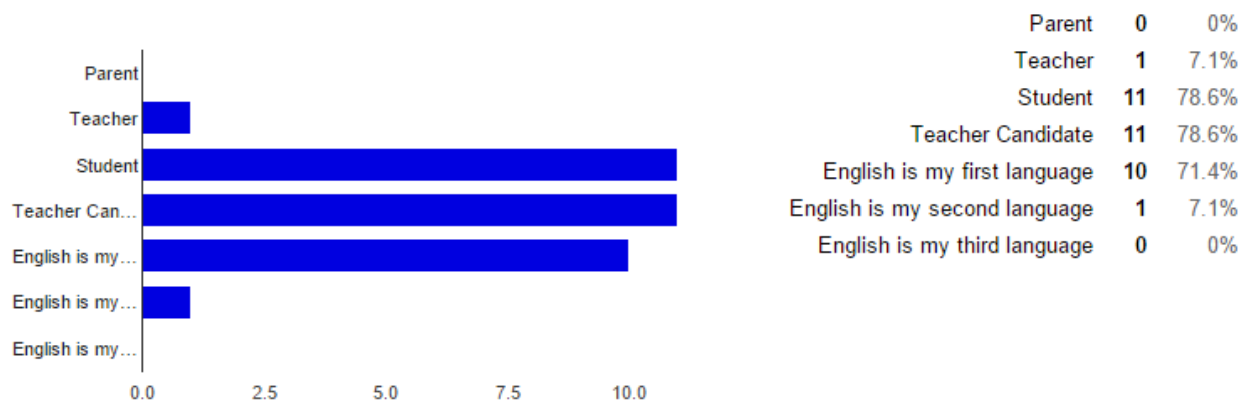


Figure 1. Please select all that apply.

This figure provides a context for the survey recognizing that all participants work or study in the field of education.

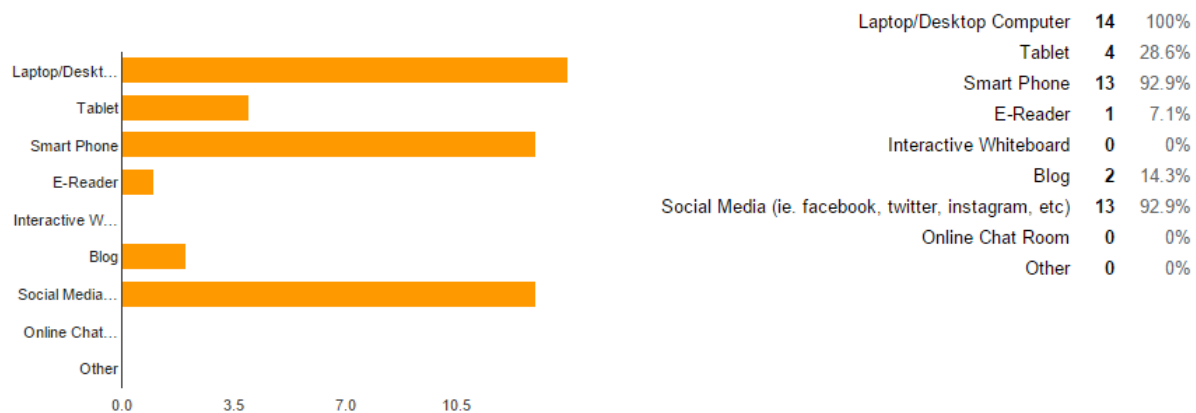


Figure 2. Please select the technologies you use on a regular basis.

Figure 2 shows that laptops/ desktop computers are used most frequently, closely followed by Smartphone's. Social media is also used on regular basis by 92.9% of participants. There seems to be a lot of opportunity to integrate these applications into teaching. Though no participants use separate online chat rooms regularly, the large percentage of participants using social media such as Facebook leads me to believe that many users use the chat rooms and messaging systems that are integrated into such applications. As tablets can be used similarly to Smartphone's, apart from calling features, it is likely tablets would be a more likely technology to be integrated into classrooms in a large scale. For at home and personal use, Smartphone's

clearly have potential to be used a learning tools as well though.

Please rank the following technologies in ease of use (Note: Only rank those that apply to you)

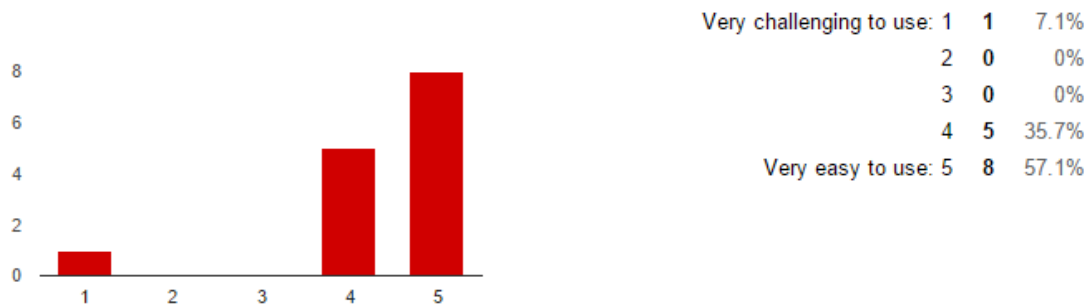


Figure 3. Laptop/desktop computer rated in ease of use.

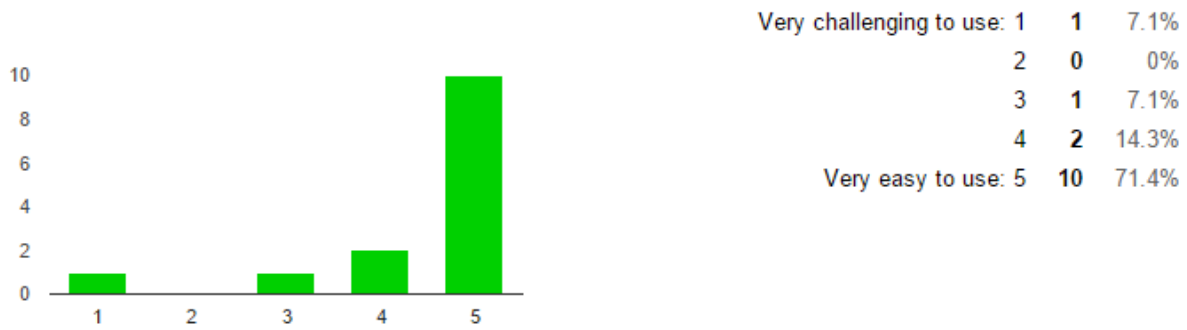


Figure 4. Smartphone rated in ease of use.

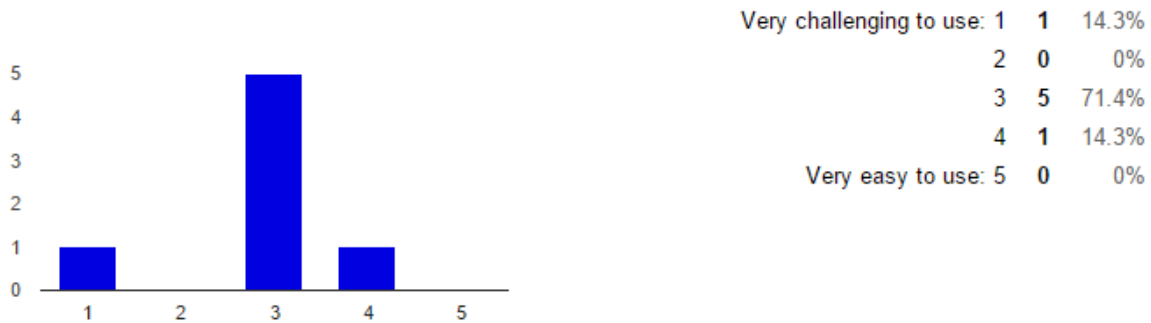


Figure 5. Interactive whiteboard rated in ease of use.

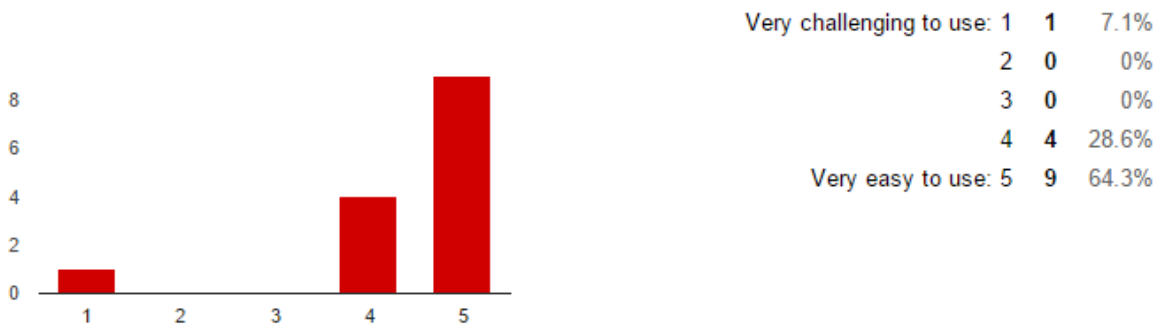


Figure 6. Social Media (Facebook, Twitter, Instagram, etc)

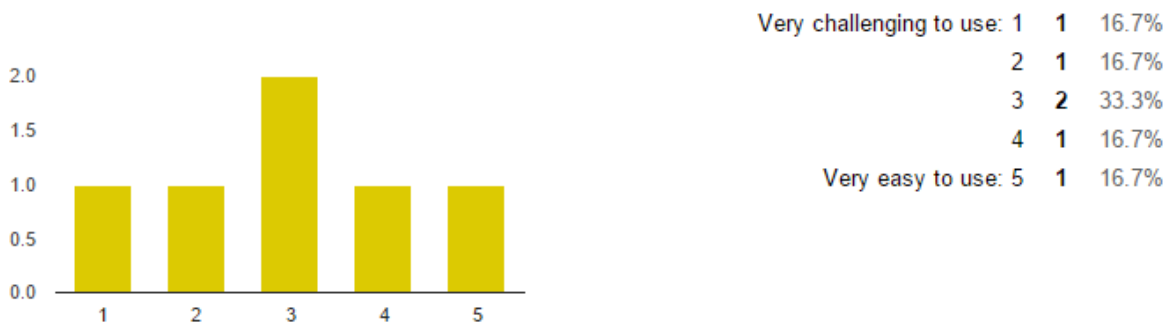


Figure 7. Online chat room rated is ease of use.

The laptop/desktop computer, Smartphone, and social media ranked highest in ease of use according to survey results. Tablets, E-readers, and blogs were also ranked in this category but yielded poorer results in ease of use. According to my survey results, it seems that frequency of use and ease of use is directly correlated. As ELL students are focused on growing in the area of literacy, it is important that the use of technology does not interfere with learning or create anxiety. Technologies that are widely recognised as easy to use and intuitive will likely be the most beneficial for aiding these students' needs. These are also the technologies that teachers and other facilitators of learning will feel most competent using.

It is important to recognize that 78.6% of survey participants were teacher candidates and 7.1% survey participants were teachers and interactive whiteboards were rated relatively low in terms of ease of use. This is perhaps evidence that more training for teachers needs to be made available to ensure teachers can use this technology comfortably and effectively.



Figure 8. Please identify the technologies that you have used to assist you in learning a new language.

Survey participants identified online applications such as Google translator and bonpatron.com as useful technologies in assisting them with learning a second language. These resources are useful in translating words and short phrases as well as correcting grammar and spelling. The most common resource identified for second language learning was Rosetta Stone. From the perspective of a teacher candidate, a comprehensive language learning program may be beneficial for at home use by ELL students and the former resources may be used as a support in classrooms as well as at home. It is important to recognize that all survey participants are 18 and older and that resources such as Rosetta Stone may be challenging for younger users such as elementary students.

reasons as well as others, she acknowledges that the impact technology has on learning must be monitored to ensure it is truly effective. This expert did point out that the use of technology does have advantages though. She explained that using authentic materials is motivating for students who are learning a new language and that there is plenty of authentic material to be found online that can be used for learning.

Conclusions and Recommendations

Previous research on the topic of technology and language learning reveals that while there are some disadvantages to using technology in the classroom, it is very capable of supporting and enhancing students' language learning. Upon reviewing my own findings from both survey and interview methods, I too conclude that technology is beneficial in supporting ELL students upon a number of conditions being met: 1. The technology is intuitive and user friendly. 2. The technology or program does not replace the role of the teacher. 3 Teachers feel comfortable using the technology themselves to best support the learner. This may mean more training for teachers in the field of technology is necessary. 4. The technology enhances the child's learning, rather than replaces a traditional practice that is just as effective. Overall, research reveals that technology can support ELL students when used strategically and thoughtfully. With these recommendations in mind, it is a professional responsibility of teachers to be aware of new technologies and resources that can aid students. Teachers should attend professional development workshops surrounding technology to ensure they are always improving their teaching practice. It is of course important to recognize that technology will not support every student in the same way and educators should use their discretion when deciding what role technology should play in each student's learning.

This study yielded data that will strongly influence my future teaching practice as an elementary teacher. I have identified which technologies are most likely to work well in supporting ELL students and have learned about new applications and resources to use while teaching English. My concluding conditions that should be met to integrate technology effectively will also strongly inform my future teaching.

Future research questions this study has identified include: Is more training for teachers needed to ensure they feel comfortable and competent teaching with the technology? How can teachers ensure the use of technology does not cause students anxiety? What is the best balance of technology and traditional practices? These questions may be beneficial to research in order to

gain an even fuller and informed understanding of using technology to support ELL students.

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