Online Communication Systems: Improving Writing Skills

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Presented to the Education Faculty
at the University of Michigan-Flint
in partial fulfillment of the requirements for the
Master of Technology in Education

December 2012
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I. Introduction

A. Background

Facebook, Twitter, blogging, texting, Skyping- the number of online communication opportunities for today's young people is vast. According to the Pew Internet Project, 94% of the teens surveyed now go online to use the Internet or email (Lenhart, Arafah, Smith & Macgill, 2008). In my own teaching profession, in the six years that I have been teaching technology I have seen an increase in opportunities for students to interact and communicate via the Internet. For the first two years of teaching, I did not allow my students to freely use email sites or social networking sites, because it was against school policy. For me, these communication platforms were for after-school in the comfort of their own homes where parents could monitor what was being forwarded back and forth through online communication systems. However, the world is ever changing and evolving and so it goes with technology and learning. If you follow the news you will witness a shift in what students are allowed to use in school to help them engage in their learning process, and this is all due to a shift by educational officials as they rethink state and school polices concerning mobile technologies and social media. What lies ahead is unknown but what is known is that emerging technologies are here to stay.

As we prepare students for the 21st Century and our global economy, my fellow educators, and
I must learn to embrace existing technology and new emerging ones. Author Marc Prensky coined the phrase, "Digital Natives," (2001), “Our students have changed radically. Today’s students are no longer the people our educational system was designed to teach. Our students today are all “native speakers” of the digital language of computers, video games and the Internet” (p. 1).

If our students are digital natives, could the use of a computer be effective in improving literacy skills? Could we use one of these existing technology tools, an online communication system ("OCS"), to motivate and engage students to become proficient at their writing? The technology itself is not a barrier --there are many OCS websites that are free, and one just has to create a login (and if less than 13 years of age be supervised by an adult). These websites are readily available to anyone with an Internet connection, and students already speak the language (Prensky, 2001).

A conversation with a 6th grade student about her experiences in writing encouraged this idea. I was curious about her thoughts on peer editing and whether she found this step in the process beneficial or not, and she said, “I'm not comfortable telling someone face to face their writing isn't good.” I then asked what about using technology or the Internet to peer edit and she said, “I would rather do that because I would feel more comfortable talking to my friends about their writing.”

Thus, my idea for this research project was born through a short conversation with a student. The use of technology to communicate is nothing new, but the idea of peer editing through an online communication systems is a new concept at the school I am employed. My research will investigate the value of this in process writing.

B. Research Questions

Using the students in the sixth grade as my research context, I will explore the following questions:
1. Can the use of online communication systems (OCS) in process writing, particularly peer editing using a commenting approach, help to motivate individual students to improve their writing skills? If so, what aspect do they find most motivating?

2. What writing traits and cognitive behaviors are specifically supported by the use of online communication systems in process writing?

3. What are the outcomes of engaging low achieving students in writing assignments when this type of system is used?

Sub-questions:

1. What are the advantages and disadvantages for certain students using an OCS?

2. How do peer conversations and, or commenting about writing using an OCS affect the type of revisions?

3. How does allowing students to post their published written work affect the quality of writing and student's attitude toward writing?

II. Literature Review

Process Writing

My literature review focuses on several areas of research and the implications they had for my project. First, I looked at research on process writing as it pertains to middle school, especially what the research says about students' perception of writing and what motivates them to engage in literacy tasks that will improve their academic achievement. I also looked at research about the effectiveness of peer editing using technology in process writing, including the cognitive behaviors and writing traits that it supports. Lastly, I examined literature about teens and technology (including how teens spend time online), along with current trends in the use online communication systems, and how the use of these
platforms can affect literacy.

My first search involved finding a current definition of the writing process. The current emphasis is on “process writing” -- writing instruction that focuses on process and not the end product (Tompkins, 1990). Here students of all ages work through five stages: pre-writing, drafting, revising, editing, and publishing. Students can move back and forth between these stages while writing because there is no set sequence to follow (Gardner & Johnson, 1997; Tompkins, 1990). Writing instruction can take on several forms, whether it is a Writers' Workshop model (Calkins, 1986), or a variant of this process approach called modeled writing (Graves, 1983). Regardless of the format of writing, handwritten or word processed, these stages focus on “quality writing” and learning the different genres of writing. There is wide agreement that “quality writing” is an important outcome of literacy instruction and an important component for academic achievement and proficiency.

Despite this, writing proficiency is at a crisis. In the United States a number of adolescents graduate from high school unable to write at the basic level required for college or employers (Graham & Perin, 2007). Moreover, about 7,000 students drop out of high school daily (Alliance of Excellent Education, 2006), many of these students drop out because they lack the basic literacy skills to meet the curriculum (Kamil, 2003). In addition, for those who do make it to a higher education institutions a recent survey by the National Writing Commission of Deans, administrators, and writing counselors at several four-year colleges stated that students at their institutions could not produce good quality writing defined by clarity, accuracy, and coherent (Graham & Perin, 2007). Many adolescents in my own classes mirror these trends.

Although nationally the average writing assessment scores for eighth- and twelfth graders have
increased according to The Nation's Report Card: Writing 2007, the same report also showed that in Michigan students' scores decreased by 1%. Other writing assessment indicators point to the 2011 Michigan Educational Assessment Program, MEAP, where, too, writing proficiency scores for Michigan students in grades four and seven decreased by about 1% when compared to the previous year. Nevertheless, this is a statewide average and for many school districts in Michigan the decrease was much larger.

What does this say about the state of writing instruction? We have moved into a new era, the 21st Century, and many educators say the writing curricula must change to meet the new tech-rich world. If academic achievement is the goal how can we embrace digital technology, and Web 2.0 tools? We know that people of all ages write as never before -- in print and online. In her article *Writing in the 21st Century*, Kathleen Blake Yancey (2009), President of the National Council of Teachers in English, says this about the new era of writing:

> Perhaps most important, seen historically this 21st century writing marks the beginning of a new era in literacy, a period we might call the Age of Composition, a period where composers become composers not through direct and formal instruction alone (if at all), but rather through what we might call an extracurricular social co-apprenticeship. (p. 5)

Yancey is discussing the idea that the Internet gives individuals the opportunity to write and exchange ideas and knowledge freely; there is the opportunity to peer co-apprentice in a networked environment. But how is this growing trend going to affect writing quality? We know that good writing practices begin in the elementary level and continue throughout high school and beyond.

Putting aside writing instruction briefly, I took a look at how teens perceive writing and their future. The Pew Internet & American Life Project, part of the Pew Research Center, a nonpartisan
organization that conducts research in different types of issues that shape America and the world, conducted a survey on writing, teens, and technology in 2008 (Lenhart et al., 2008). The survey found that students agree that they are embedded in a tech-rich world, and that their ability to write effectively will impact their future; statistically, they found that of the teens surveyed 98% agree that writing is at least somewhat important to their future success (p. 42). So if students agree writing is important and that it is a tech-rich world with opportunities to network and share writing, and they agree good instruction is needed to be effective writers, then what is at the heart of effective writing instruction?

This question led me to specifically look at literacy best practices for adolescent middle school students and how can we move all students toward being proficient at writing to gain academic achievement. No matter the grade level or cognitive ability researchers in the area of effective instruction say that there are two factors that must be present in order for students to be engaged in literacy tasks, whether it be reading or writing, and they are motivation and engagement (Irvin, Meltzer, & Dukes, 2007). These two factors will improve students’ academic literacy skills, which will improve their content-area learning and ultimately academic achievement.

Motivation and Engagement

First, what is motivation, or more specifically, what is motivation as it applies to writing? In the dictionary, motivation is defined as a process that elicits, controls, and sustains us to act in a certain way (Merriam-Webster, 2012) and it can be driven by intrinsic or extrinsic factors. Intrinsic motivation includes things like pleasure, enjoyment, interest, and skill building -- those inner drives that sustain engagement. On the other hand, extrinsic motivation includes things like good grades, money, college admission, or in the case of a teacher, receiving a good teacher evaluation rather than teaching students
to engage in process writing for the enjoyment (Boscolo, 2007). Extrinsic motivation is not necessarily a bad thing and both types can motivate a student. For example, if a student enjoys writing but is also motivated to get good grades so they will be rewarded with academic achievement, then you can say a student is motivated by both (Ormond, 2008). Whether it's intrinsic or extrinsic factors that sustain our actions, or a combination of both, if one is motivated they will be engaged in a task. In an educational setting this is an important concept in learning.

Brophy says that student motivation, in an academic context, is used to explain the degree in which students invest attention and effort into various pursuits (as cited in Ballinger, 2009, p. 123). In terms of literacy, there are different views on how students are motivated to engage in writing traits. For instance, Kimberly Ballinger (2009) in her study on academic writing motivation found that motivation affects learning in four ways: it increases energy and activity levels of individuals; it directs learners toward a certain goal; it promotes initiation of, and persistence in, activities; and it affects learning strategies and cognitive processes (p. 2). Others say that attitude or a view of writing is what motivates students to write (Graham, Macarthur, Fitzgerald, 2007). Two contributors, Boscolo and Gelati, in the book *Best Practices in Writing Instruction*, contend that attitude is a set of beliefs that students develop through writing activities in which they are asked to write. In turn, students' attitudes toward writing influence their approach to specific writing tasks and, therefore, the degree to which they are willing to engage in those tasks. They go on to say if there is a lack of motivation it is something that probably has developed over time through writing tasks that are rigid, repetitious, or boring -- in other words, writing that is detached from classroom activities or goals that are set by the teacher and not understood by the students, and so the writing task had no real audience except the teacher (Boscolo, 2007).
What, then, motivates students to be engaged in literacy tasks like reading and writing? My research found several promising studies. As referred to previously, The Pew Research Center Internet & American Life Project on writing, teens, and technology (2008) asked teens what motivates them to write. The majority of teens surveyed said that the topic must be relevant; in other words, they wanted to write about something that mattered socially and had an impact. Also, teens said they are motivated by high expectations from a guiding adult who pays attention to them and respects and praises them. Notably, 53% of the teens surveyed said that the writing instruction they got at school had the most impact on improving their writing skills. Lastly, the survey said an interested audience and the opportunity to write creatively motivated students to write (Lenhart et al., 2008). As previously mentioned, in her qualitative study on academic writing motivation of adolescents Ballinger (2009) contends that writing that involves interaction between peers is a way to increase academic writing motivation; also, students appreciate different formats for peer editing and opportunities for collaboration. There were three things that stood out for me in this study: the idea of peer interaction, different formats for editing, and collaboration as writing motivators. If our goal is to improve academic achievement through writing tasks that motivate students to be engaged in writing, what are the implications for online communication systems, OCS, and writing? The use of an OCS could support all three of these motivators.

**Online Communication Systems, Peer Editing, and Collaboration**

For this study, there are some specifics I must define. First, for this study I define an “online communications system,” or “OCS,” as any type of web-based tool that allows individuals to interact and communicate ideas via the Internet. This type of interacting can be done synchronously (real-time), where individuals are online at the same time, or asynchronously, where contributions can be made
anytime, saved, and viewed at a later time. The communication can take the form of importing text, video conferencing, or audio. Second, the specific type of online communication I will focus on will be commenting made peer to peer in the editing step of the writing process. This is an important step in the writing process because it is when students collaboratively help each other edit writing pieces. In a cooperative classroom, classrooms were students' work together toward a common goal, peer editing can be an effective way for students to review, discuss, and edit their work. Author Roy P. Clark says this about peer editing, “The process of peer review has many advantages. It creates an audience for the work of the student writer.” He further states peer review encourages students to write to a “real” audience, which makes them conscientious of their work (Clark, 1995).

What does the literature say about peer review and motivation? As previously stated, Ballinger found that interaction between peers was a way to increase academic writing motivation and students appreciate different formats for peer editing and opportunities for collaboration (Ballinger, 2009). OCS as a platform for peer editing could lend itself to increasing motivation and we already know that when one is motivated one will sustain engagement in a task. In addition, this type of communication lends itself to the cognitive learning process theorized by psychologist Lev Vygotsky who studied how people think, learn, and remember (Blake & Tambra, 2008). Vygotsky emphasized the roles of social interaction and instruction. He said development does not precede socialization, but rather social structures and social relations lead to development of mental functions, or cognition. More importantly, social interaction plays an important role in student learning. It is through social interaction that students learn. This led me to review literature on the strategies educators have used to combine OCS, peer editing, and collaboration, and the outcomes of those strategies. We know that online communication systems can support collaboration, but how have educators used them and what were
the results of their usage in improving writing skills?

In, *The Write Technology*, Melanie D'Amore, a writing teacher at a school for the deaf in New Jersey, discussed her experiences of combining two literacy strategies -- an electronic read around and online synchronous chats -- to discuss writing topics before students began the writing process and peer commenting, once the writing was at its editing phase (Strassman & D'Amore, 2002). She found that students were highly motivated given the popularity of emailing and chatting and the peer input helped students to view writing as a social process in which the emphasis is on generating meaning to the task of writing (p. 29). Likewise, it helped those writers whom were not proficient at writing bring strengths (e.g., knowledge of word usage and connotations, effective organization techniques, or conventions) to the editing process through commenting on text (p. 30).

Two other inquiries relevant to my study looked at the effectiveness of collaborative commenting using OCS with high school students and college students. In the article *Peer Editing with Technology: Using the Computer to Create Interactive Feedback*, Debbie Perry and Mike Smithmier had individuals track their comments and the subsequent outcome of their comments. Through this tracking of revisions, they stated, students were able to identify personal strengths and weaknesses not only in their peer editing but also their writing. Consequently, a student’s portfolio assessment will have evidence of literacy growth as a writer and an editor (Perry & Smithmier, 2005). Another study looked at the types of comments reviewers produce at college level as well as their perceived helpfulness. The authors maintain that the possibility a writer gains nothing from reading their peers comments is remote; also, that if a student is capable of using an instructor’s comment to make improvements, and if students’ concerns about the quality of peers’ comments were diminished, would we see similar improvements based on peer comments (Cho, Schunn, & Charney, 2006)?
This study I found very helpful for my own inquiry. First, even though the basis for this study was to just analyze the types of comments graduate and undergraduates provided to peers and to compare to those made by subject-matter experts; it gave me the framework for how I would track my subjects' comments. Second, the authors looked at what comments the undergraduates perceive to be helpful in revising their writing (p. 262), but they did not track the revisions. This was one drawback to the study, but the study gave me the idea for my data collection and analysis, which I will discuss later.

**Teens' Online Activity**

The last area of review focused on teens and technology: how they spend their time online and how this trend could support literacy learning. A 2008 survey found that 94% of teens now go online to use the Internet, which is most certainly higher now. Furthermore, more than half (58%) of all teens maintain a profile on a social networking site such as Facebook and 27% of that percentage has an online journal or blog. These blogs are predominately maintained by girls- 34% versus 20% boys (Lenhart & Arafeh, 2008). Likewise, they found that bloggers, those who write on blogs, do more different kinds of writing, and more frequently, than other teens (p. 34). The report also stated that of the teens who blog, 65% of them feel writing is essential to later success in life, compared to 53% of non-bloggers (p. 35). So how does this trend support literacy tasks, and what do the studies say about this as a means to motivate and engage students in literacy task, so they achieve academic success?

First, let's start out with a definition for weblog, or "blog." A blog is a website consisting of entries, or posts. A blog typically includes features designed to encourage user interactivity, such as comments and links (Gunelius, n.d.). In 2011 Tumblr and Wordpress, both blogging platforms, had a combined total of 109 million blogs (Pingdom, 2012). Bloggers write about all kinds of topics that are
relevant to them. In fact, many of the teens surveyed in the Pew Report on writing and technology commented on the positive push publishing or presenting to a formal audience provided for their writing and, likewise, the social connection it provided as a means to motivate them to write (Lenhart&Arafeh, 2008, p. 58-63). This idea of social connection is important to learning in the perspective first developed by psychologist Lev Vygostky, who said social interaction leads to development of cognition, and through these interactions students learn (Blake & Tambra, 2008).

To think about it another way, if 94% of teens now use the Internet, wouldn't publishing to the Internet allow for wider audiences? Rachel Karchmer-Klein, a contributor to the book Best Practices in Writing Instruction, devoted a chapter to best practice in using the Internet to support writing (Graham, et. al, 2007). She stated what we do know is that the Internet encompasses several components that set it apart from printed text. Of the components she named, I found relevant for this study her idea of the Internet, say a blog or journaling site, providing an authentic audience for posted work — anyone can access it anywhere and anytime. She also said posting encourages students to pay closer attention to spelling and the appearance of their final product (Karchmer-Klien, 2001).

The other feature about the Internet in the writing process, Karchmer-Klein says, is the interactiveness of the Internet because by inviting others to critique and comment via Internet it helps to give writers a different perspective and insight on their writing. Richard Gebhardt in his essay on collaborative writing says this is especially important in the early stages of writing when young writers are developing their own style (as cited in Hamilton, n.d.). Also, it makes the Internet seem less vast because responses are made from real people. On the other hand, the downside to the Internet, she says, is that a specific audience cannot be targeted because it has no boundaries. The process writing approach emphasizes the importance of targeting a specific audience so writers must think critically
about the intended meaning and must acknowledge that some reader might misconstrue their work (p.
225). Regardless, blogs provide another way to showcase published works of writing with the
opportunity to add comments and interact. These social interactions provide another means for student
learning in a digital world.

III. Background and Methods

A. Description of Participants

I teach in a public academy in a suburban school district in Michigan. Our student body is very
diverse, our largest two groups being African American and Hispanic, followed by Caucasian and
Polynesian, and Hmong being the smallest sub-group. Their socioeconomic status is more
homogeneous; most of our students come from families with at near poverty level status. Ninety-five
percent of our children receive free or reduced lunch. Some of our students come from a traditional
family structure, while others come from a more non-traditional family structure. For example, it is not
uncommon for siblings living in the same house to have different fathers yet they share the same
mother. Also, grandparents are raising some of our students because the biological parent is not a part
of the child's upbringing for whatever reason.

Student retention is difficult to maintain (L. Bailey, personal communication, May 15, 2012). If a
child is being pulled out from our school it is policy to ask them to fill out a survey to help us improve
our school. Often parents note they are enrolling their children elsewhere, noting dissatisfaction with
our discipline policy; other parents have had transportation problems, and recently, due to the economy,
others have moved out of state; a small number have even stated our curriculum is too rigorous and
proceed to place their child back in the previous school. This mobility can have a negative effect on
achievement. Students who move between schools experience problems like low achievement due to
discontinuity of curriculum between schools, behavior problems, and difficulty developing peer relationships (Rumberger, 1999). Therefore, we are continually working with students through remediation to catch them up academically to their peers so they can be successful, and behavior problems are often hard to break because there is no stability and consistency in consequences due to this mobility and lack of parental control in the home setting, too. However, once we have a student for more than three years their academic growth seems to improve (C. Sugerman, personal communication, May 15, 2012). The data we have collected from Michigan Educational Assessment Program (MEAP), Performance Series - a computer based standardized test given three times a year, for grades second thru eighth - and MAT8 testing which is for grades kindergarten thru first grade twice a year, supports this theory.

Technology in the form of computers is absent from some of our students' homes; if a computer is available some state they do not have Internet connection. Each classroom, kindergarten through eighth grade, has at least three computers available for students to use and all have Internet connections. In addition, we have a thirty-computer lab that is used constantly during school hours in fifty-minute increments. I am the technology teacher in the lab for three class periods each day of the week and during the other hours of the day the lab is used for classrooms to use CompassLearning Odyssey. This is an online program in which teachers assign students lessons based on classroom learning objectives.

My job as the technology teacher is to use the Michigan Educational Technology Standards (METS), and the Michigan Grade Level Content Expectations (GLCE), to create lessons that align with classroom instruction for grades kindergarten through eight. My philosophy as a teacher is that the use of computers is an instructional tool used to support student learning; therefore, technology is integrated into the curriculum through my lessons. I also believe that technology is not a substitute for good instruction and that it is not my job to instruct them on new content but to collaborate with the
core teacher and support their learning objectives while aligning with the Michigan Educational Technology Standards. In School Investments in Instructional Technology, Anderson and Becker argue that technology is not a substitute for good instruction; effective teachers should provide intellectually powerful and technology rich environments for students without undermining sound pedagogical practices (Anderson & Becker, 2001).

Hence, when I introduce a lesson, I have already discussed with the teacher where the students are in a particular learning objective, vocabulary that has introduced, and any deficits the teacher feels need to be addressed in the lesson. My next step is to search for a lesson on the Internet that someone has created or create my own, using technology as the tool to teach the objective. Often my assignments are project-based with learning objectives posted both digitally on the classroom's webpage and the Smarttech© Notebook lesson as well as handwritten on the board. The assessment is the end product and often I ask students to give me a written reflection on their learning process. David Jonassen in his book Meaningful Learning with Technology states that lessons using technology must be active, constructive, cooperative, intentional, and authentic (Howland, Jonassen & Marra, 2011). Therefore, all my lessons are designed with those objectives in mind.

The students I selected as my research subjects were the sixth graders in 2011-2012. Their English Language Arts teacher said they are struggling academically and she felt they lacked motivation to be successful writers. With that in mind as I set out to construct this research project in attempt to find a means of motivating these students in the writing process with the outcome of improving their writing skills. My objective, however, was not to undermine the ELA teacher's practices of teaching literacy skills, which showed success in the 2011 MEAP writing scores of the current seventh grade students. These scores showed that more than half her former students met or exceeded writing expectations for this group of students (MEAP, 2011). This is a clear example of her teaching ability, so perhaps this
group needed something more technology based in the writing process or more motivating to move those not meeting expectations over the edge.

Consequently, after a brief discussion with her we agreed it was not her instruction, based on past test scores, but perhaps a combination of motivation, students’ mobility, and lack of family participation in their child’s academics that accounts for her sixth graders’ poor writing habits. A clear indicator of their attitude toward writing was presented in a pre-survey they were given at the beginning of the project (Appendix A). Four students indicated they like writing a lot, the remaining eight students who took the survey said “some” to “not at all.” Also, when asked if they wish they had more time at school to write most students said “not at all.” Though this class’s writing ability will not be assessed until the 2012 MEAP writing assessment, the teacher fears they will not show proficiency and, therefore, it will reflect on her performance as a teacher. In an informal conversation she stated:

I have 10 girls and 8 boys, seven of these students receive special services and most of the others are lazy. I only had one student on the last card-marking make the honor roll, the rest get “C” and “D’s.” They lack motivation to write, let alone, peer edit. We go through lessons on what makes quality writing, model through samples on the Smartboard©, talk about word choice, detail, voice, spelling, grammar and all the things that make quality writing but they just don't seem to care. We model peer editing, they get with a buddy go through the motions and nothing seems to work (Interview, 2012).

The ELA teacher's literacy curriculum is a melting pot of different research based programs that include- 6 + 1 Traits of Writing©, Thinking Maps©, Step-Up-to Writing©, Writers Choice, and a blended writers workshop in her class. She stated, “Homework is given at least four nights a week, but some just don't do it.” She also added that her students keep a writing journal for free-writing and published writing pieces go through the process writing steps: pre-writing, drafting, revising, editing, and publishing. Peer editing is done the traditional way, face-to-face, and since computers and time are limited, most published writing pieces are handwritten. A manila folder serves as a writing portfolio for
published pieces. Any word-processed pieces are printed, too, and stored in the folder for the student to take home at the end of the school year.

My research began with the following questions: if we gave these sixth grade students the opportunity to peer edit through an online communication system (OCS), could we improve their chances of showing improvement in their writing skills thus their academic achievement? Given 53% of the students enjoy texting and emailing (Appendix A), and given their demonstrated enthusiasm in using “Edmodo” a social learning network for teachers, students, and parents that I periodically use in my classroom, could the system be a motivational factor?

Consequently, I selected to use Google Docs, a Google product that allows students in real-time to add comments to documents. The sharing of documents was important to this project because in order for students to post editing comments they needed to be able to see the comment without having to save and send. Also, Google Docs was designed with the idea that one could create and share files online by sending one a link to a file or sharing with an individual through email. This sharing files idea was a key component in my decision to use this system because it was my hope that it would prove worthwhile for students to be able to peer edit at home with classmates and the like. Also, it is something new to our students because they were only familiar with the traditional means of peer editing or the teacher editing their writing. Moreover, the word processing component is similar to Microsoft Word, which is what we use in the lab.

B. Description of Activities

1. Student introduction to peer editing using Google Docs

My first step in this research project was having the ELA teacher go through peer editing in the homeroom using a lesson called *Peer Edit with Perfection: Effective Strategies*. She had used this
lesson early in the school year but felt it was necessary to model it again for the students. The lesson was found on the ReadWriteThink© website (Dennis-Shaw, 2012) and we agreed it looked simple and effective in teaching the main components necessary for peer editing. It involved a three-step strategy for peer editing that had a slide-show tutorial and worksheet for students to complete. Students completed the worksheet independently after the lesson and then edited a writing sample on the Smartboard with the teacher using the strategies from the lesson. Next, students exchanged writing journals and went through the same editing process collaboratively with one another. Collectively we felt the lesson hit the important writing traits a good writer needs for effective editing and revising.

Our second step was to select a writing topic for our first sample and then introduce them to Google Docs' word processing features. Google docs had two purposes for us: 1) individuals would word process their writing piece and 2) they would post comments that centered on compliments, suggestions, and corrections as presented in the Peer Edit with Perfection lesson. My classroom of 30 computers could be converted to an editing center where students could roam the room peer editing and creating a feeling of collaboration and interactive feedback amongst peers (Ferry, 2005).

For the first sample, the ELA teacher selected a persuasive letter they were currently writing. The letters were written in their writing journals and were still in the drafting stage. Together we felt the students were ready to use the OCS to work through the peer editing process in the computer lab, so I proceeded to create a Google account specifically for my research subjects even though I currently have a classroom account for my students to use. I knew that the logistics of using the same account could cause problems in my collection and analysis of the data because students can easily tamper with other students' documents. However, one of the features of Google Docs is that the user has the ability to view a document's history and revert to the old version of the documents or restore deleted files, if needed. Another feature that makes this system appealing is the creator of the account can request to be
emailed when changes are made to this particular Google product. For instance, if during non-school hours I see student work being sabotaged I can remotely change the password. Of course, the whole purpose of an OCS to peer edit anytime anyplace is the purpose of this study and I would hope students would not misuse it.

Likewise, during the introduction of the project I also included a discussion with the students on why I was doing this study with them and what specifically would take place. I wanted the students to understand that the writing process is not only an important part of their academic success in school, but also their future. Also, that writing should not be an isolated activity in school and the use of an online communications system, like Google Docs, could prove to be an effective way for individuals to help each other become better writers.

The whole process of writing, editing, publishing took about three months and we worked through the process using three writing genres. The subsequent samples included a paragraph the ELA teacher called a "precise paragraph," for which students had specific topics to choose from, and the third sample was a topic of their choice -- she called this last topic "free-writing." Because the literature I reviewed argued that students are more engaged in learning when the topic is meaningful or relevant to them, I wanted to include such a sample in this study.

2. Measuring student outcomes using an online communication system

Three writing samples were peer edited and revised using Google Docs. After each sample was drafted students were given a print out of the ThinkWriteRead© model for peer editing that gave examples of types of compliments to give peer, types of detail suggestion to add, and specific correction one might suggest. I instructed the students to move through each commenting type and asked them to include their initials as part of the comment. The initials served two purposes, 1. If the author needed further clarification they would know who to contact, 2. I could track whether certain
peers focused on certain traits of the writing process and whether others sought them out to improve certain areas: word choice, details, mechanics, or organization (Perry, 2005).

As part of data collection, I asked the students to word process their writing piece in Google Docs and as individuals finished find peers to exchange computers and go through the three part editing process. I asked students to not make any changes until next session so that I could take a screen shot of the comments and documents. I anticipated students deleting comments so I felt a two-session approach was necessary. This would give me the chance to record the types of comments, and then compare the after commenting version of the document to the original document. The next session, students were asked to read all their comments and make changes based on suggestions. I mentioned to the students that if they need clarification from the author of the comment please contact them (Appendix B). In addition, the same procedure was done on a sample-writing piece students peer edited in class. This could serve as a comparison and it might be noted the teacher, too, added comments and specific changes needed on the draft and the like was done using the OCS (Appendix C).

3. Outcomes of publishing: Blogger

For purposes of publishing or showcasing the students published piece I had one of the students create a weblog or Blogger, as Google calls it, using our account and I suggested we entitle the blog AOWWRITERS so that the whole world could read what they have wrote. They agreed and several students uploaded their first sample and the majority uploaded their final sample. I told the sixth graders I wanted the whole world to see what great writers they were and I encouraged them to tell their family and friends about the site. I also created a link to the site on our school homepage so parents and other student could easily access it.

C. Data
As previously stated, over the course of five months I collected three writing samples along with comments posted using Google Docs and two handwritten sample with peer and teacher editing comments written on the document. In both cases, the rough draft and published copies were collected and copied. The average number of students who participated in the writing assignments and the subsequent commenting using the OCS was 11.5 and it must be noted it was not always the same students in each. Variations were due to absences, or lack of student participation completing the writing assignment. The handwritten samples, additionally, do not include all students in the class either. The average number of students whose samples were collected was 8. This is due to, again, students not completing the assignment on a timely basis, and to absences.

There were also three surveys given to the students. The first was a writing attitude survey the students completed in February and again in May. It was the same one for both so that I could analyze changes in their writing attitude. I also created a survey for feedback on this project and their perception on whether using an OCS was beneficial to the writing process (Appendix D). I also added questions about their perception on the whether writing skills are of importance to their futures. All information and data collected is provided in Appendices A, D, and E.

Data from the blog, AOWWRITEERS, is also part of my analysis. After the last assignment using the OCS one of the students in the class volunteered to help peers upload their published pieces. It might be noted early on in the project a couple published pieces were uploaded to show the how easy it is to publish to the Internet and this was part, too, of my data collection. It is worth noting that I made the blog “public” to allow it to be viewed anywhere and anytime on the Internet and comments could be posted without constraints. Also, I put a link to the blog on the school homepage and encouraged classes to read what other students from our school had composed and published on the Internet. Google has available analytical data pertaining to readership of their products. This feature made
analyzing easy because it was already done for me.

D. Method of Analysis

1. Online Communication System and Handwritten Samples

Each sample was analyzed using the method Cho, Schunn, and Charney used in their study of college students commenting using an OCS (Cho, et al, 2006). In this study the authors examined the types of comments made by peers versus subject matter peers. The data collection focused on “specific” comments, including: 1. specific compliments about the writing, 2. specific suggestions about content, like adding detail or organization issues within the text, and 3. specific corrections about grammar or punctuation errors. In the same manner, I collected data on “non-specific” comments peers added that really gave no detail or particular suggestions for editing. I added this to my analysis based on previous experiences with student editing and to give me more data on how we can further help students become proficient at writing.

Consequently, in my analysis of student writing I used the three types of commenting categories used in the ReadWriteThink© lesson on peer editing and categorized the comments using Cho and et.al method of tracking. I collected data on the student’s types of comments, noting types and whether changes were made. This allowed me to examine whether there were parallels between the types of comments and subsequent edits made to their writing. The same criteria for analysis were used on the handwritten writing pieces, as well.

On these same lines, I collected data on whether the author carried out the changes suggested on both forms of writing, handwritten and keyboarded and, likewise, did the author make changes based on their own perception of needed improvement on their own accord. In order to find out whether using an OCS helped improve writing and was worthy of helping students with writing, there should have
been a correlation between the actual changes made and the type of comments students receive. Because most writing in middle school is handwritten and they are familiar that format, I used these samples as a baseline to help me analysis whether posted comments were perceived as being just as credible, as posted comments.

2. Blogger: AOWWRITERS

Examination of the blog centered on the author of a particular post and the types of comments and replies, if any; also, the number of page-views and the timeline of when the blog was viewed were analyzed. This helped me to answer the sub-question pertaining to allowing students to post their published written work and how that affected the quality of writing and student's attitude toward writing. I cross-referenced this with the writing attitude survey and looked for similarities in perception to writing attitudes of students.

3. Survey

Three surveys were given. The first survey was a writing attitude survey and it was given at the beginning of the project, February 1, and the same one was given again May 23. The purpose was to see if student's attitudes toward writing change as the project progresses and also to see if their attitude matches the statistics found in the PEW report on writing. The third survey was given the first of June after the project had concluded. This survey was entitled “Final Thoughts.” The purpose of this survey was to give me information about their perspective on the importance of writing for their future, peer editing, and the teaching of writing. All surveys were anonymous but they had the option to include their name if they desired.

Analysis of the data from these surveys was examined and used to inform my findings of students' actual writing samples using the OCS and comparisons of the handwritten samples. I examined their responses to the survey to verify what they actually did when they worked through the
project and whether their perceptions of writing and this project seemed consistent.

IV. Results and Analysis

A. Online Communication System:

As stated previously, the analysis of students writing using an online communication system and the peer editing process involved categorizing comments, and this provided me with much of the data needed to answer question 1 (Appendix F). The commenting categories included: compliments, suggestions, and corrections based on the ReadThinkWrite® lesson. Under these categories I made the sub-categories “specific” and “non-specific” comment. A “specific comment” meant that the comment referred to a particular thing the author did right or the author was specifically told to do something to their writing to improve it; a “non-specific comment” meant that the comment did not give enough detail for the author to know precisely what was well done or what corrections should be made.

For example, a specific comment might be as follows:

In contrast, a non-specific comment would not tell the author what was done particularly well, though it still might be a compliment meant to encourage the author:

The average number of specific compliments was 24 or about 1.7 per student while in
comparison non-specific compliments were 19 or 1.3 per student. In comparison, the amount of complimenting was almost zero when the handwriting samples were analyzed. The data showed that of the two handwritten samples that data was collected there was an average of 2.5 specific compliments and 1.0 non-specific compliment per session which averages to about .67 specific compliments and .27 non-specific compliments per student. Perhaps this is due to the nature of editing, face-to-face, or the teacher didn't instruct students to write comments on their rough drafts (Figure 1).

One the other hand, when it came to adding those comments I categorized as either “Suggestions” or “Corrections,” or those things that tend to make the difference between a proficient writer and a non-proficient writer, the difference between the two peer editing platforms became more apparent. Suggestions that pertained to content like word choice, adding detail showed that students ran even on the amount of specific and non-specific comments they gave in the three sessions. Online, there was an average of 14 specific and 14.3 non-specific suggestions (the average student received one each), compared to handwriting where the average student received 5.2 specific suggestions and zero non-specific suggestions (Figure 2).
Examples of specific comments given to a peer using the OCS might be as follows:

\[ \text{des Cook} \quad 1:09 \text{ PM Mar 21} \quad \]
\[ \text{U SHOULD TELL WHAT SPONGEBOD DID FOR U AND UR LIFE AND HOW HE MADE AND IMPACT FOR AVORY} \]
\[ \text{Comment - Resolve} \]

\[ \text{des Cook} \quad 3:06 \text{ PM May 10} \quad \]
\[ \text{Selected text:} \quad \text{til t} \quad \text{AN you should change this word to UNTIL instead of boring til} \]
\[ \text{Comment - Resolve} \]

While non-specific suggestions like these using the OCS were made by students to a peer:

\[ \text{des Cook} \quad 9:14 \text{ AM Mar 16} \quad \]
\[ \text{you should fix your word choice} \]
\[ \text{Comment - Resolve} \]

\[ \text{des Cook} \quad 9:17 \text{ AM Mar 16} \quad \]
\[ \text{N L its really good but you should make more details} \]
\[ \text{Comment - Resolve} \]

On the other hand, comments that dealt with writing traits or the comments I refer to as “Suggestions,” were usually written right on the rough draft and in location of the specific area the commenter was addressing while comments using the OCS where not always targeted to a specific word or phrase. If the person did not specifically click on a word that was part of text they were
addressing the author, in my judgment, might have a hard time understanding the directive. The number of comments given to help peers correct spelling mistakes, punctuation, and grammar or mechanical "Corrections" gave me an understanding of whether the students felt comfortable giving those types of suggestions to improve writing. After analyzing the data I saw that students almost gave about half as many "Corrections" suggestions as they did comments pertaining to writing trait "Suggestions." It is also worth noting that, again, handwritten comments exceeded the ones given on the online communication system, OCS (Figure 3).

![Figure 3: Correction Data](image)

A good illustration of this can be found when I put the two forms side by side and compare the type of comments. Handwritten comments, needless to say, are not always visually neat; however, they can give the author a visual map of changes (Figure 4).
On the other hand, with comments using the OCS, a student simply selected a word, and inserted a comment and hoped the author understood what the peer was referring to (Figure 5).

The next analysis I did was to take the data I collected from all the samples, both OCS and handwriting samples and look at the actual editing that took place. Did the student use those comments and make modifications to their writing in order to improve their writing piece or did they just disregard the suggestions? This analysis was probably the heart of question 1, and the most relevant evidence about whether an OCS could help to improve writing. Here again I cross referenced the comments with the edited writing pieces and recorded whether the student followed the suggestion and
changed their writing, I referred to these as “Specific Changes.” In some instances students self-edited their writing, “Non-specific Changes,” and some students made no changes at all, “No-Changes,” regardless if there was a comment given using the OCS or on the handwritten sample (Figure 6). The results are as follows:

![Average Changes Actually Made Per Session](image1)

![Average Amount of Changes/No Change Per Session](image2)

Figure 6: Changes

The result for changes, in my analysis, was surprising. The handwritten samples experienced more changes in both categories and not one of the samples had any textual change. However, I find it unclear why students did not make more changes using the OCS when it is easy to edit using the computer. Likewise, the amount of individual who made no changes at all averaged about four per session using the OCS; on the other hand, when I analyzed handwritten samples not one student did not make any changes, self-editing or based on a noted suggestion written on their rough copy.

Next, I went on to look at comments given to peers in the editing process made by those students the ELA teacher deemed underachieving in writing so I could get a better understanding of the thought process for this group of students- I wanted to see if they have an understanding of writing traits and what a good writing piece should exemplify. She identified eight students that struggle in
language arts due to being identified as cognitively impaired, learning disabled, or just academically low.

After going through comments made by these students using the OCS I found comments that were thought provoking and demonstrate their understanding of writing terms. However, I observed that many comments had no initial stamp, which made it difficult for me to identify the author of the comment, which is a limitation for analysis. Some examples of comments made by those identified are as follows:

Analysis of these and others gave me the impression that there is a thought process going on here that can have ramifications on their own learning yet once I analyzed the actual changes students made based on comments my impression changed. I also noted those changes students made using the OCS where not as complex as those on handwritten samples. Students added more detail based on suggestion in the handwriting samples but I did not see this with the OCS. With the opportunity to copy and paste, click and insert students could have made this changes readily.

B. Blogger: AOWWRITERS:

The blog AOWWRITERS had 19 posts and 31 comments at the time of analysis. The first two
posts were posted as a tester after the second sample was done using the OCS. I wanted students to get excited about the idea of having their work on the Internet. As of June 14, 2012 the page-view count of the blog was 146. 102 of these were made in May when individual students posted the third writing sample. I tracked the comments and found that of the 31, most comments were positive compliments; the author of the post deleted three because they were inappropriate, and several were replies to a post made by the author. Lastly, those comments that did not compliment generally centered on “Suggestions” for the other to add more detail to their writing (Appendix G).

Page-views, how many times the page is viewed on the Internet, were at their highest on May 30, 2012 which is the day I told students to read their peers posts and add comments. However, the page-views declined from there despite the link on the schools homepage. It is encouraging to know that on June 16, 2012 there were five page-views, which is a Saturday (Appendix H).

C. Surveys

As previously stated, the three surveys were created using a Google template. There were 15 responses to the pre-survey and 18 responses on the post-survey. The changes in responses for the pre- and post-writing attitude toward survey are as follows:

<table>
<thead>
<tr>
<th>Questions</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like writing</td>
<td>21% of the students like writing more after the project.</td>
</tr>
<tr>
<td>Writing is boring</td>
<td>50% gain toward not boring</td>
</tr>
<tr>
<td>I enjoy writing notes, letters, texting, and/or emailing people</td>
<td>No change, majority still like it a whole lot</td>
</tr>
<tr>
<td>I like writing at school</td>
<td>No change, 50/50</td>
</tr>
<tr>
<td>I have trouble thinking of what to write</td>
<td>More lean toward having less trouble after project or post-project</td>
</tr>
<tr>
<td>It's fun to write at home</td>
<td>No change, 50/50</td>
</tr>
<tr>
<td>I like to share my writing with others</td>
<td>There was a 32% gain toward liking it a whole lot post project</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>Writing is fun</td>
<td>44% think it is fun as opposed to 26% pre-project</td>
</tr>
<tr>
<td>I wish I had more time at school to write</td>
<td>No change, an average of 60% of the students prefer not to have more time at school</td>
</tr>
</tbody>
</table>

I also gave an option to add comments and one of the comments on the pre-survey stood out for me and helped to verify the idea of motivation and writing. The student wrote, “Writing can be fun but, is mostly boreing at school.”

The “Final Thoughts” survey had 16 responses (Appendices D) and from the analysis I concluded that the majority, 75%, feel writing is important to their future which is slightly lower the findings on the PEW report (Lenhart&Arafef, 2008). However, one student said, “No” it was not important for their future and 19% are not sure of its importance. Also, the responses to the question on what is the most important thing that will make them a good writer the majority said practicing by keeping a writing journal or journaling on a weblog. As far as peer editing, most said peer editing is important to the writing process and that 50% felt the most beneficial format was face to face with a peer. Sadly, of the students surveyed 5 are not sure how to peer edit effectively.

V. Conclusion

A. Overall Findings

While this study did not have the results I expected to find, the results still point to some potential benefits using an OCS to improve writing. I began with the assertion that we as educators need to embrace what our students already know- we are digital natives; we embrace technology so help us to use it to the fullest. If this is the current philosophy of many of our students and we are to
meet them where they are now, why didn't I witness this in my findings?

First, I expected the students to embrace this new way to edit, through an OCS, and take others' comments and make those needed changes that would move students toward proficiency but my expectations were not the same as theirs. I can't say the types of comments they gave were wrong - they were often thought provoking - but I noted some students gave the same comment over and over again. Were individuals really matching the comment to what was really needed in the text or just adding the comment because it sounds good? Consequently, there were no similarities and differences between the types of comments made and the subsequent edits because very little editing was done using and OCS.

Next, what was the correlation between actual changes made and the types of comments students received? Here, too, there was no correlation with the changes made and the types of comments using the OCS. The comments on the handwritten samples led to more changes in the written text, but who the originator of the suggestion was is not certain because no initial stamp was added to the comment; after a discussion with the teacher she admitted all students' handwritten pieces contained her added comments. Surprisingly, too, based on the handwritten sample's data, more changes occurred when the teacher gave suggestions and less when a peer made a comment. This could be due to the perceived expertise value a teacher. Therefore, the correlation seems to be the perceived expertise of the teacher the students rely on for editing suggestions.

In contrast, my overall finding on posting writing on a blog was that the activity was successful in creating excitement toward their writing accomplishments. First, I witnessed a sense of pride in the students when they saw their writing on the Blogger site; second, the survey results, post-project, demonstrated a growth in liking to write, 32% more said they enjoy writing.
B. Answers to Research Questions

Based on my findings, the framework of my research and the information gathered from my literature review, I will present an answer to my research questions.

1. Can the use of online communication systems, OCS, in process writing, particularly peer editing using a commenting approach, help to motivate individual students to improve their writing skills? If so, what aspect do they find most motivating?

The answer to this question is inconclusive due to the time period in which data was collected. Though the students seemed engaged and at sometimes seemed, too, engaged in the conversational aspect of online communication it is difficult to measure improvement because writing is a process that improves over time. In addition, the aspect of posting comments, whether specific or non-specific to the task at hand, seemed to be the most motivating for most students. Vygotsky contends that social connection is important to the learning process. Likewise, just the sheer fact that students are reading and analyzing peers writing is process learning. This idea of social connection is important to learning and it supports psychologist Lev Vygotsky theory on learning. In the directions for further research section of this paper, I discuss further research that could be implemented to track writing improvement over time.

2. What writing traits and cognitive behaviors are specifically supported by the use of online communication systems in process writing?

The use of an online communication system's main objective was to support the editing process of process writing; moreover, it gave the chance for students to provide a voice digitally that might not otherwise be spoken verbally. Through this form of peer commenting and editing, it was hoped students would focus on correcting various mechanical mistakes as well as suggestion focusing around writing traits like adding detail, organizing, and word choice, but the outcome was
not as anticipated based on the data. However, the sheer act of posting comments after having read a peer's writing piece required mental thought, cognition and according to Vygotsky's theory on learning, social interaction plays an important role in student learning, therefore, it merited value.

3. What are the outcomes of engaging low achieving students in writing assignments when this type of systems is used?

As previously stated, this question cannot be answered definitively at this time but based on the pre- and post-survey student's attitudes toward writing did shift. First, 21% of the students liked writing more after using used an OCS to peer edit and 50% of the students switched their opinion on the question, “Writing is Boring.” Also, after accessing the comments I did find thought-provoking comments made by some of the lowest achieving students that shifted my perceived expectations of what some of them are capable of doing and their understanding of the process writing traits.

Sub-Questions:

1. What are the advantages and disadvantages for certain students using OCS?

There were several advantages for certain students. First, it gives those students who are hesitant to sit face-to-face with a peer during the editing process a digital voice, a place they can feel safe free of judgment. The student, who I asked initially about using technology to edit, demonstrated a keen sense of literacy vocabulary in her posts. Also, because it is online and documents can be saved and edited later, students can edit others’ documents elsewhere. This, too, is an advantage because after analysis several students whose comments I tracked were not consistently present in class during the project and the task could easily become a homework assignment. However, thus lies a disadvantage, in that not all students have Internet at home and some students state their parents will not take them to places where free access is available, like the local library.

2. How do peer conversations and/or commenting about writing using OCS affect the type of
revisions?

In my analysis, the conversations did not affect the type of revision, but I think with consistency on the part of the ELA teacher to make this one of the optional formats for editing, it could become more effective. For instance, the teacher could develop mini lessons around editing using sample comments and demonstrate how to take these comments and make needed revisions. Also, the teacher could model how to reply and ask those types of questions that help to clarify comments so the needed corrections and additions are made.

3. How does allowing students to post their published written work affect the quality of writing and students' attitudes toward writing?

Because the posted writing was copied and pasted from the original document word processed in Google Docs and very few revisions were made from the analysis, I conclude posting did not affect the quality of writing; however, the survey results indicated that it did affect their attitudes. In the pre-survey 7% said they like sharing their writing "a whole lot" opposed to 28% post-survey. The PEW report on teens, technology and writing reported teens are motivated to write when there is an interested audience and the opportunity to write creatively motivated students. Likewise, the social connection idea theorized by Vygotsky as a learning means was demonstrated by the number of pageviews, five, on a non-school day. I don't believe these were just random visits make by people surfing the web, but that it was students from the 6th grade class seeing if anyone posted a comment.

VI. Discussion

A. Results Discussion

Upon completion of this project I ask myself why this research project didn't give me the result I expected to find. Why students were seemingly excited to try something new yet, in retrospect, they
seemed not sure how to correctly support each other in the editing process? There are two things about the students in this project that might tell me the answer why. First, the students were cognitively young and inexperienced in writing and inexperienced in the peer editing process. Many rely more on the teacher for support in editing than their peers and in the use of an OCS for editing purposes they didn’t know how to handle a comment from a peer. Second, the realization that writing growth happens overtime and if this type of editing process is continually used and modified it could be successful in school and at home which is the intent of an online communication system.

B. Limitations

Because this research was conducted over a short time period with limited access to computers, the results cannot be generalized for other middle school classrooms attending the same school. Also and to say that the same results would have been found with another age group, and to a greater extent another group at a different school, would be remote. Moreover, small group versus whole class and the comparison of one handwritten sample to three word-processed samples, too, seemed limiting. If time permitted, a 3:3 sample ratio could have given me a clearer picture of differences in the types of commenting and revision.

Also, absences during the time researched affected continuity. It is difficult to teach a concept and then have to reteach it numerous times when students are absent and to expect whole class involvement when re-teaching is happening. Internet connection in the lab and Google Docs, perhaps due to the connection in the lab caused lag time in posting. Also, the fact we shared one login added to the frustration. It was quicker to move about the lab to post comments rather than use the doc’s page to open individual’s document, which took away from the main purpose of real-time viewing of the document.

Time with the students was a limitation, too. At times we seemed rushed to get commenting and
revising complete. Had this taken place in the regular classroom setting with the homeroom teacher present the results might have been different. It is my feeling that with repetition, using an OCS as the means to edit; students will learn expectations and procedures to obtain the most beneficial means to edit using an OCS.

C. Implications

This research project was started approximately 10 months ago and within that time period technology continues to change and evolve yet process writing is still process writing. If indeed the use of an online communication system narrows the gap between writers who are advanced and non-proficient then it is my hope that all classrooms adopt this form of editing, or a modified version, thus allowing students a choice to the format they prefer to use. Choice seems to be key because 50% of the students in the final thoughts survey stated they prefer face-to-face editing. However, there still is a need for improvement with roughly 20% of the students stating they do not know how to effectively edit. As Michigan moves toward adoption of the Common Core State Standards in 2014, which establishes what students need to learn to be successful in college and work, it is evident that these skills include communication, collaboration, and digital literacy. The use of an online communication system, as a platform for editing, gives instructors and students another means for improve writing skills.

D. Directions for further research

In order to gauge the significance of this research project, further data collection and analysis of student's written work needs to be tracked and recorded paying significant attention to changes in the writing traits, as well their attitude toward writing. Because the motivation factor, time and time again, was addressed in my research as a means to engage students in writing, I would suggest selecting an experimental group of students who don't seem especially engaged in writing, and a control group with
the same criteria, and comparing results using an OCS versus the traditional means of editing. Both groups would be comprised of students on the cusp of proficiency in writing; both groups would be taught the same literacy lessons in the English language class but just the format of editing would vary.

Also, I believe my last question, “How does allowing students to post their published written work affect the quality of writing and student's attitude toward writing?” could expand into another new research topic. As technology evolves and learning moves from the classroom to networking through online communication systems like the Twitter, Facebook, and Edmodo (the classroom equivalent of Facebook), it comes apparent that social learning as a means of cognitive development needs to be addressed. Quantitative data could be collected and analyzed in a controlled platform using Edmodo. This would give teachers insight into process writing development starting at a grade level that most seems developmentally ready to use technology in literacy tasks. Through data collection and analysis of posted responses and student conversations one could assess what topics in literacy need to be addressed and assess student achievement and growth.

VII. References


Retrieved from http://www.lrdc.pitt.edu/schunn/sword/publications/choschunncharney@wc.pdf


VIII. Appendices

Appendix A: Pre-survey

15 responses

Summary See complete responses

I like writing.

<table>
<thead>
<tr>
<th>Response</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>A little</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Some</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>A lot</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>A whole lot</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

Not at all 1 7%
A little 4 27%
Some 3 20%
A lot 3 20%
A whole lot 1 7%
Writing is boring

- Not at all: 3 (20%)
- A little: 2 (13%)
- Some: 2 (13%)
- A lot: 4 (27%)
- A whole lot: 1 (7%)

I enjoy writing notes, letters, texting, and/or emailing people.

- Not at all: 2 (13%)
- A little: 0 (0%)
- Some: 2 (13%)
- A lot: 2 (13%)
- A whole lot: 6 (40%)

I like writing at school.

- Not at all: 3 (20%)
- A little: 2 (13%)
- Some: 3 (20%)
- A whole lot: 1 (7%)

I have trouble thinking of what to write

- Not at all: 1 (7%)
- A little: 7 (47%)
- Some: 1 (7%)
- A lot: 1 (7%)
- A whole lot: 2 (13%)
It's fun to write at home

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<thead>
<tr>
<th>Level</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
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<td>13%</td>
</tr>
<tr>
<td>A little</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>Some</td>
<td>4</td>
<td>27%</td>
</tr>
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<td>A lot</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>A whole lot</td>
<td>2</td>
<td>13%</td>
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</tbody>
</table>

I like to share my writing with others

<table>
<thead>
<tr>
<th>Level</th>
<th>Count</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>A lot</td>
<td>0</td>
<td>0%</td>
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<tr>
<td>A whole lot</td>
<td>1</td>
<td>7%</td>
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## Appendix F: OCS and Handwritten Comments Data Totals

### Compliments

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<th>3 session OCS Averages</th>
<th>Average Total Specific Compliments 21</th>
<th>Average Actual Changes: OCS Specific Changes 4.45</th>
<th>Handwritten Specific Changes 42</th>
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<td>average per student 1.80</td>
<td>Specific Changes</td>
<td>Non-specific Changes 2</td>
</tr>
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<td></td>
<td></td>
<td>Average Total Non Specific Compliments 12</td>
<td>Non-specific Changes 15</td>
</tr>
<tr>
<td></td>
<td>Average per student 1.06</td>
<td>No Changes</td>
<td>0</td>
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<tr>
<td>1 handwritten</td>
<td>Average per student Compliment handwriting .71</td>
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<td></td>
</tr>
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<td></td>
<td>Average Non-specific compliments .29</td>
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### Suggestions

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<th>Average Total Specific Suggestions 11.67</th>
<th>Average per student 1</th>
<th>Average Total Non Specific Suggestions 12.3</th>
<th>Average per student 1.05</th>
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<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1 handwritten</td>
<td>Average per student Suggestions handwriting 4.5</td>
<td></td>
<td>Average Non-specific Suggestions 0</td>
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### Corrections

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<th>3 session OCS Averages</th>
<th>Average Total Specific Corrections 9.67</th>
<th>Average per student 1</th>
<th>Average Total Non Specific Corrections 4.67</th>
<th>Average per student .40</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 handwritten</td>
<td>Average per student Corrections handwriting 3</td>
<td></td>
<td>Average Non-specific Corrections 0</td>
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### Online Communication System and Handwriting Sample Data

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<th>Compliment Specific</th>
<th>Compliment Non-specific</th>
<th>Suggestions Specific</th>
<th>Suggestions Non-specific</th>
<th>Corrections Specific</th>
<th>Corrections Non-specific</th>
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<td>No Changes-3</td>
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<tr>
<td>Sample 2</td>
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<td></td>
<td>6</td>
<td>11</td>
<td>3</td>
<td>7</td>
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<td>4</td>
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<td>NSC-8</td>
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<td>4</td>
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<td></td>
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<td>Handwriting Sample</td>
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<td>5</td>
<td>2</td>
<td>32</td>
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</table>
Appendix E: Post Survey

18 responses

Summary

Your name (optional)

I like writing.
- Not at all: 3 (17%)
- A little: 6 (33%)
- Some: 3 (17%)
- A lot: 1 (6%)
- A whole lot: 5 (28%)

Writing is boring
- Not at all: 4 (22%)
- A little: 6 (33%)
- Some: 6 (33%)
- A lot: 0 (0%)
- A whole lot: 2 (11%)

I enjoy writing notes, letters, texting, and/or emailing people.
- Not at all: 0 (0%)
- A little: 1 (6%)
- Some: 5 (38%)
- A lot: 4 (22%)
- A whole lot: 8 (44%)

I like writing at school.
- Not at all: 5 (28%)
- A little: 3 (17%)
- Some: 2 (11%)
- A lot: 7 (39%)
- A whole lot: 1 (6%)

I have trouble thinking of what to write.
- Not at all: 4 (22%)
- A little: 6 (33%)
- Some: 6 (33%)
- A lot: 1 (6%)
- A whole lot: 1 (6%)
**It's fun to write at home**

- Not at all: 4 (22%)
- A little: 3 (17%)
- Some: 6 (33%)
- A lot: 2 (11%)
- A whole lot: 3 (17%)

**I like to share my writing with others**

- Not at all: 6 (33%)
- A little: 2 (11%)
- Some: 3 (17%)
- A lot: 2 (11%)
- A whole lot: 6 (29%)

**Writing is fun**

- Not at all: 4 (22%)
- A little: 4 (22%)
- Some: 3 (17%)
- A lot: 2 (11%)
- A whole lot: 5 (28%)

**I wish I had more time to write at school**

- Not at all: 9 (50%)
- A little: 3 (17%)
- Some: 4 (22%)
- A lot: 0 (0%)
- A whole lot: 2 (11%)

**Any additional comments:**

I love writing a story. I hope this was good enough. Maybe Mrs. Hooper should be a little nicer instead of a mean teacher. None from Mrs. Dobbins. For the question on a head thing I think we write a good amount of time.

**Number of daily responses**

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
Appendix D: Final Thoughts Survey

Final Thoughts Survey

16 responses

Summary

Do you think texting and academic writing are two different types of writing?
- Yes [13] 74%
- No [6] 38%
- Not Sure [3] 19%

What is the most important thing that will make me a good writer?
- Good teacher instruction
- Websites that teach you how to write
- A good textbook that will teach me
- Practicing writing by keeping a writing journal either a notebook
- Other

Do you feel you are ready to the question above what is the other?
- Having fun
- Other

Is peer editing important in the writing process?
- Yes [11] 69%
- No [2] 13%
- Not often [3] 19%

People may select more than one checkbox, so percentages do not sum to 100.
What was more beneficial when it came to peer editing?

- Face to Face with a peer
- Using an Online Communication System like Google Docs
- Does not matter either way

People may select more than one checkbox, so percentages up to more than 100%.

Do you understand how to peer edit effectively?

- Yes 11 69%
- No 0 0%
- Not Sure 5 31%

Anything you would like to add?

by the way i am shawntae i am Mrs.Doebbles NOPEEEE no i love the writing but we shoul have did some poems.

Number of daily responses

- 5/22/2012 0
- 5/23/2012 18
beautiful Saturday morning, Levash woke up to a very pleasant surprise; she had two modest gifts from her father and mother in her bedroom. She went down stairs to thank her mother and father for the gifts which was an outfit and a pair of nice pink skates. Then her mom and dad said they were going to the rollerdun for her birthday party, Levash restrained herself from screaming, he loves the rollerdun.

Dear network producers

My name is Rasheen Jasper Brown and I'm writing you because of you are cancelling the shows that we love and that why you canceled "Sunset Galactica".

Love,

Rasheen
My name is Dominique Stephens and I am 11 years old. I am so disappointed that you took off Dragon Ball GT. It's not that good that you took off my favorite show. That show use to be so good when Goku goes into super sayans I use to be so happy because it is so cool that when his hair is black collect a lot of energy and his hair turn gold and his eyes turn blue but his regular eyes in black. Another thing is it like when Trunks go into super sayan he does the same as Goku but has much taller. That's why I love that television show back.

Sincerely, Dominique Stephens
Dear Television Network,

Why would you take off Degrassi? That's my favorite show and a lot of my friends watch it every night. I'm very disappointed with this network because there's no reason you couldn't keep it on.

I would love if you could put Degrassi back. Why you may ask? Why should you put Degrassi back on? Well, because it's very popular and it teaches us lessons. It's also very entertaining. Good and it keeps me involved with all the drama. I hope you understand what I mean and please do me a favor and bring it back.

Sincerely,

Maria
Over the weekend I was to packing up to on a vacation called Castaway Bay. When I was packing up I noticed that I was missing something in my luggage. I said "my toothbrush"; I looked around for my toothbrush in a furious way. My mom shouted "Damaris, your ride is here." I said "hold on, give me five more minutes." I ran to my mom and said "Mom, did you find my toothbrush?" I said "my mom said 'yeah, I put it in your luggage while you were using it in the bathroom.'" So I dashed in to my room and opened my suitcase and there it was, my toothbrush. Then I packed my luggage in the car and left.
My missing PSP

Over the weekend I went to my friend's house and I left my PSP on the bed and when I came back it was gone. I think my roommates because she said she cleaned my room or I think my little sister took it because I never let her touch or play with it. So then I called my aunt to convince my mom to talk with my sister about it. She took my PSP because she would take it. Then my aunt said she would take it. Then I kept looking for my PSP. I finally found it and my PSP was missing it. It was in the wrong place it was in my backpack in the bottom of all the stuff that was in there. Then I told my mom and sister that I am sorry for assuming that they took my PSP. Then they were like you know did you think that and I said when I came back from my friend's house so they said okay. Lesson learned never assume that people took your thing but it was a mistake put in the wrong place.
May 7, 2012

"Oh No!" I yelled, as I rushed down the stairs. My brother quickly following me. I ran into the kitchen explaining to my dad what had happened. "Dad, my birthday money is missing," Dad told me to "Settle down and breathe," my brother standing next to me giving names of his imaginary friends who might have stolen it. I was getting ready to fall down my face, thinking "Whoever stole it is dead meat..."

"Who couldn't have done it?" I asked calling all my friends for moral support. My best friends, Sophie and Lauren bustled over when they got here, we tour the entire house apart searching for the word of money. Mom asked, "How much was it?" and I said "$60.00". I name peppered into my head. James, my brother's best friend had coppia over that weekend and I remembered him and my brother were playing the will in
<table>
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<th>Author</th>
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https://www.blogger.com/blogger.g?blogID=86314073.7504201387

12/20/2012