

Exploring Technology in English Language Arts

by

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### Abstract

This research explored the use of technology within the English Language Arts block. The purpose of this research study was to utilize different digital tools in ELA and understand which tools worked best for the students. Data were collected over a period of 5 weeks including teacher field notes, student journals and student artifacts. Data were analyzed to understand the impact of digital tool use in the classrooms.

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## Introduction

Do you remember what it was like the first time you were introduced to a new piece of technology such as a computer or an iPad? It can be overwhelming as an adult or child to see this new piece of technology and not understand what to do with it. I recall the feeling when the computers in the lab in the school where I was teaching were replaced by Chromebooks. Suddenly the familiar Internet Explorer of the desktop was gone and I was faced with Google Chrome OS on the Chromebook. There was a great deal of anxiety because I had to learn this new search engine at the same time as teaching it to students.

As a teacher I knew I needed to learn quickly how to adapt using this new piece of technology into my classroom, but I just wasn't sure how to do that. I asked a few teachers how they used these Chromebooks in their classroom and their responses were similar; "I don't know." "I am just using the basic websites that we used in the computer lab." I was not satisfied with that answer and decided to look in depth at these Chromebooks and learn how to use them productively in my classroom.

My students recently have started to express an interest in using the Chromebooks more often. One day, I was watching one of my students on her cellphone at the end of the day as she was writing on a blogging website. I questioned her about it and she stated "I'm updating my blog for the day. I write about what happens to me and what is on my mind each day." It peaked my interest and I began to research how I could incorporate these digital tools that my students are already using outside of school and bring them into the classroom. According to Featro and DiGregorio (2016), "Research has identified many benefits of blogging as an instructional practice" (p. 2). Blogging can help with students' writing skills, and help with students' higher-order thinking skills. As a young teacher, I want to make sure I keep up to date on the latest

digital tools that can be incorporated into English Language Arts. For this reason, my study is focused on answering the question: What happens when we incorporate technology in English Language Arts?

### **Topic and Research Problem**

Most teachers are given Chromebooks or iPads but are not given a list of digital tools that work well when teaching specific topics in English Language Arts. Most of the studies that I have read incorporated technology into the classroom of college students. Teachers need digital tools that can be used in elementary classrooms. The study that I performed involved three digital tools that I have learned about recently and incorporated into English Language Arts instruction. I incorporated these digital tools with a class of sixth grade students. Research suggested that “more strenuous effort is needed to tie students’ out-of-school literacy practices to their in-school literacy practices” (Hutchison & Colwell, 2014, p. 154) and therefore I attempted to do so by introducing new digital tools to connect home and school literacies.

### **Rationale**

I was interested in conducting my research study by exploring the incorporation of technology in the classroom because as teachers we always need to adapt to new digital tools that are being created for students. These tools have specific literacy uses and my goal was to see what patterns of outcomes each of these three digital tools produced. Technology is advancing continuously and it is our job as teachers to incorporate this technology into English Language Arts in a meaningful and useful way. This study is important because technology is commonly being used by our students and teachers should understand the ways to utilize this technology to create meaningful ELA instruction.

### **Purpose for the Study**

The purpose of my study was to explore the use of technology during English Language Arts. I examined students' finished work using the technology. After each week of using a digital tool, I had students write their perspectives of using the digital tool in their journals. Once students completed the assignments I looked for patterns between their creations and journal responses.

### **Research Questions**

The research questions for my study were:

What happens when teachers incorporate technology into English Language Arts?

What are students' perspectives about the digital tools teachers use?

### **Review of Literature**

The use of digital tools can have the potential to alter the classroom environment. Technology has changed so much in my opinion. When I was in school, I only used the internet to look up information and now there are many different tools students can use with the multiple forms of technology that they have access to, including mobile devices. Taylor (2006) has defined mobile knowledge as "learning mediated by mobile devices, or mobility of learners (regardless of their devices), or mobility of content/resources in the sense that it can be accessed from anywhere" (as cited in Chou, Block, & Jesness, 2012 p. 11). "One-to-one learning with a mobile device falls into the same category of mobile learning. One-to-one learning occurs when learners use a mobile device (e.g., iPads, iPods, netbooks, laptops, cell phones, or other mobile devices) with internet access to engage in learning activities" (Chou, Block, & Jesness, 2012

p.11). Numerous research studies have focused on at least one of the following three main topics: instruction, collaboration and student perspectives on the use of technology in the classroom. Every teacher has the ability to incorporate technology into his/her classroom. McKee-Waddell (2005) found “Teachers are seeking inventive forms of digital technology instruction to enable, engage, and propel instruction in composition” (p. 26). Through understanding the many applications of digital tools, teachers can discern which would be beneficial in the instruction of English Language Arts.

### **Instruction**

“Digital tools have the potential to transform instruction and promote literacies outlined in the Common Core State Standards” (Hutchison & Colwell, 2014, p. 147). “Choosing to integrate digital tools, and transforming traditional writing concepts such as audience and voice to multimodal composition can be seen as a reinvention of the curriculum” (Curwood & Cowell, 2011, p. 118). A teacher’s function is to ensure students understand the instruction being taught to them in the most effective manner possible. In the school district where I currently teach, we are mandated to use the Common Core State Standards. “While the ultimate goal of the Common Core State Standards is to prepare students to be college and career ready, the Common Core State Standards (CCSS) place a significant emphasis on the use of digital technology to promote domain specific literacy in grades 6-12 learning and instruction” (Hutchison & Colwell, 2014, p. 147).

Hutchison & Woodward (2014) point out that “although research in the area of new literacies is still emerging, the adaption of the Common Core State Standards (Common Core State Standards Initiative, 2010) by most states makes the use of digital tools in the literacy and language arts classroom a requirement rather than a preference” (p. 316). Along with the

Common Core State Standards, “Writing has evolved over the course of time to accommodate the introduction of new tools and new technologies into classroom instruction and assessment practices” (Davis, Orr, Kong, & Lin, 2015, p. 180).

Harris & Hofer (2009) describe instructional decisions that teachers can make to plan a learning event that involves digital technology (p. 4). The researchers suggest that, “teachers: 1) choose learning goals, 2) make pedagogical decisions about the nature of the learning experience, 3) choose activity types to combine, 4) select assessment strategies, and 5) select the digital tools that will best help students benefit from the learning experience” (p. 4). The study I conducted allowed me to look at patterns from the students’ creations using three digital tools and provides suggestions as to which digital tool are the most useful to help students achieve the maximal benefits from instruction. Teachers should not use a digital tool without understanding how it will be meaningful for the students. The methods that a teacher utilizes to instruct should be purposeful.

Teachers need to understand that using digital tools isn’t just taking a form of technology, putting it on a child’s desk and letting him or her get right to work. Teachers should explore and understand the technology first before asking a child to use it. Research suggests “teachers analyze the tool to determine whether there are features or circumstances that would prevent the tool from contributing to instruction or would minimize the possible contributions” (Hutchison & Woodward, 2014, p. 461). One effective method of introduction of education to technology is through a model called SAMR. Romrell et al. (2014) explain:

The SAMR Model has four main categorizations which include: 1) Substitution: The technology provides a substitute for other learning activities without functional change. 2) Augmentation: The technology provides a substitute for other learning activities but with

functional improvements. 3) Modification: The technology allows the learning activity to be redesigned. 4) Redefinition: The technology allows for the creation of tasks that could not have been done without the use of the technology (p. 4).

Most teachers I know usually work at the substitution level of the SAMR model, which means they are merely swapping paper and pencil with a Google Doc or another word processing tool.

### **Collaboration**

In my opinion, after taking part in professional development opportunities in my district, I believe schools are venturing away from emphasizing teacher-centered classrooms to a student-centered classroom. Chou, Block, & Jesness (2012) claim “that with sound pedagogy and implementation, one-to-one technology has the potential to transform the classroom into a true learner-centered learning environment in which communication, collaboration, and creative problem solving flourish to create student-driven learning” (p.13).

Collaboration is vital when students are learning new material.

Al-Chibani (2016) states the following:

The use of online collaborative writing tools has been integrated within educational settings, research shows that the advantages of such tools, specifically in high education settings, include enhancing the learning process and motivation of the students. (p. 333)

One of my strategies of teaching students new material is to have the students discuss the new information in small groups of two or three following the new lesson. This collaborative exchange affords peer-to- peer instruction. According to Broin & Raftery (2011), “Google Docs (word-processor documents, spreadsheets, presentations, and forms) can all easily be shared with

anyone who has a Google Docs account” (p. 35). Each student will likely take away something different from the classroom lesson. The small group instruction allows students to teach each other and subsequently enrich their own and each other’s learning. Teachers are said to have two different mindsets when it comes to incorporating technology into the classroom.

Researchers Hutchison & Woodward (2014) state:

Mindset 1 is indicative of an individual who recognizes the prevalence, and perhaps the value, of digital technology, but views digital technologies as commodities and as production tools with spaces that are enclosed and intended for specific purposes.

Mindset 2 as an individual who recognizes the prevalence and value of digital technology but views its roles and functions differently. This individual perceives digital tools as enabling devices, as collectives, rather than production tools, and as spaces that are open and fluid rather than enclosed and purpose-specific. Mindset 2 are teachers who are open to having students work collaboratively. (p. 319)

According to Hutchison and Colwell (2014), “The Common Core State Standards also call for students to use digital tools to interact and collaborate with others” (p. 148). In this article, the authors mention an app called VoiceThread, which is a tool that can be used on computers and iPads. This app allows students to insert pictures, text, and their own voices to explain their ideas. In a study performed by Castek and Beach (2013), “the researchers had students use VoiceThread to explain what caused the extinction of dinosaurs, students needed to attach images appropriate to their ideas and added narrations explaining their predictions” (p.562). After all the students finished their VoiceThreads, they would pass the digital tool to another student. That student would listen to the VoiceThread and would critique it.

In conclusion, collaboration is an important part of learning new material because what students grasp from the lesson varies. The students in the class can then collaborate, exchange knowledge and ideas to understand the material even better to enhance their learning and digital tools can assist with this.

### **Student Perspectives**

When I first began teaching, other experienced teachers advised me of two things. One was that I should allow students to feel welcome on the first day of school by asking their perspectives on the first day of school. The second was to ask students' perspectives and opinions throughout the school year. Every student in the classroom wants to believe that his/her opinion matters.

Student perspectives are very important when it comes to incorporating digital tools into an English Language Arts classroom. One of the digital tools I used for my study is Google Docs. Suwantarathip and Wichadee (2014) focused in on using Google Docs as well, "Google Docs is stored online and students can work at school and at home from any computer with an Internet connection" (p. 149). These two researchers focused on using Google Docs to work collaboratively when writing in a foreign language. Although this article focuses on writing in a foreign language, the message used can be transferred to the instruction of writing in English Language Arts. Overall, the students had a positive response to using Google Docs. "This is likely due to the fact using Google Docs makes collaboration easier" (Suwantarathip and Wichadee, 2014, p.154). Students were able to go onto their Google Doc from any location to review and edit the document through the digital tool. This is in contrast to the tradition method of working face to face where everyone needs to be at the same place at the same time. With

most students having ready access to mobile technology, they can even access it from their mobile phones.

Sy-Ying Lee (2015) concentrated on student blogging and linguistic development. The researcher's participants in this study stated "that understanding that their writing would be read by the instructor and their peers made them want to read more and write better" (Lee, 2015, p. 379). As teachers continue to incorporate new digital tools in the classroom, teachers need to remember to ask students their thoughts about each tool. If students do not care for a certain digital tool, they will not want to work to their fullest ability on it and teachers will not be successful with using it. In contrast, if students think positively about a digital tool, it is beneficial to both teacher and students to continue incorporate that tool into the classroom as often or as frequently as possible. The goal of education is to focus on students and provide means to allow them to learn in the most optimal way that they can.

### **Methodology**

This study focuses on exploring what happens when teachers incorporate technology into English Language Arts. Data were be collected for 5 weeks and will contain student artifacts/ classwork and field notes.

### **Participants**

The participants in this study were selected because they are all students in my sixth grade classroom for the 2016-2017 school year. The participants in this study include 10 girls and 6 boys, most of whom are Hispanic. All of my students speak English as their first language. All of my students come from low socio economic status and receive free and reduced lunch. I

am the main teacher in the classroom and am responsible for giving instruction in all subject areas including: English Language Arts, Math, Science and Social Studies.

### **Setting**

The setting for this study is a sixth grade classroom in an urban elementary school that includes grades K-8, and is located in New York State. The school environment is welcoming and has a multitude of student creations on the walls. Students' desks are aligned in three groups with 8-9 desks in each group due to the amount of space in the classroom.

### **Positionality**

My role as a classroom teacher and researcher is based upon my own education, opportunities and beliefs. I am currently a single white woman in my upper 20's. I grew up in a suburban neighborhood and graduated from suburban high school. Neither of my parents graduated from college. I obtained a bachelor's degree in childhood education from the State University at Buffalo. I believe urban students should be given the same opportunity as suburban students and I believe that my job as a teacher is to use as many resources as I can in my instruction in order to reach every student.

### **Methods of Data Collection**

As a teacher-researcher, I utilized a variety of sources of data for my study and have explained each below:

#### **Field notes.**

I took field notes on each of my students as they used the five digital tools. I made my observations by walking around the classroom as my students were working on each task.

Students worked with each digital tool and I looked for specific patterns from the digital tool creations and student conversations, engagement and interactions. This helped me to answer my research question: What happens when teachers incorporate technology into English Language Arts?

### **Student journals.**

Each student kept a journal where he/she noted thoughts about each digital tool after using it for one week. This allowed me to see what patterns appeared from their perspectives and helped me to answer the question: What are students' perspectives about the digital tools teachers use?

### **Student artifacts.**

Every student had a week to explore the digital tool that I incorporated into their ELA block. After the week was over, I collected all of the finished pieces of work to include in my data analysis.

### **Trustworthiness**

Trustworthiness was established through the practice of data triangulation. "Triangulation is the process of corroborating evidence about a finding from different individuals or types of data" (Clark & Creswell, 2015, p.364). I have triangulated my data by using cross verification from two or more research sources to make sure my data is reliable. I used the constant-comparative method between all of my forms of data to explore evolving themes among my research.

### **Procedures**

My entire class was involved in using digital tools in English Language Arts but I only looked at the work of the students who gave consent for this study. I instructed and collected data for 5 weeks.

Every week, I introduced a new digital tool to my students. The digital tools that I incorporated included: Google Docs, Google Slides, and Google Tour Builder. A brief explanation of each tool is as follows:

- **Google Docs-** Create and edit documents online. Can use this independently or collaboratively. I used Google Docs as a tool for students to write their persuasive essays.
- **Google Slides-** Create online presentations online. Can use this independently or collaboratively. I used Google Slides as a tool for students to present their inventions to the class.
- **Google Tour Builder-** A way to show people the places you've visited using Google Earth. It lets you pick the locations right on the map, add in photos, text, and video, and then share your creation. I used Google Tour Builder to have students reflection on what places Percy Jackson visited in the book *The Lightning Thief*.

I instructed my students on how to use each tool. They then worked with the tool for a week and then handed in their finished work at the end of the week. After handing in their finished work, students wrote in a journal that was provided to them for the study. Student wrote their perspectives on the digital tool. All of the creations that the students made are based on the content that they learned in English Language Arts. As students worked, I walked around and took notes on what I noticed each student doing with the digital tools.

### Analysis

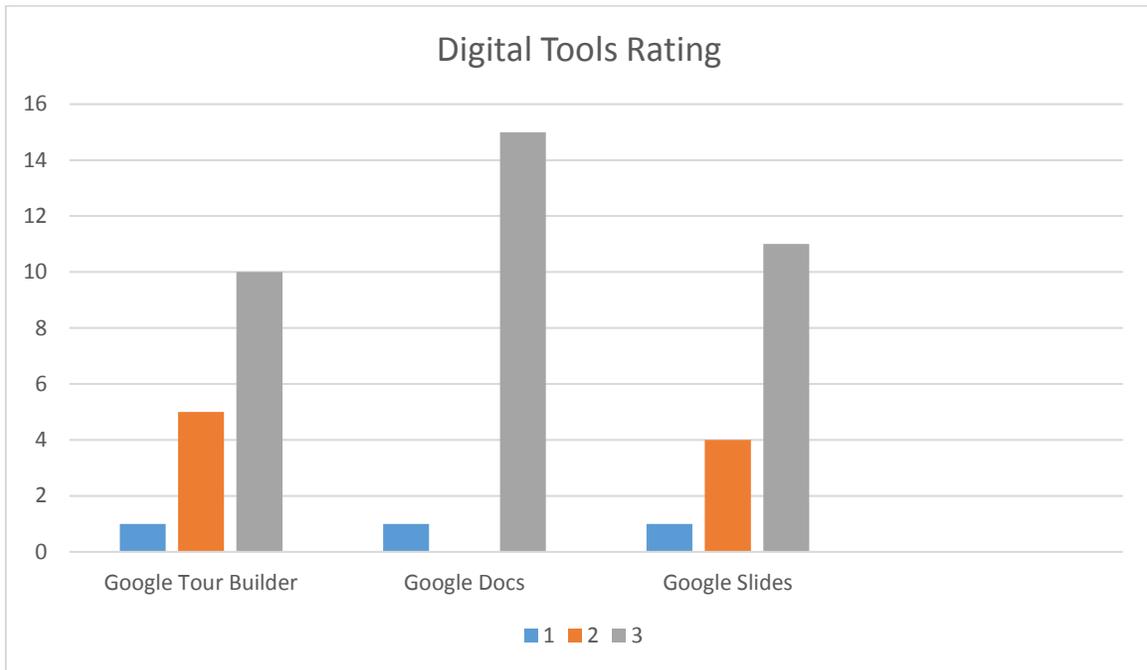
After data were collected, I took all of the students' finished work from the digital tools, their journals as well as all of my own reflections and I looked for patterns that emerged. As I laid out all of the data I had collected, I used a coding system to explore evolving themes that I noticed while analyzing my student's technology journals and my field notes. Following that step I used the constant comparative process to compare and contrast the students' technology journals, their finished pieces on each of the digital tools and my field notes (Shagoury & Power, 2012, p. 144). I began to notice themes that answered my research questions: "What happens when we incorporate technology into English Language Arts? And, what are students' perspectives about the digital tools we use?" I have noticed the following themes: 1) Student engagement varied according to digital tool; 2) The length of students' writing increased with the use of digital tools; 3) Students' spelling accuracy increased.

**Finding One:** Student engagement varied according to digital tool.

During this research study, I asked my students to keep a "My Technology Journal." After each week of using a new digital application on their Chromebooks, students were given time to reflect on using that application in the technology journals. The journals had three questions that the students were asked to answer: 1) What did you have to do on this technology application?; 2) What did you think about this technology applications? Did you enjoy it? Why or why not? and 3) Is there something you would change next time you used this technology application?

After I collected all of the technology journals from the students, a vast majority- 93% of students stated that they enjoyed using digital tools and found them to be helpful during English

Language Arts. Students were also asked to rate the tool on a scale from 1-3, with 1 meaning they didn't like the digital tool and wouldn't not want to use it again and 3 meaning they really enjoyed the digital tool and would like to use it again in the future. Figure 1 shows how each of the students rated the three tools that they used during this study.



*Figure 1.* Students were asked “How would you rate this technology application?” Google Docs had the best rating.

This finding was aligned with what I observed in the classroom as documented in my field notes. My notes indicated that the majority of students were engaged in their classwork when using digital tools. The students were focused on their objective. My sixth grade students are typically talkative when they are completing their classwork, but when I asked them to write their persuasive essays on Google Docs, the talking decreased significantly. I found that students were paying attention to their classwork instead of to what their classmate adjacent to them was doing.

One thing that I found really impressive and truly showed me that my students were engaged with using digital tools, was a conversation that I had with a student as documented below:

**Mark:** Ms. Hovey I really like using Google Docs to write my paper.

**Me:** I'm happy that you like using it. What do you like about it?

**Mark:** It's easy to write what I'm thinking. Can I go get a Chromebook and work on my paper instead of doing Fun Friday? (Fun Friday happens on Fridays and the students can choose to play a board game with each other, watch a movie or play a classroom game such as four corners.)

**Me:** Absolutely! Are you sure?

**Mark:** Yes, I am sure.

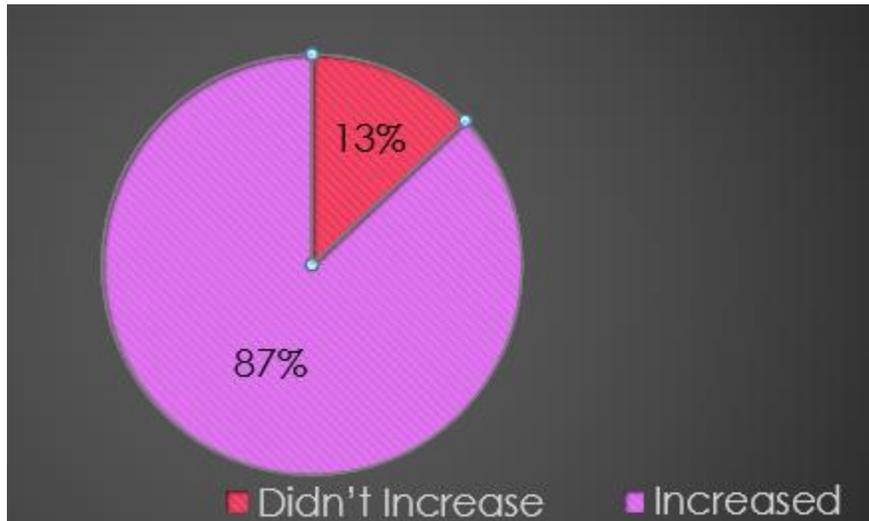
Mark is usually the first to grab a game and play it with a friend during Fun Friday. The fact that Mark chose to write his essay on Google Docs instead was very impressive. The effort he put into his writing truly made a difference on the outcome of his essay. He added considerably more details to his persuasive writing with the use of Google Docs.

Another example of student engagement became apparent as I observed the students. Two students were engaged in conversation. As I neared them I overheard Addison ask Joey how he was able to share his document with Nicole. He told her "Look up there, see the word share? Click that and type in the person's name you want to share your document with."

I was impressed that Joey knew how to share his document and so I decided to instruct the whole class about this option. I explained to the students that when they had finished writing their papers, they could find a friend and share a document with them. Having students share

their documents with each other allows them to read someone else's essay and peer edit their work. I observed students being truly engaged with this application. While the students were editing, I noticed that if they had a question about the other persons' essay, they would go over and ask the students about it. When students discuss their work it demonstrates that they care about what they are writing and reading about. According to Kirsch, Marlow, Pingley, Leonhirth, & Lownes (2016), "It is our collective goal to use technology in our classes to engage students with course materials while also improving participation" (p. 51).

**Finding Two:** The length of students' writing increased.



*Figure 2.* The data above shows the percentage of students whose writing increased compared to the percentage of student writing that didn't increase with the use of technology.

During week 2 of my research study, I introduced the digital tool Google Docs to my students. I informed them that they would be writing a persuasive essay on Google Docs. I performed a mini lesson on how to write a persuasive essay using paper and pencil. Towards the end of the week, students were finalizing their essays. I began reading the finished essays and I

observed that my students wrote significantly more using this digital tool than they have before using paper and pencil.

“Yes I do enjoy using Google Docs because it is easier for me to type.” This was Jenny’s response when asked what they thought about this technology application. Jenny, along with many other students, found typing using the digital tools to be easier than using paper and pencil. The digital tool provided ease in adding more details to their writing as well as removing errors. Joey stated, “If I make a mistake it is easy for me to fix faster what it would have took if I was writing on paper.” Writing should not be a stressful learning experience for students. I sat down with Joey and talked about his reflection about how digital tools make it easier to fix mistakes. Here is an excerpt from my field notes:

**Me:** I thought it was interesting when you brought up how using technology helps you to fix your mistakes faster. I was wondering if you could explain that to me a little more.

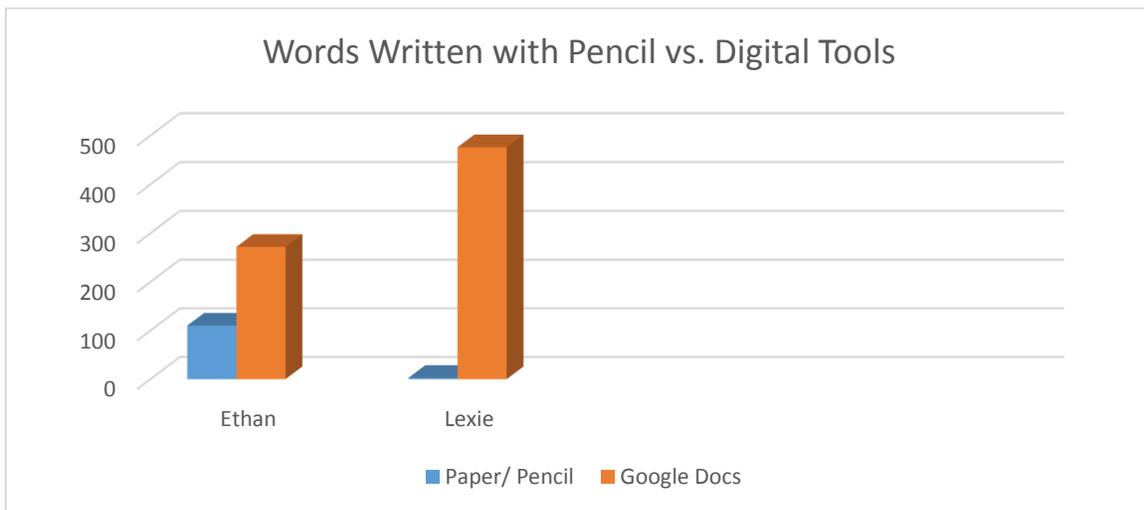
**Joey:** Sure! What I meant was that when I write with paper and pencil I have to go back and either erase everything I have wrote to add in what I left off or I have to draw a line over to the empty space to add in what I forgot to write. It always looks so sloppy.

**Me:** Yes, having to go back and draw arrows to the margins can make your paper look sloppy. Why did using the digital tools make that faster to fix?

**Joey:** I am always on the computer at home, so I type very fast. This helps me to get all of words on the paper without forgetting anything. If I do forget to type something down, I can just go back to where I need to insert the text and type it into the spot where it belongs. I don’t have to erase anything or draw arrows.

**Me:** I'm glad that using these tools has improved the length of your paper because you were able to add additional details faster.

There are two students in my classroom who struggle with writing. Ethan and Lexie are both students in my classroom who have IEP's. They typically wait until the last minute to complete a writing assignment and rarely write more than one paragraph. They are both seen for resource four times a week and have a consult teacher who pushes into the classroom three times a week to work with them. The data from my study demonstrates that Ethan and Lexie both wrote significantly more using Google Docs compared to writing essays using paper and pencil. Below I have constructed a chart that compares the number of words using paper and pencil with the number of words written using the digital tool- Google Docs.

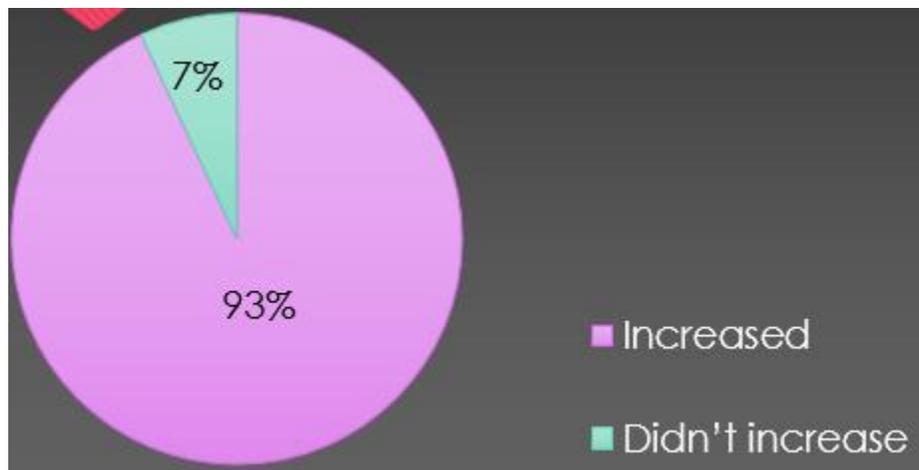


*Figure 3.* This chart compares two students and the number of words written with paper and pencil compared to the digital tool: Google Docs.

In Lexie's technology journal, she wrote about how she had to write a persuasive essay on why I should hire them for the job that they wanted for their inventions unit. Lexie wrote that she enjoyed being able to share her essay with the other students because they were able to edit

and revise her paper, which she said “made it better.” During my observations, Lexie worked diligently and was not visibly frustrated, a typically emotional state that she exhibited during writing assignments previously in the classroom. In an article that I read, the researchers conducted a study using tablets which is another form of technology and concluded by saying “If we can increase students’ desire to write by providing tablets, it may provide them with greater opportunities to practice their writing skills and in turn lead to increased confidence in their writing ability” (Corkett, J., & Benevides, T, 2016, p. 21).

**Finding Three:** The students’ accurate spelling increased when they were able to use these applications on the computers.



*Figure 4.* The figure above shows the percentage of students whose spelling increased with the use of technology compared to the students whose spelling didn't increase.

Over the last few years, students have significantly lost touch with how to correct their spelling and grammatical errors. Many students will try and sound out the word that they need to spell and will continue on with their writing. As I began to incorporate the three digital tools into my English Language Arts block, I noticed that my students’ spelling improved when they were

able to use utilize these applications on the computers. All three of the digital tools had an editing tool that allowed the students to see when they made an error and prompted them to fix it. Having this capability on these applications allowed my students to continue to write their essay and they didn't have the worry of crossing out the misspelled word and rewriting the word over it. Usually when students have to take the time to cross out a word that they don't need in their essays, they have to stop their train of thought to do this. It then becomes hard for the students to remember what they were writing about before they did the crossing out the unwanted word. Instead, they were able to click the highlighted misspelled word and the editing tool changed the spelling for them.

Addison is a student who strives to do her best. She usually gets very upset when she gets drafts back that have been edited by me because she notices all of the words that she spelled incorrectly. One day when I was observing my students from the back of the room, Addison got up out of her seat and came over to me and said, "Ms. Hovey, I am going to have a great paper when I hand it to you because I know what words I spell wrong on this application." She was very happy that she was able to see her spelling errors and was able to fix them before handing them to me. In her reflection of Google Docs she stated, "I enjoyed this application because it helps with spelling and mistakes."

In addition to accurate spelling, students demonstrated positive perceptions of the quality of their work. Google Slides is another digital tool that students can use to create projects within the classroom. I requested that the student create a slideshow based upon the inventions that they created and present them to the class. Every student was required to contribute to the slide show. I observed one group having a conversation and giving each other jobs based on their strengths. Two people were in charge of typing the important information on each slide, two people were in

charge of checking the spelling on each page and one person needed to take and upload pictures that aligned with the slides. This collaborative effort not only produced wonderful slideshows with no grammatical errors but also promoted teamwork in their creation and classroom presentation.

The following excerpts are from students' reflective journals, where they wrote about their experiences:

Students name	Except
Kristina	"I do enjoy using it because it helps me with spelling and writing more because my hand doesn't hurt when writing."
Joey	"It improves your writing, grammar, and if you have bad handwriting, it improves or makes it better."

These two students, as well as many other students stated that they enjoyed using the digital tools because it helped them with spelling and wrote legible work.

### Discussion

The purpose of this study was to explore the use of technology within English Language Arts (ELA). This study was focused around the following research questions:

- What happens when teachers incorporate technology into English Language Arts?

- What are students' perspectives about the digital tools teachers use?

This research study took place over 5 weeks. During these five weeks, I was able to incorporate technology into my ELA block and discovered that using technology does help support students in ELA. Students with various learning styles are able to use technology and apply it appropriately to assist them in ELA. "Integrating digital tools into the ELA classroom has the potential to support effective writing instruction by bridging the gap between home and school writing practices, influencing the development of ideas, and providing authentic purposes and audiences" (Groenke & Laughter, 2005, p. 76).

Data analysis showed three main findings when incorporating technology within the ELA block. First, students stayed engaged using the digital tools included in this study. Student engagement is important because it correlates with students interests in their assignments. "There are various types of technology tools that can be used to encourage students to actively participate in the classroom learning process" (Sawang, O'Connor & Ali, 2017, p. 17). Having students engaged is important because when students are interested in the material that is being taught to them, they are more likely to use the taught material in the future. Next, data also showed that when using digital tools in ELA, the length of students' writing increased. "Using digital tools for drafting, editing, and revising, a word processing application is superior to paper and pencil" (Vue, Hall, Robinson, Ganley, Elizalde & Graham, 2016, p. 86). Giving our students the option of using digital tools for drafting, editing, and revising is important because both students and teachers can work off one document to help the student achieve a great written paper. Students and teachers can leave suggestions for the student to make in order to have a great paper. Students can simply delete what they previously wrote and rewrite it quickly with the new information. Using digital tools in English Language Arts also showed that students'

spelling accuracy increased with the use of these tools. According to Gupta (1998), “if students know the approximate spelling of a word, the spelling checker will supply a list of typographically similar words which may contain the word that the student wants” (p. 257). Many students understand the sounds within a word, but don’t necessarily understand how to spell the word correct. Since students’ are supplied with a spell checker on the digital tools that were incorporated in this study, students’ were able to use those sounds to spell the word as best as they could and the click on the suggested word that the digital tool believes that they wanted.

## **Conclusions**

### **Incorporating technology increases students’ engagement with the ELA content.**

Student engagement should be looked at first when planning instruction. In order for students to learn, they need to be fully engaged in the lesson. If students are engaged, they will be more attentive and will have a greater chance of applying the new material correctly. In the 21<sup>st</sup> century, our students are constantly using technology outside of school. Students are on social media and writing blogs about their lives. It is in the teacher’s best interest to apply technology in the classroom because we as teachers need to constantly stay on top of what our students’ interests are when they are in our classroom. There was a notable increase in student engagement when three digital tools were incorporated into my classroom. The noise level diminished dramatically because students were focused on their task with the technology. I found the quality of the students’ finished work was directly correlated with their level of engagement. Students papers were very well thought out and they were able to share their documents easily with their peers to peer-edit each other’s work.

### **Technology helps students produce longer papers.**

Incorporating technology into the English Language block helps students to create longer papers and edit their work more easily. Students can easily delete unwanted sentences and rewrite something new. Technology removes the frustration of having to erase over and over again in order create the essay with which the students are satisfied. Many students typically get frustrated when they have to erase something that they have written because it interrupts the flow of writing in a forward fashion.

During my study, I noted that when students used digital tools such as Google Docs or Google Tour Builder, they were able to easily delete unwanted text and insert new sentences. This allows the students to produce longer papers because they didn't have to stop their thought process to erase sentences that did make sense. Students could also insert words into their previous sentences to help convey their thoughts more effectively. This was due to the fact that students didn't have to stop their train of thought to insert additional words into their sentences.

### **Technology enhances students' self-editing.**

Researchers found that “when using pen-and-paper, students produced more spelling mistakes and the overall quality of organization and structure was less when they used a computer based word processor” (Corkett & Benevides, 2016, p.17). I have noticed in my research that when my students handed in their writing pieces, the majority of students' writing quality increased and their spelling errors decreased dramatically. Each of the digital tools that my students used had an editing tool that allowed students to check their spelling. Having this tool allows students to edit their own work and correct spelling errors. Students can easily look over their writing and when students see a red line under a word, it signals a misspelled word that can easily be fixed.

In my classroom, I have one student who is very self-conscious about sharing her work with other students in the classroom. She believes she is a poor writer because she often spells words incorrectly and writes slowly. When I began to explain to the students that we would be exploring the use of digital tools in ELA and would be peer-editing with each other, she got nervous and was hesitant to get started on her writing. As she began to spell words incorrectly, she noticed that she could easily right click on the word and change the incorrect word to the correct one. This tool gave her confidence to peer edit with the other students. She knew the other students could focus on the sentences she wrote rather than on the misspelled words. I was extremely impressed with her final writing piece because she had zero spelling errors in her paper. When using digital tools that have an editing tool are useful when students are writing their essays. It removes the pressure of spelling words incorrectly.

## **Implications**

### **Teachers and students need access to technology.**

“Technology for educational use is rapidly increasing and changing” (Borr, Napoleon & Welch, 2013, p.12). As teachers begin thinking about incorporating technology into their classroom, they need to make sure they have consistent access to it. “Instructional technology, however, may not be readily available, reduced budgets and funding may play a role in monetary allocation decisions” (Sundeen & Sundeen, 2013, p.8). If teachers are looking to use digital tools such as Google Docs or Google Tour Builder, they need to make sure they can access them easily. In my study, access was a minor issue when it came to incorporating technology into my classroom. Our school has given each of the grade levels one set of Chromebooks to use among three teachers. I was unable to use the Chromebooks every day and this was detrimental to

students' learning experiences. For example, I noticed that some of my students would forget what they were writing about if a couple of days passed and they could not see their creations.

Teachers should have access to the technology consistently to see the benefits of incorporating it into the classroom. If teachers have access to technology, they can explore more digital tools within the classroom and understand which digital tools work best for their children.

### **Students need to have access to programs with editing capabilities.**

Allowing students to have editing capabilities on the digital tools that I incorporated into their ELA instruction allowed them to correct their own spelling errors before they allowed their peers to read over their written work. Students are able to find their own errors and correct them rather than wait for another student or teacher to find them. Having this ability on Google Docs, Google Tour Builder and Google Slides allows students to focus on adding details to their writing content rather than on their spelling.

The editing tools helped a lot of my students who may struggle with spelling. Students were able to use this tool to help themselves check their own spelling. These students then began to be more involved with the detail in their writing rather than the amount to errors they would have in their essays. Editing capabilities should constantly be incorporated in any digital tool that a child uses in the classroom.

### **Limitations**

The limitations of this study included time, class size and grade level. Due to the limited amount of time, I was only able to explore the utility of three digital tools in my classroom. Also, my participant size was limited as I was only able to conduct research with one class of sixteen 6<sup>th</sup> graders. In order to gain a better understanding of what happens when teachers incorporate

technology into the classroom, it would be necessary to look at more students within other grade levels over a longer time period.

### **Suggestions for Future Research**

Technology is used worldwide. “Many of today’s students could be called “digital natives,” having grown up surrounded by technology” (Borr, Napoleon, Welch, 2013, p. 11). One suggestion that I have for future research is to explore other digital tools during the ELA block. Many students in my classroom have blogging sites that they use when they are on their cellphones. I would like to explore what would happen if I incorporated a blogging site such as Kidblog into my classroom. I could use this site for students’ responses as they read a whole class book together. Students’ would be able to respond to each other’s blogging post.

### **Overall Significance**

This study is important to me because many of our students are using technology outside of school. We are constantly urged to think about the students and what would help them become better learners. Today, the answer to that is technology. The results of this study show that students are more engaged with technology, the length of student writing increased and their spelling accuracy increased as well. Incorporating technology into the classroom can be a benefit to students in all grade levels.

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## Appendix

Rachel Hovey

IRB 2016-73

### Field Notes Template

Date: \_\_\_\_\_

Location: \_\_\_\_\_

Digital tool being used: \_\_\_\_\_

**Notes**

**Takeaways**

Student Technology Journal

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

**1. What technology application did you use?**

*Google Tour Bulder*

**2. What did you have to do on this technology application?**

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**3. What did you think about this technology application? Did you enjoy using it? Why or why not?**

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**4. Is there something you would change next time you used this technology application?**

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How would you rate this technology application?      1      2      3

Student Technology Journal

(1= I don't like this application to 3= I really enjoyed this application and want to use it again)

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

**1. What technology application did you use?**

*Google Docs*

**2. What did you have to do on this technology application?**

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**3. What did you think about this technology application? Did you enjoy using it? Why or why not?**

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**4. Is there something you would change next time you used this technology application?**

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How would you rate this technology application?      **1      2      3**

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

**1. What technology application did you use?**

*Google Slides*

**2. What did you have to do on this technology application?**

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**3. What did you think about this technology application? Did you enjoy using it? Why or why not?**

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**4. Is there something you would change next time you used this technology application?**

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**How would you rate this technology application?**

**1    2    3**