St. Cloud State University

theRepository at St. Cloud State

Culminating Projects in Teacher Development

Department of Teacher Development

Perceptions of Technology Use and Its Effects on Student Writing

Tessa E. Strain-Moritz

St. Cloud State University, tstrain@isd138.org

Follow this and additional works at: https://repository.stcloudstate.edu/ed_etds

Perceptions of Technology Use and Its Effects on Student Writing

by

Tessa Strain-Moritz

A Starred Paper

Submitted to the Graduate Faculty of

St. Cloud State University

in Partial Fulfillment of the Requirements

for the Degree

Master of Science in

Curriculum and Development

May, 2016

Starred Paper Committee:
Ramon Serrano, Chairperson
Stephen Hornstein
Mary Beth Noll

Table of Contents

List of Tables

Chapter 1: Introduction

Teachers frequently complain about the decline in writing quality and effort of secondary students, but they have a difficult time figuring out what is causing this to happen. These examples are pieces of actual student writing I have seen in my class this last year:

"i wake up for the great weekend. i usually get up and talk to my dad and figure out what we are gonna do. i eat breakfast. then i get up and get dressed and feel great." – 11th grade

"After sitting at home for an hour i got the sudden urge to go for a little bike ride. i asked the wife if she wanted to join and as well the neighbors john and ashley." – 12th grade

A plagiarized copy of Jack London's "To Build a Fire," renamed "In Need of a Flame." – 12th grade

"It's about a girl named casey newton and she is trying to save the world so it dont go to crap and the economy doesn't go downhill and so this little girl named athena gives casey this pin and she can go into the future to fix things." – 12th grade

A copy and pasted Wikipedia page, explaining the plot of "Walter Mitty."

The purpose of this paper was to explore the effort of increased technology use on students' writing ability. I wanted to research this because I am a high school English teacher, and as the years progress I see that academic writing has become more and more of a struggle. Due to the added use of technology in schools, I think students are having a more difficult time differentiating when it is appropriate to use this type of writing and when it is not. Their papers indicate they do not understand how to make this differentiation.

Students' papers are worrisome enough, but they also do not know how to write a professional email, which is going to affect them in their future careers. Aside from the

occasional abbreviation of "LOL" or an emoticon/emoji (see definitions below) in an academic paper or email, I have also noticed that writing using a basic sentence structure has become more and more difficult for students as well. They do not understand when they use fragments or when they use run-on sentences. I started thinking it may have something to do with their technology use. Aside from using abbreviations when they text or write online, they do not use proper grammar and punctuation.

When texting and when using Twitter, Snapchat, and Facebook, it is common not to write in complete sentences. Perhaps this has generalized to academic writing for many high school students. There seems to be a new literacy being created as text messaging evolves and as a person's online presence grows. More and more people have at least some kind of online presence, and they have adapted to a new way of writing while online.

The idea behind Twitter is that a person has 140 characters to "tweet" his or her thoughts. This is a very truncated form of communication in which complete sentences are not used, and sometimes complete words are not used. Facebook is also designed to be able to share thoughts and ideas quickly. Although there is no character limit, many people write in phrases and fragments on the site as well. Texting is another current technology that has an effect on writing. Texting is sending text messages between two or more people via telephone. These can include characters such as letters, numbers, and emojis. Emojis are symbols-a face or other image-used to convey a message without actually using any words. They are becoming more widespread as more people use smartphones and are a very short way to communicate a feeling to someone rather than typing out what they mean to say.

In school, students are expected to learn how to use technology to collaborate, communicate, and be a successful digital citizen. In our school, students are given Chromebooks and are expected to use them to access and complete assignments, collaborate with peers, submit work, communicate with teachers, and check grades. Our school uses a learning management system called Schoology, and many teachers use Google apps as well for students to complete work and share ideas. Not only does technology have an evolving role in our schools, but it does in our workplace as well. As a teacher, I use technology every day. I use it for posting assignments and notes online so students have access, communicating with parents and staff, collaborating with coworkers on a new unit or assignment, and teaching my students how to use it to be effective communicators. For example, my writing class uses Google Docs heavily so they can collaborate on assignments, peer edit, and share content.

Purpose of the Review

The purpose of this review was to explore the effects that specific types of technology use have on students' writing and achievement at the secondary level. This review of the literature is important because education and the environment students learn in are changing so quickly. More schools and teachers are embracing technology in their classrooms, and they need to have the tools and ability to continue to teach students in their evolving world. Students need to learn to effectively use technology to communicate because it is such a large part of most workplaces and communication is a highly valued skill in modern workplaces. They will be in professional positions soon, and they need to be equipped for communication in that type of setting.

Definition of Terms

For the purpose of this starred paper the following terms are defined as follows:

- Emoticons or emojis–symbols that demonstrate an "emotion" in text. Examples from

  NetLingo List of Smileys and Emoticons (2016):

  - : typed as : and) together; standard smiley face
  - ;) : winking face
  - 0:) : angel
  - :D : big smiley face, "sweet"
  - : typed as : and (together; unhappy/sad face
  - :'(:crying

- Social Media–online forums in which people interact and communicate. For

  example: Facebook, Twitter, Instagram

- Technology–digital tools including but not limited to cell phones, computers,

  programs and websites used on these platforms, texting, email, and so forth.

- Text shortcuts–abbreviations that are frequently used in informal writing. Examples

  from NetLingo List of Chat Acronyms and Text Message Shorthand (2016):

  - LOL: Laugh out loud
  - BRB: Be right back
  - BTW: By the way
  - IDK: I don't know
  - FTW: For the win
  - SMH: Shake my head
  - ROFL: Rolling on the floor laughing
  - HBU: How about you?

- Turnitin (2015)–a website teachers and students can use to submit work to check for

  plagiarism. It checks the internet for similar words and phrases to show how much of

  a student's writing is original.

- Writing Process–the process of writing and producing a written work

- Prewriting–generating an idea, building on it, and planning the structure and flow of a writing piece

- Writing–the first rough draft of a written piece

- Revising–second draft of the piece. This is the stage where a writer adds, deletes, rearranges, et cetera.

- Editing–the stage where one reads and revises a draft for mechanical errors (capitalization, punctuation, repetition, etc.)

- Publishing–submit the final draft

Chapter 2: Literature Review

This literature review covers student and teacher attitudes toward writing and technology. It also covers the impact of technology use on writing ability and academic dishonesty.

Students' Perceptions of Technology

Students perceive the effects of their technology use on their writing in many different ways. Of teens who text, email, instant message (IM), and use social media or other online communication tools, 73% see little or no impact of technology on their writing abilities in school (Lenhart, Arafeh, Smith, & Macgill, 2008). Lenhart et al. conducted a study consisting of eight focus groups that reported 15% of teens think technology has improved their writing, whereas only 11% say it has been harmful. Overall, 59% of teens say that computer use makes them better writers because they can revise and edit more easily (Lenhart et al., 2008). Interestingly, teens who viewed communication with friends through technology as "writing" were more likely to use informal writing styles in their academic work. Drouin and Davis (2009) found that more than half of the 80 college students they surveyed thought text speak was hindering their ability to remember standard English.

Researchers found many effects of technology use on student writing. Students agreed with some of the claimed effects of research findings, and disagreed with others, so some students do recognize an impact of technology on their writing. One of those effects is their use of vocabulary. According to Adams (2007), students who were accustomed to communicating online tended to stay away from higher level vocabulary, because that is not how they speak to their peers. It is beginning to have an effect on their academic writing. They just do not use the

vocabulary in their everyday lives, so they are not familiar with using it in academic contexts. One student had this to say:

>I would say it definitely cripples your vocabulary if all you are using is the same couple of hundred words that are abbreviated. If you are only seeing the same things in different combinations from people, then you aren't going to expand. I guess your mind can only get so small. If the extent of your reading is only the text messages and emails from your friends, then, yea, definitely, it isn't going to help you that much as opposed to a book. 9/10th grade boy, Pacific Northwest City (Lenhart et al., 2008).

From a survey conducted by Adams (2007), students also admitted they do not put a lot of thought into their writing. They have a difficult time concentrating on the task at hand since they are so used to multitasking with what they do online. This is affecting their ability to complete full and thoughtful writing assignments.

Some students do see technology as a positive tool in their learning. For example, a study conducted through two sections of 40 college students found that they rated the collaborative ability of Google Docs as high (a 4) and very high (a 5) on a scale of 1-5, and nothing lower (Suwantarathip & Wichadee, 2014). The study included two groups of students; one worked on Google Docs face-to-face with their peers in class, while the other group worked through Google Docs out of class. Students responded that: (a) they liked the ability to share ideas, (b) Google Docs promoted collaborative learning, and (c) its use increased interaction. However, results revealed the students gained only moderate knowledge. The researchers found no substantial difference in writing scores between the two test groups.

Teacher Perceptions of Technology

Carver (2016) surveyed 68 teachers on their perceptions of technology use in K-12 school settings. The survey was administered to teachers enrolled in graduate education programs. Survey questions addressed barriers in implementing technology into classrooms, benefits of technology implementation, factors that impact the frequency of teacher use, and factors that impact the frequency of student use. Of the 68 teachers who participated in the study, 74% were English or Language Arts teachers, and 19% taught high school. Carver found that the biggest barriers were the amount of technology available (61% of respondents identified this as a barrier), the location of technology (6%), limited instructional time (6%), and teacher knowledge or skills (24%). The findings of this study revealed that teachers had differing perceptions of technology. Aside from the barriers, teachers cited benefits that technology use has in their classrooms. Fifty-nine percent of teachers thought technology led to increased student engagement, 23% thought it helped their student's understanding of the material, and 95% thought it helped in differentiation.

Attitudes Toward Writing

Students, parents, and teachers all have very distinct views on writing and its importance in a successful life. For example, Lenhart et al. (2008) reported 86% of students believe good writing is important to success in life, whereas 56% of them would say it is essential. That number is even higher among those who write in their free time, with 65% agreeing that writing is essential. Eighty-three percent of parents see also see a need to be successful in writing, and they indicated there is a greater need to write well today than there was 20 years ago. Parents also think that their children write more today than they did when they were in school.

According to Purcell, Buchanan, and Friedrich (2013), 92% of 2462 teachers surveyed think writing is essential to formal learning, and "writing effectively" is necessary for success in life.

Attitudes Toward Technology Use

There are different attitudes among students, parents, and teachers towards technology use in writing. As mentioned previously, many students do not see a negative effect that technology has on their writing, whereas teachers would largely disagree. That being said, some students can recognize some of these effects, and are aware of them in their writing. According to Lenhart et al. (2008), 64% of students acknowledge their informal styles in academic writing, 50% know they sometimes use incorrect mechanics (grammar, punctuation, capitalization), 38% have admitted to using text shortcuts, and 25% have admitted to using emoticons in academic writing. According to Jackowski-Bartol (2001), many do not double-check their work; they simply use spellcheck. Students generally had the attitude that what they wrote on the computer was correct and did not need revision. It appears that although students can recognize traits that do not belong in academic writing (problems with structure, lower vocabulary use, and informal styles as a whole), they either do not see them as "negative" or they simply do not care enough to change their writing for academic purposes.

Parents generally view technology as a positive force in students' lives, although some would disagree. Twenty-seven percent of parents think their child is a poorer writer because of their children's technology use, whereas 40% claim to not see an impact on their children's writing (Lenhart et al., 2008).

Purcell et al. (2013) found teachers had different attitudes toward the use of technology in their classroom for writing. They found that 94% of teachers surveyed still encouraged students

to do at least some writing by hand. Responses to this survey varied greatly; some teachers preferred to use online tools to teach and assess writing, and some still had students do the majority of their writing by hand to prepare for standardized tests or to prevent plagiarism.

**Impact of Technology Use on
  Writing Ability**

This section reviews information on technology's impact on writing ability. It reviews how technology has an impact on the writing process and how it affects various writing skills. This section also addresses technology's impact on academic dishonesty.

Writing process. Adams (2007) reported that both teachers and students have seen an impact in the drafting stage. In this study, students tended to write in shorter "spurts," similar to how they write online and in text messages. They also tended to use more abbreviations in their writing, again very similar to how they communicate electronically. Students also admitted to a low effort to revise their papers, opting to use spellcheck instead of edit sentences and paragraph organization for structure or fluency. Nonetheless, because teachers were optimistic about the effect technology had on the publishing stage of students' writing. They thought students were able to reach a wider audience, and that was a positive writing with technology outcome.

Academic writing. Teachers have also seen a change in writing ability due to technology use among their students. Purcell et al. (2013) asked teachers to rate nine important writing skills on a scale of "poor, fair, good, very good, excellent" in their students' papers. According to Purcell et al. a cultural emphasis on shortened forms of communication, is affecting students' ability to organize and structure an essay. In the category of organization and structure, 24% of students received an "excellent" or a "very good," and 43% received a "good" or "fair." This means 33% of students are not demonstrating the skills necessary to organize and structure

an essay. In the category of tone and style, 56% of students were rated as "good" or above on

their ability to use appropriate style for their intended audiences. This is how students ranked in

the other seven categories (percentages reflect those that scored "good" or above): understanding

and considering multiple viewpoints, only 60% were ranked "good" or above; providing

constructive feedback to peers, 50%; appropriately citing and referencing sources, 43%;

synthesizing information from multiple sources, 56%; constructing a strong argument, 51%; read

and comprehend a long complicated text, 33%; and navigate issues of copyright and fair use,

33%. Table 1 reports Purcell et al. teacher's ranking of student's writing ability.

Table 1

Teacher Ranking of Student Writing Ability

WRITING SKILL	POOR-FAIR	GOOD-EXCELLENT
Tone/Style	1083 (44%)	1378 (56%)
Consider multiple viewpoints	984 (40%)	1477 (60%)
Provide constructive feedback	1231 (50%)	1231 (50%)
Appropriately cite sources	1403 (57%)	1058 (43%)
Synthesize information from multiple sources	1083 (44%)	1387 (56%)
Construct strong argument	1206 (49%)	1255 (51%)
Read and comprehend long and complicated text	1649 (67%)	812 (33%)
Navigate issues of copyright and fair use	1649 (67%)	812 (33%)

n=2462

Professional writing in academic settings and the workplace, falls into this category as

well. Drouin (2011) found a negative relationship between text speak and professional

communication (e.g., emailing a professor) and literacy (reading accuracy). This study examined

152 undergraduate students in a college setting, so it does not account for the population that

does not attend college. Conversely, Drouin found a positive relationship between frequent text

messaging and literacy skills such as spelling and reading fluency.

Academic Dishonesty

Williamson, McGregor, Archibald, and Sullivan (2007) researched information use by secondary students in four schools and their attitudes toward research and plagiarism. They found that the students they researched did not think they had to cite sources if they put the information in their own words, even if the information was new to them (they did, however, know they had to cite the source when using a direct quote). Basically, the students thought they did not have to cite sources internally when paraphrasing, and that a bibliography was enough. One student in their study had this to say about whether or not they needed to cite sources: "Um, not really. It was all pretty basic information. Like, if it was in depth but when I found it and did a dot point and expanded on it, it became pretty much in my own words." Their study also found that of students that plagiarize, and they all copied more from the internet than they did from books. The availability of the internet had a major impact on student work, with students seeing Google as a "total answer to all their information needs."

College students admitted to frequently cheating or plagiarizing. One of the most cited reasons for academic dishonesty was easy access to the internet (Grohe, Schroeder, & Davis, 2013). Cheating and plagiarism are unfortunate products of the increased use and access to technology. Not only does the internet make sharing assignments easier between peers, but students can literally copy and paste others' work and claim it as their own. Forty-nine percent of teens say they are more likely to take shortcuts or plagiarize when using computers (Lenhart et al., 2008). Sixty-eight percent of teachers think digital tools make students more likely to take shortcuts and not put effort into their writing, and based on responses in student focus groups, students seem to agree (Purcell et al., 2013). Also interesting were the findings that, according to

teachers in the same study, only 44% of students were able to properly cite sources. Academic

dishonesty and an inability to know when or how to cite sources seems to be a major problem

that teachers and students face in this technological world.

     Addressing academic dishonesty. Plagiarism is a major issue that teachers face in their

profession. In collaboration with teachers and media specialists, Williamson and McGregor

(2011) developed and tested teaching methods in three schools to increase awareness and

avoidance of plagiarism at the secondary level. The first method was raising awareness of

plagiarism in the classroom. Teachers accomplished this by conducting group and class-wide

discussions as well as direct instruction, document comparisons, hypothetical situations, and

examples of plagiarism. The second method they used was developing students' information

handling skills. They taught students how to take notes by focusing on main ideas and facts,

retaining essential information, and putting notes into students' own words in bullet-point form.

Teachers taught these concepts by modeling, examples, and providing scaffolding for note

taking. The third strategy was teaching students to attribute direct quotes and ideas they used

while paraphrasing information. After implementing these strategies, teachers and researchers

found that students had good recall of the information. They were most successful in recalling

how to take notes in their own words, using bullet points. The research also found that students

learned how to acknowledge direct quotes and paraphrased ideas, which is what a previous study

had found students struggled with (Williamson et al., 2007). Williamson and McGregor (2011)

interviewed teachers and concluded that there had to be school-wide changes to address the

issues. Teachers know that plagiarism will always exist, and the best way to combat that is by

continuously and consistently reinforcing student learning and plagiarism policies. Overall, the

research in this study found that teaching students to become aware of plagiarism and teaching

them how and when to cite sources should be consistently revisited across subject matter and

grades beginning in the secondary levels.

Online Resources

Students and teachers see values in using online resources in the classroom. According

to Vurdien (2013), tools such as blogs helped students put more thought into their writing if they

knew their peers would be looking at it, and not just their teachers. They also reported that

online tools increased their writing skills, provided them with better planning tools prior to

writing, and even helped keep them motivated. The 23 first-year college students in the Shih

(2011) study supported this idea. Students reported online tools assisted them with organization,

vocabulary, and spelling because they were able to obtain feedback and encouragement from

their peers.

Grohe et al. (2013) contended even though students admitted they have plagiarized, the

use of online resources helped change students' attitudes and practices toward plagiarism. Being

able to use sources like Turnitin helped students to have more confidence in their writing and to

shy away from being academically dishonest.

Chapter 3: Implications

While researching the effect technology has on writing, I came to the conclusion that it has a profound effect, but it does not need to be a negative one. Several studies showed the negative effects technology use can have on a student, but there are some positives to this use as well. In conversations with my students, I learned that technology use while writing helps with their spelling, it is faster to type, and it is easier to turn in assignments. They can keep track of their papers much better, and it provides easier access to research. To me, this means that I should continue using technologies such as Google Docs in my writing classes, at least for students to revise drafts and turn in final assignments.

One of the recurring themes in the research on this topic was that since technology and our use of it is evolving, our language use is evolving as well. Twitter is an example of a platform in which a person is supposed to write in short spurts, and keep it as succinct as possible. Online articles that are published today can even come in a list format (e.g., Buzzfeed). We see an emphasis on shorter and more frequent communication, and that is coming through into our society as these issues we see in student writing and reading ability. Purcell et al. (2013) found teachers rated only 33% of their students as being able to read and comprehend long or complicated texts. Many of my students have expressed that they would rather read a shorter article or list than a longer, more complicated text. As a teacher, this tells me that we need to teach students both the skills to be able to do this, and the motivation or purpose to complete a task like this. As our society shifts to these shorter forms of expression, it is still important to teach students why they should care about longer texts and teach students to work through more challenging texts they may not be accustomed to reading.

With regard to writing, I learned I need to be very purposeful in teaching students when it is appropriate and necessary to use academic writing. I need to teach them what it looks like, sounds like, and should be written like. I have come to the realization that some students simply do not know when to make the shift between informal and academic writing. I have also come to the realization that we need to teach students to revise their writing. According to Jackowski-Bartol (2001), students perceive that if they wrote it on a computer, it must be correct and does not need revision. This is something I see in my writing classes today. Students know they should use spell check; some do, some do not. In my conversations with students, the majority said they used it to fix their mistakes when they knew they had made them, and they cared to fix their mistakes as well. However, I notice that many of them do not realize when they need to revise their writing. Revision is something I now understand I need to teach in a more purposeful manner.

My students had some opinions on how technology may hurt their writing. Many of them said that using it provides distractions that would not otherwise exist. Many of them also said they think technology hurts their spelling and grammar skills. They indicated they do not know how to spell any longer. The computer automatically tells them it is wrong, and they do not care to learn how it should be spelled. The same problems apply to grammar when students are told they made a mistake and do not care to learn the rules. Their grammar skills do not then translate to when they produce a handwritten work. In my own experience in school, technology did not automatically fix the spelling and grammar mistakes I made. That is why we had spelling tests and learned proper grammar. When I was in high school, revision and editing skills were emphasized, often days were set aside to focus on this and conference with the

teacher. Now, even if students have time in class to complete revision and edits, they will often not fix them because they assume their work was written correctly the first time and any mistakes will be autocorrected.

One major disadvantage of autocorrect is miscommunication. Typing and texting provide ample opportunities for miscommunication due to autocorrect, but talk-to-text technology is also a major contributor to this issue. This is becoming a popular option for people texting and completing school assignments. For example, I recently received a text message that stated: "On the way now to get th em. V poo ukf you drnf s pic of your ins card?" Luckily, I had the context from previous messages to understand the gist of it, but even with context I did not understand other parts. If I had not received previous messages, I would have had no idea of the message content. Aside from the problems of spelling, grammar, and miscommunication, there are many other problems with writing and technology that students identified.

Another negative impact of technology on writing is that students say they feel less inspired. They do not think about what they are writing, and they do not put as much effort into their writing. They indicate that having access to so much information online while they are writing leads them to use other people's ideas, take information and reword it, and they do not really care to try very hard while word processing their writing. This information has made me think a great deal about how I organize and assign work for students in class. I think I need to start providing more paper assignments for things like pre-planning and drafting. This way, students are forced to use their own ideas instead of searching for what has been done in the past, and this will help them develop creativity. I also think this would lead to an increase in effort,

because if students cannot go online and find other's ideas, they need to put in the effort to use their own. I think students are more likely to put in effort when they truly own a project or idea.

Because the use of other people's ideas is one of the more negative aspects of technology's effect on writing, I asked my students about plagiarism. The Lenhart et al. (2008) study found that 49% of teens say they are more likely to take shortcuts or plagiarize when using computers. Many of my students said that cheating or copying another's work was a negative effect of technology, and several said it was easy to do and that they had seen their peers do it. In the past, students had been taught to do research via print sources. Although plagiarism was not unheard of, it was more difficult to copy another's work. Students were taught to cite sources without the use of technology such as EasyBib, and there was a greater emphasis placed on giving credit to original authors. Now, it is easy for students to cite sources and even easier for them to find resources to answer their questions to provide them with ideas. The students with whom I spoke to definitely thought that technology use made students lazier and therefore more likely to just open a new tab, copy someone else's writing, and put a little twist on it to call it their own. However, they also thought technology made it easier for cheaters to be caught.

I also spoke to other teachers about these issues, and they had some similar insights. One of the major concerns shared was the ease of plagiarism. Teachers said they are dealing with more plagiarism issues now than 10 years ago, which they attributed to the introduction of technology in the classroom. They found it was easier for students to copy and paste from an online source or another student rather than handwrite a passage from information obtained from a book-which is how reports were written prior to technology's introduction in schools. Teachers with whom I spoke said it was easier for students to plagiarize, and they think more

students actually do it now as well. They have had students actually admit to copy and pasting another person's work, rewording it, and passing it off as their own. Along with this, teachers expressed concerns about the lack of originality they see in students' writing. This leads me to the conclusion that we have to teach students how to think for themselves and teach them why originality is so important.

Plagiarism was not the only issue related to the use of technology in writing lessons. Teachers are also seeing "a laziness" in their students who are relying too much on technology to fix their mistakes. Students fail to capitalize when they should, include proper punctuation, and sometimes do not bother to correct spelling mistakes or learn how to properly spell a word. They rely instead on spell check and autocorrect. They forget basic rules of writing. In addition to spelling and grammar, teachers are also seeing that students have a poor grasp of formal writing. Students do not know when to use formal academic language and when to use casual language. They are so accustomed to casual writing while texting, Facebooking, tweeting, and using other forms of social media that they cannot make the switch to academic language when in school. This shows me that as a teacher, I have to teach students when they should use different types of writing. I need to teach them that even though they are using technology for something like writing an email, they still need to first be aware of the context in which they are writing and make appropriate language choices.

Although writing with technology has its pitfalls, there are some ways in which teachers viewed it as a learning aid in their classrooms. For example, teachers liked technology for its writing resources such as Purdue OWL, Easybib, and writing prompts. They also liked that it allowed students to edit and create multiple drafts more easily. In addition to resources, teachers

also liked that word processing helps more with illegible handwriting and its use make learning more relevant to today's students. I think we need to teach students how to use technology to benefit their writing and we need to teach students to use the tools they have at their disposal.

In the future, I plan on creating ways for students to consider issues such as effort and plagiarism in their writing. During conversations about these issues, Serrano (personal communication, March 22, 2016) recommended a writing prompt where students are asked to write a short piece using technology (Google Docs for example). They would then be assigned a number (instead of their name being attached to it), and exchange their work with another student. The student who receives this new paper will then use the internet to try to find what pieces of the writing have been plagiarized. This, in turn, would create a discussion with the class about where to go from there and how plagiarism should be dealt with in class. I can see this being very useful to encourage students to think about the issue of plagiarism in their academic lives and create a dialogue about what constitutes plagiarism. The study conducted by Williamson and McGregor (2011) supported the idea of having discussions with students about academic dishonesty and then teaching them strategies for how to avoid it.

Overall, in my research on this topic and my conversations with both students and teachers, I learned a great deal about technology's effect on writing. Many concerns were cited, such as plagiarism, effort, and writing skills. However, positive aspects of technology use were also reported, including more access to information, collaboration, revision, and providing students with skills they will need in college and the workplace. The biggest takeaway I had while researching this is that we need to teach students about technology and how to use it appropriately in their writing.

References

Adams, J. (2007). Student perceptions of the impact of instant messaging on academic writing.

Literacy Learning: The Middle Years, 2, 37.

Carver, L. (2016). Teacher perception of barriers and benefits in K-12 technology usage.

Turkish Online Journal of Educational Technology--TOJET, *15*(1), 110-116. Retrieved

from http://eric.ed.gov/?id=EJ1086185.

Drouin, M. A. (2011). College students' text messaging, use of textese and literacy

skills. *Journal of Computer Assisted Learning*, *27*(1), 67-75.

Drouin, M., & Davis, C. (2009). R u txting? Is the use of text speak hurting your literacy?

Journal of Literacy Research, 41(1), 46-67.

Grohe, B., Schroeder, J., & Davis, S. R. B. (2013). Using online resources to improve writing

skills and attitudes about writing and plagiarism of criminal justice students. *Journal on*

Excellence in College Teaching, 24(1), 23-45.

Jackowski-Bartol, T. (2001). *The impact of word processing on middle school students.*

Retrieved from http://eric.ed.gov/?id=ED453825.

Lenhart, A., Arafeh, S., Smith, A., & Macgill, A. (2008). *Writing, technology and teens.*

Washington, DC: Pew Internet & American Life Project.

Netlingo. (2016a). *Netlingo list of chat acronyms and text message shorthand.* Retrieved from

http://www.netlingo.com/acronyms.php.

Netlingo. (2016b). *Netlingo list of smileys and emoticons*. Retrieved from

http://www.netlingo.com/smileys.php.

Purcell, K., Buchanan, J., & Friedrich L. (2013). *The impact of digital tools on student writing and how writing is taught in schools.* Washington, D.C.: PEW Research.

Shih, R. (2011). Can web 2.0 technology assist college students in learning English writing? Integrating "facebook" and peer assessment with blended learning. *Australasian Journal of Educational Technology, 27*(5), 829-845.

Suwantarathip, O., & Wichadee, S. (2014). The effects of collaborative writing activity using Google Docs on students' writing abilities. *Turkish Online Journal of Educational Technology--TOJET*, *13*(2), 148-156. Retrieved from http://eric.ed.gov/?id=EJ1022935

Turnitin. (2015). *Products: FAQs*. Retrieved 5, April, 2016, from http://turnitin.com/en_us/ what-we-offer/faqs.

Vurdien, R. (2013). Enhancing writing skills through blogging in an advanced English as a foreign language class in Spain. *Computer Assisted Language Learning: An International Journal, 26*(2), 126-143.

Williamson, K., & McGregor, J. (2011). Generating knowledge and avoiding plagiarism: smart information use by high school students. *School Library Media Research, 14.*

Williamson, K., McGregor, J., Archibald, A., & Sullivan, J. (2007). Information seeking and use by secondary students: The link between good practice and the avoidance of plagiarism. *School Library Media Research*, *10.*