

Promoting Revision through Blogging in a Second Grade Classroom

Chase Young

Texas A&M University – Corpus Christi

Katie Stover

Furman University

Abstract

This study helped the researchers to determine if blogging as a revision strategy in a second grade classroom was beneficial. Nineteen second grade students wrote expository essays and made revisions and edits based on peer feedback in a blogging environment. Six elementary school teachers independently rated the students' writing samples using the second grade district writing rubric. The Wilcoxon matched-pairs signed-rank test was employed for the purpose of data analysis. According to the statistical analysis, writing scores increased significantly.

Many beginning writers typically view writing as something that is finished after the first draft is written. Experienced writers on the other hand, know that good writing goes through the writing steps of drafting, revising, rewriting and editing (Murray, 1998, p. 202). For example, when asked to revise, a young writer might go back to a draft and change a word such as 'funny' to 'hilarious' rather than take time to engage in a more meaningful revisions. Students need to learn that writing is a process that evolves over time through rereading, rethinking, rewriting, and reseeing their words on the page.

Murray (1998) describes the benefits of using a computer to write and revise. He explains the ease of cutting, pasting and moving text around during the drafting and rewriting stages. In this study, we extend this notion to suggest that using Web 2.0 tools such as online blogs to compose and revise writing with a wider audience is a beneficial assignment or exercise. In this article, the use of blogs was explored as a digital tool that allowed second grade writers to collaborate with their peers to revise and to increase their writing proficiency, as they progress through the writing cycle steps.

Literature Review

Technology is becoming an ever-increasing part of daily life in the 21st century (Partnership for 21st Century Skills, 2015). According to Overbaugh and Lu (2008), more than 90% of educational settings provide access to computers with Internet. In fact, President Obama recently unveiled a new initiative to connect 99% of America's students with high speed Internet access (The White House, Office of the Press Secretary, 2013).

With the surge of technology, it is imperative that students learn how to use these tools in the learning process (Zawilinski, 2009). According to the 21st Century Skills Partnership (2015),

inclusion of Information and Communication Technologies (ICTs) must take place in order to be fully literate in today's digital world. With the wide use of ICTs, the nature of reading, writing, learning, and the way we communicate are constantly evolving (International Reading Association, 2009) and a new generation defines what it means to be literate (Hansen & Kissel, 2010).

Coining the term multiliteracies, the New London Group (1996) sought to deepen our understanding of what it means to be literate with multiple modes of representation. According to Hull (2003) it is necessary to provide students with "the space and support to communicate critically, aesthetically, lovingly, and agentively" (p. 230) in order to redefine what it means to be literate in the 21st century.

Traditional literacies (listening, talking, reading, writing, viewing & visual representation), augmented by new literacies (digital and internet) enhance learning for 21st century learners (Bogard & McMackin, 2012). Electronic tools change the way messages can be produced, distributed, and exchanged (Lankshear & Knobel, 2003). New technologies allow teachers to foster the writing process and collaborative writing within the classroom and beyond (Boling, Castek, Zawilinski, Barton, & Nierlich, 2008). Dalton (2010) and Olthouse (2012) recommend the use of technology throughout the various stages of the writing process. For instance, Bogard and McMackin (2012) explored the use of digital storytelling with third graders to incorporate both traditional and digital resources. Web 2.0 applications such as VoiceThread (www.voicethread.com) and Voki (www.voki.com) can be effective tools for collaborating with peers to revise and edit writing (Young & Stover, 2013). The use of digital tools for communication allows writers to interact with an authentic audience making the writing more meaningful and the experience more engaging (Merchant, 2005).

Blogging, a popular form of online composition, offers writers an opportunity to write in public spaces. Blogs allow users to develop content including text and adding pictures, graphics, videos, or other multimedia for an authentic audience to read, respond, and engage in online discussion (Ellison, 2008; Hsu & Wang, 2011). Used in the classroom context, blogs can build a sense of community and increase communication skills (Lee & Gilles, 2012). Whether blogging to share concerns about endangered wildlife, to discuss literature, or to respond to open-ended questions, the use of blogs in the classroom promote social interaction, collaboration, and offer digitalized support (Andes & Clagget, 2011; Zawilinski, 2009). Examples of digital support include peer interaction, as well as the use of spell check, and online dictionaries (Graham & Harris, 2013). Lee and Gilles (2012) describe the use of blogging as 21st century strategy.

Online blogging offers an educational and personally rewarding opportunity for communicating and collaborating with others. Blogging and other digital tools have changed the writing processes (Yancy, 2009) and empowered educators to meet the technological demands on education. Zawilinski (2009) describes how the use of blogs can increase students' higher order thinking skills through broadening an audience for student writing and engaging them in thoughtful collaborative discussion. Mills and Levido (2011) found greater enthusiasm to participate in writing in blog spaces for reluctant writers. Blogs that involve an authentic audience create meaningful experiences that motivate and expand students' thinking and heighten their dedication to produce quality compositions (Boling et al., 2008).

Purpose of Study

The first author wanted to determine if blogging could be used to encourage students to not only write but to revise their own writing. In addition, the researchers wanted to see if integrating technology provided a meaningful way to engage students in writing, giving good feedback and revising their writing. The second author was invited to join the study because of her interest and expertise in digital literacies. The questions developed for this study were:

1. Does the blogging process help produce higher quality writing?
2. How does blogging impact student's writing/editing/revising skills?

Method

This qualitative study helped researchers determine if blogging as a revision strategy in a second grade classroom helped to produce higher quality writing and to determine how blogging impacted participants writing skills.

Participants

The study was conducted in a suburban district in the Southwest. Eighteen percent of the school's population received free or reduced lunch. The first author's second grade students (7 and 8 year-olds) served as the participants. There were 19 students included in the study (8 males and 11 females), four of which were English Language Learners (ELL), speaking a variety of languages such as Spanish, Mandarin, and Hebrew. Two students received services from special education. All students were given a pseudonym.

KidBlog

Kidblog.org is a site designed for educational use that provides a safe place on the Internet where students and teachers can connect. The teacher signed up for kidblog, created logins for each student, customized the look of the class blog, and adjusted the privacy settings so it was only viewable by class members. In addition, the teacher chose to moderate posts, requiring the teacher to manually approve each post and comment.

After the blog was set up, maintenance was minimal. Students logged on and created new posts or commented on existing posts. The posts ranged from random accounts about the student's weekend to in-class writing assignments such as summaries, narratives, or expositions. To direct the learning process, it was essential to have a clear goal, purpose, and procedures for interacting within this digital space. In this capacity, the goal for the students was to become more adept at revising their own writing.

Preparing Students for Blogging

The students had to learn how to do two things. First, they were taught how to create thoughtful responses to aid in the editing process. Second, they were taught about things to think about while creating an initial blog posting.

The first step was to familiarize the students with the blogging technology, to have fun and to learn the particulars of the blogging site. The teacher (first author) encouraged students to practice blogging by writing autobiographies. Thus, the teacher did not grade the autobiography blogs and comments from peers were not a part of this step.

However, as students' proficiency with the blog increased, the focus of the writing changed to using specific revision skills. Teaching students to provide useful comments to their peers' blogs was an essential component of instruction. The goal for students was to comment on their classmates' blogs in a respectful and helpful manner. Because this was a new concept for these young learners, the teacher spent a lot of time instructing the students on how to deliver constructive thoughtful feedback.

First, the teacher led the whole group of students in a mini-lesson designed to help the students understand how to make thoughtful comments. The teacher explicitly stated to the students that the goal for commenting was "to help the writer make changes to their writing in order to make it better." Next, the teacher created a blog and modeled how to write a post on Kidblog.org using the following:

Teaching is the best thing in the world. First, it is so much fun working with kids every day. Kids always surprise me with their creativity and intellect. Also, I like figuring out new and cool ways to teach. Finally, as you teach, you are constantly learning—I love to learn!

Second, the students practiced commenting on the post while in the computer lab. The focus of the exercise was to allow students to practice reading a post and commenting on the text. Not surprisingly, the comments were nice, but not particularly helpful. Robin commented, "I loved your story." Andy commented, "Awesome." There were 16 subsequent comments similar in content, mostly variations of the first, such as "I loved your story so so so much." Nevertheless, the purpose of the lesson segued nicely into the next mini-lesson.

Third, the class revisited the post and examined the comments. The teacher asked the students, "Which of these comments will help me make my story better?" The answer was unanimous, "none." So, the teacher engaged the students in a discussion of what types of comments might help with revisions. The teacher solicited responses from the students and wrote all of the comments on chart paper. After collecting all the responses, a T-chart was put on the board and the students, as a whole class activity, looked at the comments and determined which side of the T-chart the comments were placed: *nice comments* or *helpful comments*.

Fourth, after the lesson on how to create helpful comments, the students visited the lab again, reread the comment again and made new comments. Anita commented with a question, "Why else do you like teaching?" Corrine also asked a question, "How is teaching the best thing in the world?" Donna commented, "Please add more detail about teaching." After time spent in the computer lab, the students gathered around the SMART board again to discuss the new comments. The students noticed that Anita's question required the teacher to consider other reasons why he liked teaching, and thus expanded the content of the post. Donna's comment also required the teacher to expand the post by elaborating on the existing ideas. Corrine's question, "How is teaching the best thing in the world," prompted the teacher to provide more support for his argument. The students deemed all of these examples *helpful comments*. So, the students went back to Kidblog and practiced again, using what they believed to be helpful comments and essentially providing constructive feedback.

Fifth, the last lesson on commenting required students to synthesize the helpful comments and compile the learning into a practical list that they could use to write thoughtful blog posts. After specifically looking at the helpful comments, the students, with guidance from the teacher, looked for themes among the student comments, and developed language stems.

The teacher wrote the language stems on a chart paper, so it could be easily transported to and from the computer lab. Following is the original list of question stems that the students developed for creating good comments:

- Please reorder your sentences to make more sense.
- Can you please add more detail about...
- I want to know more about...
- Can you please spell _____ like _____?
- Can you please capitalize _____?

The list is not an exhaustive list of language stems that foster constructive commenting skills, but it was a good start for the second grade students. Because blog posts and writing is dynamic, students were encouraged to come up with their own responses to meet the needs of each blog; however, the stems were also posted and available for the students to reference. After equipping students with the language to ask clarifying questions and providing helpful comments that encouraged revisions, the students began to comment on other posts.

Timeline and Details of the Study

The students posted their first expository essay in December 2012 using what was learned about creating expository blogs. After completing their post, the students were then asked to read others' posts and provide helpful comments to their peers.

Each month, the students went to the computer lab, revisited their original post, read the comments, and made new revisions. A monthly frequency was used in order to allow students to acquire new expertise in writing that could be used to strengthen their blogs. The students worked independently for approximately 20-30 minutes while the teachers walked around to help them. The timeline for visiting the computer lab and working of revising is seen in Table 1.

Table 1

Detailed Timeline of Study

Date(s) - 2012	Activity
November 26 – 30	Students completed first drafts of their expositions
December 2 – 6	Teacher taught mini-lessons on providing feedback and using kidblog.org
December 11	Students posted expositions on the class blog
January 9	Students commented and revised blogs
February 13	Students commented and revised blogs
March 13	Students commented and revised blogs
April 11	Students commented and revised the blogs and the teacher printed the original and current versions of the blog posts for data analysis

Analysis

The researchers recruited six teachers from the research site, ranging from first to third grade teachers. The researchers printed three copies of the first draft and three copies of the most current draft of each of the 19 participant's essays.

Teachers were only given a copy of either the first draft or the last version to avoid rater bias based on relative changes to the drafts. Each teacher received only one version of each student's essay, and each version was independently rated by three teachers. The ratings were based on the district approved writing rubric for second grade (Figure 1). Each grade level had its own rubric, which was similar in structure, so the teachers had extensive experience using the rubric.

After the researchers randomly distributed the drafts to other primary grade teachers within the research site, the first author held one-on-one meetings with each teacher to describe the rating process, provide clarification, and answer questions. Once the participating teachers indicated their willingness to participate and understanding of the process, they rated their assigned expository essays based on the rubric's 1 to 4 proficiency scale. For the pretest, two teachers rated six, and one rated seven essays, which was the same breakdown for the other three teachers who rated the posttest.

The researcher also employed three independent raters for each of the 38 writing samples (19 from the pretest and 19 from the posttest) in order to establish inter-rater reliability. The percentage of agreement between raters was 85.3%. The researchers did not require the raters to discuss until reaching 100% agreement, but rather used the mean of the three total scores.

Scoring Area	Score = 4	Score = 3	Score = 2	Score = 1
Organization	Elaborate sketch matches story	Sketch matches story Detailed organizer	Sketch matches story Planning with an organizer	Sketch may match story Planning with an organizer
Focus & coherence	Sustained focus Sense of completeness	Mostly focused with minor problems	Somewhat focused	Lacks focus
Development of ideas	Ideas are thoroughly developed Thoughtful & insightful	Some ideas are thoroughly developed	Lists Minor gaps between ideas Labeling may be present	Little/ no labeling
Voice	Sustained connection Meaning is conveyed Craft is employed	Mostly sustained connection Meaning is conveyed Emerging expression	Moments when there is a sustained connection	No voice
Conventions	Consistent command of conventions Correct use of punctuation,	Minor errors in conventions Emerging punctuation & capitalization	Limited control of conventions weaken the overall story punctuation/capitali	Errors in conventions throughout cause writing to be unclear.

capitalization, and spelling patterns	Use of initial/medial/final sounds	zation	Awkward sentences
Application of high frequency words	Application of high frequency words/ spelling patterns	Use of initial/medial/final sounds	Floating capitalization/ random punctuation
Sentence fluency is progressive		Mix of capital & lowercase letters	
		Some sentence fluency	

Figure 1: Second Grade Writing Rubric

After the teachers rated the pre/post writing samples, the researchers employed the Wilcoxon match-pairs signed-rank test. The method was chosen based on the small sample size and it served as a nonparametric test to analyze the data of the class. The frequency of change from pre- to posttest helped to answer question two.

Results

Research Question 1

To answer the first research question, *Does the blogging process help produce higher quality writing?*, the pre/posttest scores on the written blogs scored using the Writing Rubric (see Table 2) were totaled for the whole class and descriptive statistics were run to determine if there were changes in the mean score from pre to post. As a change was revealed, further tests were run to see if this change in the mean was significant.

Data analysis used a Wilcoxon matched-pairs signed-rank test, which is similar to paired samples *t*-test, was employed for the purpose of data analysis. It is a nonparametric statistical technique, approximate *Z* is the test statistic, and $r = Z / \sqrt{N}$ is used to compute the effect size. According to the statistical analysis (see Table 2), writing scores increased significantly from pretest to posttest ($z = 3.07, p < .05$). Further analysis rendered a large effect size ($r = .51$).

Table 2
Comparison of Students' Pre- and Post-Writing Scores (n = 19)

Item	Pretest Mean ^a	Posttest Mean ^a	<i>Z</i> ^b	Asymptotic Sig. (2 Tailed)	Effect Size ^c
Comprehension	2.56	3.19	3.07	.002	.51

Table 2 shows the overall mean score of the students' original exposition was a 2.56, and thus suggests that students were in the "still developing" range meaning that, generally, the class did not meet the expectation of a typical second grade writer according to the writing rubric. After the students revised their expositions based on peer-feedback and self-reflection, the overall mean (3.19) met the standard for second grade writing, indicating the blogging process generally led to better writing.

Table 3 shows the frequency of percentage increase (or decrease) achieved by each

student when their pre/post scores were compared. Five of the 19 students (26.3%) demonstrated a 25% increase from their pretest scores. Overall, 73.68% of the class's writing was scored higher after the blogging and revision process. However, four students showed no growth and one student's scores decreased.

Table 3
Frequency Table of Changes in Mean Writing Scores

Percentage Increase	Frequency	Frequency %
-8.25	1	5.26
0	4	21.05
8.25	3	15.79
15.75	1	5.26
16.75	3	15.79
25	5	26.32
41.75	1	5.26
50	1	5.26
Total	19 students	

Research Question 2

A closer look was taken at the quality of the students' blogs in order to answer the second research question: *How does blogging impact students' writing/editing/revising skills?*

Following are a couple of written examples of blogs that we believe increased in quality. First, read the original post by Faye (all student names used here are pseudonyms):

Rachels misson is to help people and kids in hadi to build them houses and raise money to build them and do that.To raise all the money she goes to her schools football games and asks pepole if they want to make a donation.And i bet she makes a lot of money to make all the houses.To help the kods before she makes all the houses she helps the kids by giving food and water to survive and she helps them learn.Once she earns all the money to build the houses but first she has to find people to help her build the houses and once she finishes building the houses all the children can live in them.

Below is a key comment from one of the student's second grade peers that helped develop her exposition: "tell more about the house and how it helps the children and what about their parents." The student responded to the comment by adding more detail about the parents, how the children were helped, and more about the houses. Now, consider the most *current* version of her post (changes in bold-type):

Rachels misson is to help people and kids in hadi to build them houses and raise money to build them and do that.To raise all the money she goes to her schools football games and asks pepole if they want to make a donation.And i bet she makes a lot of money to make all the houses.To help the **kids** before she makes all the houses she helps the kids by giving food and water to survive and she helps them learn.Once she earns all the money to build the houses but first she has to find people to help her build the houses and

once she finishes building the houses all the children can live in them.**The kids were homeless and needed homes thats why rachel built the houses.Her parents helped her a lot to raise the money.She builds the houses with the money she earned the people in hadi are now all happy and have homes.She helps the kids learn by teaching them like addition and subtraction and some stuff in science the parents are poor to so they share the food all together with the whole family**

The word “*current*” instead of “*final*” was used in the description because the posts are likely to change throughout the year. As students continued to receive feedback and make revisions, their writing improved. In addition, as writers became more proficient, they revised on their own inclination. Essentially, three forces drove the revisions: questioning, commenting, and increased proficiency.

It might also be helpful to consider the progression throughout the process. Here is Deb’s original post from December:

Lions are really big fury beast.They have big red eyes and manes, but the female lions don’t .But, every body knows that. They mostly live in Africa or in jungles with alot of space.They have a big diet. They eat gazells and bunnies.

There were very few changes from the original post in January’s revision. The student removed the word “really.” This change did not result from the comments, but from a mini-lesson about using adjectives rather than “really big” and “so so big” and “very big” and the favorite, “very very big.” Therefore, not only do the comments help, but the learning from class also becomes evident in the revisions.

Lions are (**omitted “really”**) big fury beast.They have big red eyes and manes, but the female lions don’t .But, every body knows that. They mostly live in Africa or in jungles with alot of space.They have a big diet. They eat gazells and bunnies.

Although the previously noted revisions were not significant, the student continued to explore a range of revision strategies based on peer feedback. The revisions in March were prompted by a peer’s statement, “Please order your sentences.” Read her newest version to see the changes from the previous month.

Lions are big fury beast.They have big red eyes and mains.**But the females don’t so you can tell them apart. (reorded the following sentence)** Lions have a very big diet they eat gazel’s and bunny’s. (**omitted “they mostly live” and changed “they” to “lions”**) Lions live in the jungle or in the african savanna (**eliminated second part of the sentence and created a whole new sentence**). **They like to live in open spaces.**

The other revision she made in March were based mainly on a student’s question, “can you tell me more about lions?” Deb did a bit more research to make her post more informative. She also made a grammatical correction by changing “beast” to “beasts.” The conventional change served as another example of self-revision not based on a comment, a change that deserved some speculation. Perhaps the repeated readings of her blog post prompted the change. It was also likely that her writing skill improved overtime due to maturation and classroom instruction, so perhaps the change resulted from her increased proficiency in writing

Lions are big furry beasts. They have big red eyes and manes. But the females don't so you can tell them apart. Lions have a very big diet they eat gazel's and bunny's. Lions live in the jungle or in the african savanna. They like to live in open spaces. **Lions are a big kind of animal the biggest lion is 700 pounds.**

Finally, the current version which was completed in April contained more information about lions, probably due to the "helpful" and "good" comment by Sherrye, "I love it tell me more!!!"

Lions are big furry beasts. They have big red eyes and manes. But the females don't so you can tell them apart. Lions have a very big diet they eat gazel's and bunny's. Lions live in the jungle or in the african savanna. They like to live in open spaces. Lions are a big kind of animal the biggest lion is 700 pounds. **A lion is a symbol of England and one of the 4 biggest cats in the world.**

Summary

The researchers heeded the call to incorporate technology into literacy instruction (Andes & Clagget, 2011; Zawilinski, 2009). The need for research-based instructional approaches led the researchers to conduct this quantitative study to determine if using blogs to foster peer revision and enhanced writing had a significant impact.

Research Question 1. To answer the first research question (Does the blogging process help produce higher quality writing?), the results suggest that spending time blogging does produce higher quality writing which corroborated previous research on the positive impact of technology on writing (Boling et al., 2008; Dalton, 2010; Olthouse, 2012). Thus, blogging can be used as a writing tool to promote the writing process.

Research Question 2. To answer the second research question (How does blogging impact students' writing/editing/revising skills?) the details of the written blogs were examined. It was found that the writing improved in both quality and length.

No Growth. However, while examining the data, it was found that four students did not experience any growth in their writing scores. And even though it was not a research question, we felt it important enough to discuss.

As seen in Table 3, four students showed no growth. To understand why this happened, the student's written blogs and scores from the Writing Rubric had to be examined. As seen in Table 4 below the four students that did not show any growth began the process at or above the standard. Two of the students were subject to the glass ceiling effect, as Carol and Anita began with the highest score possible. One cannot confidently state that the students made no progress, only that they exceeded the expectation in both cases.

Table 4
Students' Writing that Showed No Growth

Students who had NO growth	Rater 1	Rater 2	Rater 3	Original Mean	Rater 4	Rater 5	Rater 6	Revised Mean	Growth (%)	Increase
Donna	3	4	3	3.33	3	3	4	3.33	0	0
Carol	4	4	4	4	4	4	4	4	0	0
Anita	4	4	4	4	4	4	4	4	0	0
Deb	3	3	3	3	3	3	3	3	0	0

In the other two cases, Donna and Deb also met the expectation and were rated similar before and after the blogging process. However, Donna did have a variation in her writing scores while Deb's scored stayed the same throughout the semester.

Decreased Growth. As seen in Table 4, one student showed a decrease in writing scores from pre- to posttest. To understand why this happened, the student's written blogs and scores from the Writing Rubric had to be examined. As seen in Table 5 below, the exposition quality decreased by 8.25%, or by 0.33 points. While only speculation can explain this decline, the reason may be due to the student's changes that negatively affected her exposition. In order to understand the possible cause more deeply, the researcher reviewed the student's writing.

Pre Writing. A dogs is an animi that barks.Dogs chase cats too.Dogs eat a lot of bones.If you are happy,the dogs will be happy.sometime dogs chase you.By playing with them,you love them.They will protect you when you are sleeping or watching Tv.The important thing about dogs is that they guard you everyday and everynight

Table 5
Researcher's Score of Lynn's Exposition

	Conventional	Organization	Focus and Coherence	Development of Ideas	Voice
pre	3	3	3	2	2
Post	3	2	2	2	2

One of the students left a comment, "Can you please tell us more about dogs?" The teacher agreed that more information would help strengthen the exposition. In response to her peer's comment, Lynn added more information (changes in bold-type).

Post Writing. A dog is an animal that barks.Dogs chase cats too.Dogs eat more **than four bones**.If you are happy,the dogs will be happy.sometime dogs chase you.By playing with them,**if** you love them.They will protect you when you are sleeping or watching Tv.The important thing about dogs is that they guard you day light and every night.**Dogs are very rare.They can bite the strangers that they do not know.Sometimes they get**

out of the gate when you open it. There are all sorts of dogs in the world. My favorite dog is regular dog, when you open the gate or door and there is a stranger the dogs will bite them, the stranger will run away. When you live with them to your grandma to take care of your dog, then live it there for three months your dog will bite you.

Lynn certainly added more to her exposition, but perhaps not exactly what the student (and teacher) had in mind. The research reassessed the writing according to the rubric. After comparing the scores, the decrease may have been justified. Lynn's exposition increased in quantity of words, but decreased in quality, particularly in regards to organization and coherence. Therefore, it can be concluded that the raters were accurate in their scoring, and the results indicated that some revisions may negatively affect the quality of a student's writing.

Discussion

As the results show, blogging can be a powerful tool to motivate and empower students to revise their writing without the aid of the teacher and to prepare students to provide constructive feedback in a technological context. In doing so, the researchers agreed that three factors were likely responsible for the increase in quality of writing: peer comments and/or questions, explicit instruction via mini-lessons given by the teacher and individual learning throughout the process.

Another finding showed one student actually decreased in their writing scores. In this case, adding additional information to existing writing can decrease the quality as illustrated in the exposition. This brought up a concern that should be addressed in more detail and brought to mind the old cliché, "quality not quantity." It is possible that in the future, teachers may want to discuss this potential shortfall, and stress the need for rereading for coherence.

A further finding showed four students' writing scores for pre- to posttest had no growth. The results prompted the researchers to examine the use of rubrics in writing. Providing a rubric helps direct students towards proficiency throughout the writing process (Andrade, 2001; Schirmer & Baily, 2000; Tompkins, 2004). However, while a student's writing quality may have improved, it is difficult to communicate it with a rubric score. In these cases, it may be necessary for teachers to qualitatively describe the quality points that increased directly to the student (Newkirk, 2000).

Interestingly, all four of the students that did not grow were females. The researchers reexamined the data and found that overall, males' writing scores increased by 18.5% and females by 13.35%. There appeared to be a disparity, but at this point, the researchers can only speculate on reasons for the gender performance differences. Some researchers (McPhee, Marks, & Marks, 2013) suggested that the use of technology would help close the "gender gap" by increasing performance of males to that of females in a primary grade classroom. Other researchers (Sokal & Katz, 2008) claimed that classrooms where male teachers integrated technology in reading had a positive impact on male students' performance. The first author was male and used technology extensively in the classroom; perhaps a similar phenomenon occurred here. It would be interesting to conduct further research to examine gender differences in writing in digital formats.

Finally, the student-centeredness of the study was important. Again, the teacher did not offer any edits or suggestions; therefore, the changes were in the hands of the students and their

peers. The second graders learned to question each other and politely comment on each other's writing. For example, a student commented, "I really like your story but it needs to be capital and please add a little bit more detail." Teachers can foster helpful responses by providing students with language stems, as students learned to use these stems and began to create their own.

However, after reflecting on the results, the researchers recommend that teachers not only continue providing directed mini-lessons on skills students need but to consider taking on the role of editor/reviser after the blogging process, as students need a knowledgeable other that can adequately instruct students based on careful assessment (Vygotsky, 1978). Recalling Lynn's case; though it is impossible to say for sure, a peer suggestion such as, "please add your new information to a concept web to help organize your thoughts" may have supported Lynn in another round of revisions. However, because no student in the study commented as such, the teacher could have provided the insight. This feedback might have helped Lynn with her organization and coherence. So, perhaps, after the students make their own changes, and are able to view their changes, the teacher could reengage.

In the end, the young authors were able to see how their knowledge of writing and proficiency increased by considering peer feedback, reading their own work, seeing the need for improvement, and successfully making revisions. In addition, spanning the writing process over several months allowed students to also make revisions based on their maturation as a writer.

Blogging proved to be an engaging and effective means for a technologically enhanced, collaborative writing workshop, a tool that can be used at all grade-levels. Overall, the students learned an important skill that could be applied in various contexts while simultaneously learning how to use a prevalent 21st century tool, two learning outcomes that the researchers believe made the project well worth implementing.

References

- Andes, L. & Clagget, E. (2011). Wiki writers: students and teachers making connections across communities. *The Reading Teacher*, 64(5), 345-350.
- Andrade, H. (2001). The effects of instructional rubrics on learning to write. *Current Issues in Education* [Online], 4(4).
- Boling, E., Castek, J., Zawilinski, L., Barton, K., & Nierlich, T. (2008). Collaborative literacy: Blogs and Internet projects. *The Reading Teacher*, 61(6), 504-506.
doi: 10.1598/RT.61.6.10
- Bogard, J. & McMackin, M. (2012). Combining traditional and new literacies in a 21st-century writing workshop. *The Reading Teacher*, 65(5), 313-323.
- Dalton, B. (2012). *Multimodal composition and the common core state standards*. *The Reading Teacher*, 66(4), 333-339.
- Ellison, N. & Wu, Y. (2008). Blogging in the classroom: A preliminary exploration of student attitudes and impact on comprehension. *Journal of Educational Multimedia and Hypermedia*, 17(1), 99-122.
- Graham, S. & Harris, K. (2013). Designing an effective writing program. In S. Graham, C.A. MacArthur, & J. Fitzgerald (Eds.), *Best practices in writing instruction* (2nd ed., pp. 3-25). New York City, NY: Guilford Press.
- Hsu, H. & Wang, S. (2011). The impact of using blogs on college students' reading comprehension and learning motivation. *Literacy Research and Instruction*, 50(1),

- 68-88. doi: 10.1080/19388070903509177
- Hansen, J., & Kissel, B. (2010). K-12 students as writers: Research to practice. In D. Lapp & D. Fisher (Eds.), *The handbook of research on teaching the English language arts*, 3rd Ed. (pp. 271-277). New York City, NY: Routledge.
- Hull, G. (2003). At last: Youth culture and digital media: New literacies for new times. *Research in the Teaching of English*, 38(2), 229-233.
- International Reading Association. (2009). *New literacies and 21st century position statement of the International Reading Association*. Newark, DE: Author.
- Johnston, P. (2004). *Choice words*. Portland, ME: Stenhouse.
- Lankshear, C. & Knobel, M. (2003). *New Literacies: Changing Knowledge and Classroom Learning*. Buckingham: Open University Press.
- Lee, C. & Gilles, C. (2012). Discussing culturally relevant books online: A cross-cultural blogging project. *English Teaching: Practice and Critique*, 11(4), 161-177.
- McPhee, I., Marks, L., & Marks, D. (2013). *Examining the impact of the Apple "I-Pad" on male and female classroom engagement in a primary school in Scotland*. Paper presented at the International Conference of Information Communication Technologies in Education: Crete, Greece.
- Merchant, G. (2005). Electronic involvement: Identify performance in children's informal digital writing. *Discourse: Studies in the Cultural Politics of Education*, 26, 301-314. doi:10.1080/01596300500199940.
- Mills, K. & Levido, A. (2011). iPed: Pedagogy for digital text production. *The Reading Teacher*, 65(1), 80-91.
- Murray, D. (1998). *Write to learn*. New York City, NY: Harcourt Brace Publishers.
- National Center for Education Statistics (2002). National assessment of educational progress. Retrieved from <http://nces.ed.gov/nationsreportcard/>
- National Commission on Writing. (2003, April). *The neglected R: The need for a writing revolution*. Retrieved from <http://www.writingcommission.org/report.html>
- Newkirk, T. (2000, September 13). A mania for rubrics. *Education Week*, 20(2), p. 41.
- New London Group. (1996). A Pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, 66 (1), 60-92.
- Olthouse, J. (2012). Teaching Talented Writers With Web 2.0 Tools. *Teaching Exceptional Children*, 45(2), 6-14.
- Overbaugh, R. & Lu, R. (2008). The impact of a NCLB-EETT funded professional development program on teacher self-efficacy and resultant implementation. *Journal of Research on Technology in Education*, 41(1), 43-61.
- Partnership for 21st Century Skills (2015). *Learning for the 21st century*. Retrieved from <http://www.p21.org/>
- Schirmer, B. & Bailey, J. (2000). Writing assessment rubric. *Teaching Exceptional Children*, 33(1), 52-58.
- Sokal, L. & Katz, H. (2008). Effects of technology and male teachers on boy's reading. *Australian Journal of Education*, 51(1), 81-94.
- The White House, Office of the Press Secretary (2013). President Obama Unveils ConnectED Initiative to Bring America's Students into the Digital Age [Press Release]. Retrieved from <http://www.whitehouse.gov/the-press-office/2013/06/06/president-obama-unveils-connected-initiative-bring-america-s-students-di>.

- Tompkins, G. (2004). *Teaching writing: Balancing process and product* (4th ed.). Upper Saddle River, NJ: Pearson Education.
- Troia, G., Shankland, R., & Heintz, A. (2010). *Putting writing research into practice*. New York City, NY: Guilford Press.
- Vygotsky, L. (1978). *Mind in society: The development of higher mental processes*. Cambridge, MA: Harvard University Press.
- Yancey, K. (2009). *Writing in the 21st Century: A Report from the National Council of Teachers of English*. Urbana, IL: National Council of Teachers of English. Retrieved from http://www.ncte.org/library/NCTEFiles/Press/Yancey_final.pdf
- Young, C. & Stover, K. (2013). "Look what I did!" Student conferences with text-to-speech software. *Reading Teacher*, 67(4), 269-272.
- Zawilinski, L. (2009). HOT blogging: A framework for blogging to promote Higher Order Thinking. *The Reading Teacher*, 62(6), 650-661.