

Benefits of Using Technology: In Literacy Instruction

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Background

Introduction

Although neither one of us have had our own classrooms, we have spent ample time in various classrooms in different parts of the state. We have spent time in rural and urban classrooms, wealthy and high-poverty classrooms and classrooms with various degrees of diversity. We have worked with older students and younger students. Across all these ranges of classrooms we have seen a common theme between technology and reading. In modern society, individuals are surrounded with technology during every waking hour. Computers, the internet, televisions, SmartBoards, cameras, gaming systems and cell phones are just a few of the different technology-based mediums that consume our lives and the lives of our students on a daily basis. Since technology is something that all teachers face, we chose to address how technology can not only be a part of, but foster growth and motivation for students everywhere. As teacher researchers we ask if this is possible and if this goal is realistic. In some schools, the use of technology might be sparse but in most it is a growing continuum that teachers should embrace and integrate as part of their everyday instruction. In this technological society, we need not dismiss the opportunity to cultivate a love of reading in our students as well explore the use of everyday technologies. The use of multimedia-based technology explicitly facilitates teaching and learning interactions that are responsive to students in the digital age. As competent educators, we must constantly explore and evaluate new technologies that are compatible with today's society and motivate students to work hard. Through our experiences in schools we have noticed students struggling with finding the motivation to read when there are so many other fun and interactive things to do. Our students are 21st century learners and as teachers we need to adjust our instruction and make it reflect the needs of all learners.

Research

Since this is a somewhat new concept and is constantly changing at an alarming rate, research studies have been few and far between. However, the research we found has been consistent in saying that technology amplifies student learning and motivation.

In, "Expanding the New Literacies Conversations," Lue and colleagues at the University of Connecticut discuss the idea that "the most profound influence on life in the 21st century may turn out to be the Internet" (Lue, et. al., 2009). They argue that there is a need to build a good dual-level theory. The first level requires the need to understand and inform the importance of internet use in schools. The second theory promotes the notion that within this recognition there is also a need that requires teachers to learn and promote the necessary skills that are required for students to comprehend different forms of text. This theory promotes the idea that providing students with ample forms of communication can assist in areas of reading, writing, and communication. Students live in a rich environment where they are continuously exposed to technological advances. 21st century learning requires a need for classrooms to not ignore or remain stagnant in this realization. Since technology is constantly evolving, this effort should be continuous and not dichotomous in effect. This article argues that viewing the

internet and other digital forms should take the approach that this is a literacy issue and not a technology issue. Framing the internet and technologies in this way promotes analysis to new social practices; fusing technology standards with the curriculum, integrating the internet into each content area, and promoting the need for classroom teachers to learn and acquire effective strategies for teaching online information and communication use. This collaborative approach initiates, promotes, and teaches new skills that are “central to full participation in a global community” (Leu, 2009).

Julie Coiro and Elizabeth Dobler discuss this “dual theory” in depth in their research article, “Exploring the online reading comprehension strategies used by sixth-grade skilled readers to search for and locate information on the internet.” In their research they found that there are differences in comprehending traditional text and new text. Their study recognizes the importance for students to be exposed to numerous forms of text in the classroom. Along with this exposure is the need for developing strategies for students to not only effectively navigate search engines but to also acquire skills to research, validate, comprehend, and synthesize information found. This acknowledgment is essential for the future of our education (Coiro and Dobler, 2007).

In the article *The Effect of Book Blogging on the Motivation of Third-Grade Students* by Swanson and Legutko, the authors found that third-graders who blogged about the books they were reading had a marked improvement in motivation. Swanson and Legutko implemented Wiki technologies to increase student’s motivation. They collected baseline data by administering a six point motivation scale during guided reading and scoring student responses to guided reading texts for one month. After baseline data was collected, students were introduced to Book Blogs and responded to readings on a blog and Wiki. Students were reassessed on motivation following the Book Blogs intervention using the same six point scale. Swanson and Legutko found that when the motivation scores before the Book Blogs intervention were compared to the scores after the intervention, “the Book Blogs intervention results were significantly higher.” The study found that all students demonstrated an increase in motivation during the Book Blogs intervention. It is believed that the students’ increased motivation scores was “due to the social connections, meaningful audiences...” (Swanson and Legutko, 2008).

The Effects of Technology on Reading Performance in the Middle-School Grades: A Meta-Analysis with Recommendations for Policy found that most research about integrating technology into literacy instruction is based on reading comprehension and there is little research that emphasizes the effect of technology on motivation (2005). With that being said, the study found that using a wide range of technology in middle school grades “appears to enhance the reading performance” and motivation of middle school aged students (Pearson, Ferdig, Blomeyer & Moran, 2005). The study suggests that researching technologies used in the classroom is an important factor in obtaining success because many types of technology interventions “are not any more effective than garden-variety print-oriented instruction” (Pearson, Ferdig, Blomeyer & Moran, 2005). The authors recommend that as a profession,

teachers should embrace technology and reevaluate assessment methods of reading performance.

Rachel Karchmer's study on the influence of the internet on literacy instruction found that elementary grades teachers "noticed an increase in their students' motivation" in reading and writing when the students knew their works would be published on the internet (2001). Karchmer studied thirteen teachers, who had been identified by their peers as exemplary users of the Internet in literacy instruction. Karchmer collected data by completing email interviews, collecting reflective journals and obtaining additional materials (i.e. Webpages, and articles); after analyzing the data she collected, Karchmer found that students' motivation to produce "quality written work increased when they knew it would be published on the internet" (2001). These teachers noticed a difference in students' writing when the Internet was used. Students' motivation seemed to increase when assignments and projects were completed and published online.

Small change shapes BIG practice. Change occurs in many facets and the magnitude of such depends on the environment in which it occurs. 21st century learning requires the formation of cohesive research and pedagogy that interconnects with merging implications for best classroom practices. As future educators we need to bridge in and out of school literacies in order for students to function effectively in a global economy. Shaping practice that facilitates new skills encourages students to become makers of their own learning and identity.

Research Question

1. What are the effects of incorporating technology into literacy instruction?

Research Design

Participants

We provided our interventions to an entire fourth grade class. We chose this class to work with because the lead teacher in the class was willing to let us come in and implement some interventions into her daily instruction. This class was also ideal for our study because there was a range of reading levels. We feel our research is applicable to all readers, not just one group such as high-achieving or struggling readers. The class we worked with is made up of an almost equal number of boys and girls (13 girls, 12 boys). Overall, the class has an average fourth grade reading level. There are a few students reading above grade level and a few reading below. There are no TD (gifted) students in the class and five EC students (including one ESL student). The school is located in a middle-class suburb of Charlotte. Matthews Elementary is considered a neighborhood school, meaning students from areas surrounding the school in close proximity attend. Most students have gone to this school since kindergarten and their families have lived in the area for years.

For our research study we chose to study six students in depth. We chose these students based on pre Garfield Motivation Survey scores. We chose boys and girls that ranged from highly motivated to lacking motivation. We chose two students from each sub-group,

both boys and girls, to study. Our sub-groups were highly motivated, moderately motivated, and lacking motivation.

Intervention Procedures

Our research was conducted over a five week period. Student's motivation level was assessed at the beginning of the study using the Garfield Motivation Survey. Each picture on the Garfield test was assigned a value one, two, three or four. When students completed the survey at the beginning of the research, we totaled their motivation score and converted it into a percentage. The Garfield Survey consisted of twenty questions. We modified the survey to fit our needs by changing some questions to better fit our study. For example, we added a question about how students feel about summarizing a text because summarizing was part of our intervention. We also added a few questions about technology, such as "how do you feel when you have an assignment on the computer?" and "how do you feel about using the computer at school?" We felt these questions were necessary to add to the survey so we could gauge each student's interest level in technology and how they felt about summarizing in general. This helped us have a clear understanding for our study.

At the beginning of our study we created an entire class blog where students had their own pages to add their individual entries to. On the same day we administered the Garfield Motivation Survey we also introduced the class to the blog. We then modeled how to access, write on, add comments and also went over blogging rules and regulations. Students were required to blog once a week, but encouraged to blog as many times as he/she wanted to. Students were already required to read a minimum of thirty minutes of self-selected reading and write a short summary or reflection (3-sentences) in their journal each night. Writing on the blog took the place of writing in their journals, at least once a week. In their blog entry, students wrote a short summary of what they read; these guidelines have been in place since the beginning of the year.

At the two week mark of our study we introduced our second intervention to the class. We presented how to create a Wordle to students as a means of summarizing a text. A Wordle is a "toy for generating 'word clouds' from text." As an entire class we modeled how to create a Wordle about a classic story, "The Three Little Pigs". Students were then given the instructions for creating their own Wordle about a story they would read later that week. Students were told that someone who had not read the story should be able to get a general idea of what the story is about from looking at their Wordle.

At the four week mark we introduced our final intervention, creating a Glogster about a basal text. A Glogster is an "interactive visual platform in which users create a poster or web page containing multimedia elements including: text, audio, video, images, graphics, drawings, and data." We modeled how to create a Glogster to the class as a whole and showed them how to add links, pictures and text. Students then created their own Glogster based on a basal story the whole class read.

Data Collection

For our data collection we had formal and informal methods of collecting data. We collected data by administering pre and post surveys (Garfield Motivation Survey and SurveyMonkey.com culminating survey), conducting student and teacher interviews and comparing students writing in their journals versus writing on the blog. We created a spreadsheet to help display our data collection.

At the beginning and end of our study we administered the Garfield Motivation Survey. Our reasoning for administering the survey was to compare student's reading motivation levels before and after our interventions. We also interviewed the teacher to get further insight on student's reading motivation levels before and after our interventions. We also charted specific feedback and comments from the teacher and students during and at the completion of each intervention. After each intervention, we specifically asked each of the six students if they enjoyed this activity more than writing a response paragraph and for any additional comments. At the end of our study students answered a simple survey we created on SurveyMonkey that was specific to the interventions we implemented.

In order to compare and contrast the students' writing in their journals and on the blog we created a rubric. The rubric was based on pre-determined expectations set in place at the beginning of the school year. The teacher required the students to write a minimum of three sentences summarizing or reflecting on what they read in their journals. In order to maintain the validity of our study we did not change the expectations for writing on the blog, nor did we encourage students to alter their writing on the blog. Based on these expectations we chose to include word count and sentence count on our rubric. We felt word count and sentence count were an appropriate and fair measure of motivation due to preset expectations by the classroom teacher. Students were not previously asked to include detail or dialogue, so we did not see it fit to look for these aspects in their writing and judge motivation based on these factors.

Data Analysis

Using a spreadsheet we compiled the following scores for each of the six students: Garfield pre and post scores, information from pre and post teacher interviews. The spreadsheet also showed comparison of students writing in their journal and on the blog per week for the duration of five weeks total, see Table 1. We also displayed results from Garfield surveys, see Table 2 and 3 and journal versus blog writing, on graphs see Table 4.

Table 1:

	Garfield Pre/Post	Average Word Count Journal/Blog	Average # of Sentences Journal/Blog	Teacher Interview Comments Pre/Post	Student response after Wordle and question	Student response after Glogster and question
1	42.5/62.5	23/32	2/5	Low motivation/ Seemed to be more motivated when using interventions	"Yes, I enjoyed it"	"It was cool but kind of hard to use. I liked Wordle better"
2	60/63.75	24/52	3/8	Low motivation/ Could not tell difference in motivation	"Yes. Wordle was cool. I liked choosing the words to type on there"	"Yes! Coolest thing ever!"
3	78.75/81.25	29/54	3/6	High motivation/ Remained highly motivated	"Yes. Wordle was a neat way to explain my thoughts about the story"	"Yes, I thought it was neat how we could add videos and add pictures, Wordles and writing"
4	73.75/78.75	43/50	4/6	Moderate motivation/ motivation seemed to increase at beginning of blog intervention but dwindled by end	"It was awesome, I want to use this all the time after reading"	"Yes. I think this would be cool to do a book report on"
5	96.25/97.5	41/85	3/8	High motivation/ remained extremely highly motivated	"Yes! I think that Wordle is a good way to express ideas. I liked how everyone's Wordles were different"	"Yes, I can't wait to use this at home and show my mom"
6	81.25/91.25	38/103	3/9	High motivation/ motivation increased- enjoyed sharing with peers	"Yes, I liked seeing how the same words were used in different ways. I definitely enjoyed it"	"Yes, Glogster is a cool way to show different ways of expressing ideas in a story"

We coded student responses to question: did you enjoy this activity more than writing a response paragraph and for any additional comments. We highlighted "yes" responses in

yellow and “no” responses in red. Student motivation scores were coded in red, yellow or green (low, moderate, high).

At the beginning and conclusion of our research we assessed each student’s motivation level by using the Garfield Motivation Survey. See Table 2 for Pre results and Table 3 for Post results.

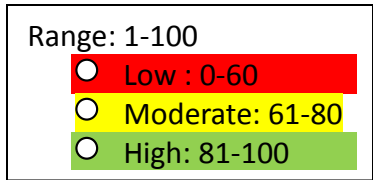


Table 2:

Pre- Garfield Survey Results

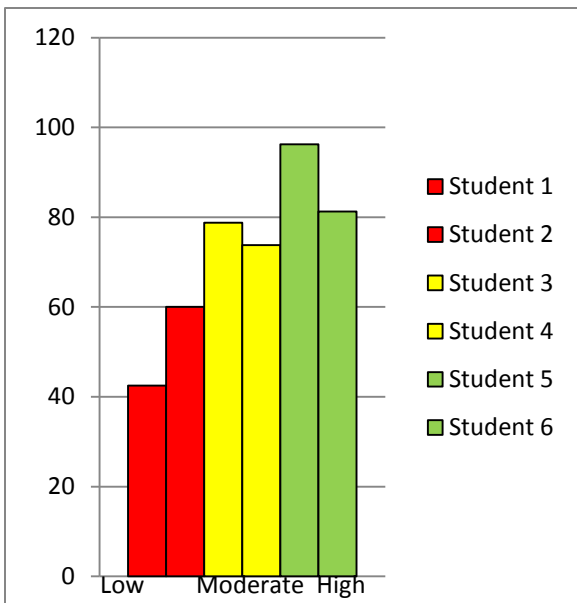
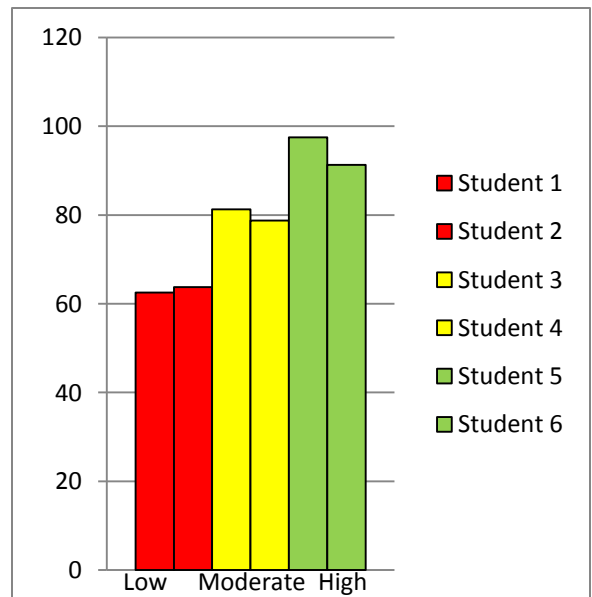


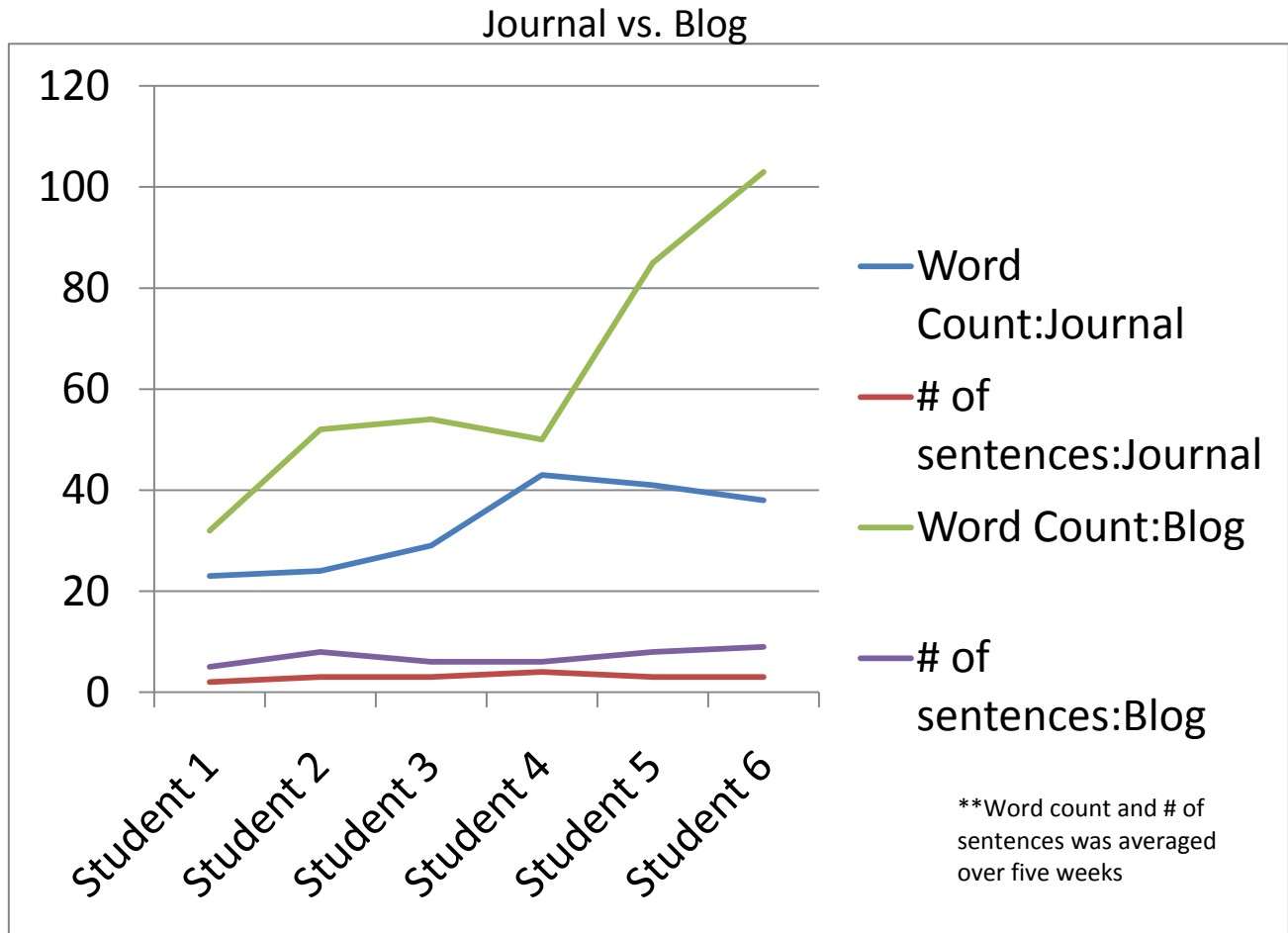
Table 3:

Post- Garfield Survey Results



We organized our findings from word count and sentence count displayed in journal and blog writings. We averaged these findings and created a chart to display the differences. See Table 4.

Table 4:



Results

Lacking Motivation Students: See Student 1 and Student 2 Examples in Table 5

Table 5:

Student 1: Example

Journal Sample

✓ 1-25 Mgrclzth
Peter found out his mom's pregnant.
Peter's mom had a baby girl. Peter and Fudge and Fudge stayed hide and seek and help Peter's baby.
✓ Super Fudge March 8th 2557
Peter is still doing a way again.
They are moving to New Jersey.
Peter's mom want to move with Fudge or Boris.
✓ Super Fudge 1-25-18
Peter and Fudge are a bunch of words. Peter is a little bit of a mess.
✓ March 11th 51-18 Super Fudge
Peter and Fudge went to school and they were all there. Peter went to school and they were all there.
Fudge and Fudge.

Blog Sample

Reading Summaries

Mrs. Jackson's 4th Graders Reading Summaries



Student 1

4/5/11

Double Fudge

26-35

Fudge and Peter keep talking about mixed group. Peter kept trying to explain why his dog's name is turtle. While Fudge was running he met a girl who lives where Peter's old friend did.

Student 2: Example

Journal Sample

✓ Salt 11-11-11
Michael loved playing football with his brother's. he was followed him everywhere but was to short to play football and he was very sad.
10-8-10 Little Bill wants to discover a comet and be famous.
First he needs a telescope but it cost like 1000 dollars. Little Bill find the comet.
✓ For me's 6-11-10 all
Farmers work hard so that people will have food. Some farmers grow crops of vegetables that also grow grains.

Blog Sample

Reading Summaries

Mrs. Jackson's 4th Graders Reading Summaries



Student 2

Tonight on the titanic 22-26 4-6-11

The titanic was sinking and people were yelling and running while other people got on boats and were leaving. Jack and Annie got on a little boat and they found a puppy and they got him up under the puppy there was a letter from Morgan and it said bring the puppy back to the tree house tomorrow. So the next day Jack and Annie got up early and went to the tree house and there was another letter it said get a lot of sleep you have a big mission tomorrow.

Student 1 and Student 2 Results:

Student 1: In journal writing findings for Student 1 indicated a lack of sentence structure. This included run on sentences, punctuation and capital letters. He also had incomplete thoughts, illegible handwriting and lacked cohesion. For example, in one journal entry he wrote "crash ordered two medium all pepperoni. crash is the allstar for his team. And webb also made the cheerleading squad." In blog writing, Student 1's writing improved, he still left out capital letters, but had more complete thoughts and sentences. His summaries were more coherent and were legible due to the support of writing on the blog. In his journal he wrote an average of two sentences and on the blog he consistently wrote three or more sentences.

Student 2: Student 2 is an ESL student. In his journal he always wrote exactly three sentences but on the blog he expanded his writing to a minimum of five sentences. In his journal summaries he struggled with spelling, complete sentences and appropriate use of punctuation. For example, in one journal entry he wrote "Farmers work many hours so thar People will have Food. Some Farmers grows crops of Vegetables. they allso grow grains." On the blog, Student 2's spelling and punctuation use improved. He still had difficulty with complete sentences.

Among both Student 1 and Student 2, our low motivated students, we found some common themes in their writing. Both students had a difficult time forming complete thoughts and sentences and using appropriate punctuation. We saw and improvement in both of these areas when both students wrote on the blog. We also saw an increase from both students in the amount and detail they wrote when writing on the blog.

Moderate Motivation Students: See Student 3 and Student 4 Examples in Table 6

Table 6:

Student 3: Example

Journal Sample

10-7-10
Game
76-81
Dr. Trindler motioned me to his car across from him. Dr. Trindler was going to make Nora take a test. Nora asked Dr. Trindler if she will ever see her grade for 10.

10-10-10
Game
82-84
Nora saw a soccer game when she was only three years old on Spanish tv. Nora felt like I was a hundred feet above the field calmly looking down. I was pure - no question nourities n/walls no team napping on nails n/sheets of glass trying to press me down flat

Blog Sample

Reading Summaries

Mrs. Jackson's 4th Graders Reading Summaries



Student 3

4/3/11
Happy birthday Samantha
46-56
They finally saw jip they tried to pick him up but it was too hard. When they got to wear Aunt Cornelia was and she picked jip up. When Samantha and the twins went to go tell Cornelia what happend and she got so mad that they almost lost jip.
When they got to the ice cream shop they told grandmary what happend and s he was not really mad.

Student 4: Example

Journal Sample

10-3-10
Baby Sitters Club
The first two people were okay but she was also stuck with Logan! ~~When she got on the bus she told Dawn her stepsister, every thing.~~

10-7-10
Earth Quakes
An average of once every thirty seconds an earthquake is happening somewhere. They can be all kinds of sizes. An earth quake happens usually in the earth's crust.

10-9-10
Earth Quakes
The san Francisco earthquake was one of the most violent earthquakes ever recorded. The huge quake was more than twice the size of California. More than 3,000 people died. After the quake there was fires. The fires alone damaged 28,000 buildings.

Blog Sample

Reading Summaries

Mrs. Jackson's 4th Graders Reading Summaries



Student 4

4/5/2011
Summer of Riley
45-68
William wants the government to know that Riley was innocent in chasing Peaches old horse because if Riley is guilty he will get put down. William finally finds someone that can get Riley from the pound.
William is happy that Riley can live, but does he still want him back?

Student 3 and Student 4 Results:

Student 3: Student 3 consistently wrote an average of three sentences in her journal. On the blog her average increased to six sentences per summary. Her writing showed that she struggled with spelling and capitalization. Her journal entries consisted frequently of direct quotes from the book she was reading. For example, she wrote for one entry "I was pure- no question no worries no walls no frames hanning on nails no sheets of glass trying to press me down flat." On the blog Student 3 appeared to not directly quote text and began pulling her own ideas and meaning from the text.

Student 4: Student 4 also seemed to directly quote text in her journal writing. She included accurate punctuation, complete sentences and appropriate capitalization. In her journal she wrote an average of four sentences and on the blog she wrote an average of six sentences. In her journal she wrote, "An average of once ever thirty seconds an earthquake is happening somewhere. They can be all kinds of sizes. An earthquake happens usually in the earths crust." On the blog she showed a progression from simply summarizing to reflecting on what she read. For example, on the blog she wrote "William wants the government to know that Riley was innocent in chasing Peaches old horse because if Riley is guilty he will get put down. William finally finds someone that can get Riley from the pound. William is happy that riley can live ,but does he still want him back?" The inclusion of the question at the ends shows that she is thinking deeper about the text.

Among Student 3 and Student 4 we noticed that both girls were consistently quoting directly from the text in their journal writing. When these students wrote on the blog, direct quoting was virtually eliminated and both students appeared to reflect more in their writing.

High Motivation Students: See Student 5 and Student 6 Examples in Table 7

Table 7:

Student 5: Example

Journal Sample

Writing Catch Caught by \$125-201
Ken and his father go to state they are down
by 3. Ken was scared and he needs help. When he
goes up he hits a home run! After a long hard
game they finally win they have a party with
pizzazz cake, cookies and ice cream.
can Jason 1-1-19
When Cum and Eric find materials Legilaves
the trees they know something is going on. The Duff also explore
in the forest. They have to find out what is going on
and @Dicks.
Mark and Drake 1-152
Mark and Drake are best friends they have to
find out where the diamond is. They go out to the park
and lost for the diamond they get pulled into another
hole from work. Now they have to get it.
12-18-18
can Jason 1-1-19
Cam and Eric find out that someone has
stole the gym teacher's trophy. They
go looking around the building for it. When
they stop on the carpet of the gym teacher
from their last the trophy to get the trophy.

Blog Sample

Reading Summaries

Mrs. Jackson's 4th Graders Reading Summaries



Student 5

The Night Tourist 4-7-11
whole book

Jack lives with his father on the University of Yale Campus. His father sends him to see a mysterious doctor in the NYC. Where Jack hasn't been since his mother died eight years ago. In a train station he meets a girl named Euri. She shows him the other floors of the train station where only urban explorers know about. Jack is in the underworld. Jack thinks this might be his chance to see his mother. He tries to bring Euri back, but fails because he looks behind himself which is mother told him not to do.

Student 6: Example

Journal Sample

Mrs. Piggie Wiggle's Farm
Diabe is so scared of everything, even horses
and dogs. So her parents send her to
Mrs. Piggie Wiggle's Farm. Piggie and
Mrs. Piggie Wiggle help her fight
her fears.
Mrs. Piggie Wiggle's Farm 2-5-11
Morton can never find anything, so his parents
send him to Mrs. Piggie Wiggle's Farm. Piggie
helps him find what he needs, a breathing device and
lets more when he goes home. He has
the shortest eyes in the whole town.
Little House in the Big Woods 2-1-11
Laura, Mary, and Carrie all live in a cabin in the
Big Woods. Now they are all working on storing food
for the winter. They get meat, sugar, and
and do chores to help for the winter time.
Little House in the Big Woods 2-21-11
When Pa has to go to town, he says he will
get Laura, Mary, and Carrie. When he comes
back they each have a gift. Ma gets a calico dress.
Laura, Pa tells her that she is very lucky
that Sundays are not like they used to
be.
Little House in the Big Woods 2-22-11
Pa, Ma, Laura, Mary, and Carrie all went to
Grandpa's. There Pa, Grandpa, and Uncle George
all got syrup from the trees. Also some more
guests came and she had a dance.

Blog Sample

Reading Summaries

Mrs. Jackson's 4th Graders Reading Summaries



Student 6

4/6/11 By the Shores of Silver Lake Pages- 85-99 (LONG PAGES)

One month Pa decides to give the men half of their pay on the 15th of the month and the men are very mad and are crowding around the store demanding for the rest of the month. The men will not go away until Big Jerry comes and takes them to a village with a riot and where they can be demanding and angry. That night Ma is very worried and in the shanty Laura overhears Ma and Pa talking together and Ma sits on Pa's knee while Pa explains everything to her and Ma finally feels a little bit better and they all go to sleep. So many birds are flying above Silver Lake and so Pa hunts many of them down for dinner and Ma says they almost have enough feathers to make a feather bed!!!! This is an AWESOME book!! I highly recommend it!

Student 5 and Student 6 Results:

Student 5: Although Student 5 is highly motivated to read and often reads whole books in one sitting, his journal writing were strictly summaries that lacked cohesion and his handwriting was not legible. For example, "When Cam and Eric find mysterious light above the tree theyknowsomething is going on. They tried to explore in the forest. They have to find out what is going on...and quick." On the blog, he continued to write just summaries but his writing was more cohesive and more clearly articulated. For example, "Finn and the others are at a dhi celebration. They see Amanda and Jez, Jez is running the same pace. This bothers Amanda because Jez is a fast runner. They soon find out that Jez is caught. They fight Malfecient and find Jez. They are in huge trouble because they have to fight Chernabog , the worst villain that walt Disney ever created."

Student 6: Student 6 consistently met expectations when journal writing, having the blog seemed to activate the use of higher order thinking skills and she began more descriptive writing. For example, in her journal she wrote "Pa decides to go help Uncle Henry cut his wheat. Laura and Mary play outside with their cousins. When Charley is working with Pa and Uncle Henry he steps on a yellow jackets nest." On the blog, she showed reflective thinking in her writing, for example she wrote "One night at dinner Pa is very quiet and only and will answer questions and Ma wonders if he is alright and he said to her," Caroline, everything is fine, it's just that horse theives Pa got back home and said everything is fine and everyone is O.K. Still little Flutterbudget, as Pa calls Laura, has so many questions until at last Pa and Ma agree that she can go watch with Pa the men work. She had never had such a good time and could watch them forever with their scrapers and plows- so amazing to her! I think it would be so cool to live back when the Ingall's did."

Among Student 5 and Student 6 we saw an increase in cohesion and excitement in their summaries written on the blog. Both students exceeded expectations in all their blog entries and increased sentence writing to an average of eight or nine sentences per summary.

Overall Results:

Even though both writing in journals and blogging had same expectations after analyzing data, our results clearly indicated that all students wrote more on the blog. Comparing writing allowed us to recognize specific areas or weakness and improvement in those areas. Students were more aware of their audience when writing on the blog. This is evident through students adding reflection to their writing, reading other students' posts, writing comments and peer review.

Survey Results:

Comparing the pre and post Garfield Scores showed that every student's attitude toward reading increased after our interventions were implemented. No matter the initial motivation score, there were slight increases and larger increases in motivation among all three sub-groups.

Our final survey completed through SurveyMonkey.com was anonymous and asked students five specific questions based on our interventions.

1. Do you prefer writing your nightly reading response in your journal or on the blog?
 - All six students responded that they preferred writing on the blog over writing in the journals.
2. How easy was the blog to use? Choose one answer.
 - Four out of the six students said the blog was “very easy” to use and the other two said the blog was “easy” to use.
3. How do you feel when you get to use technology during literacy time?
 - All six students said they felt “happy” when they get to use technology during literacy time
4. Did you prefer creating a Wordle or a Glogster?
 - Four out of the six students said they preferred creating the Glogster and the other two preferred creating a Wordle.
5. How would you feel if you got to use the computer every day for a literacy assignment?
 - All six students said they would feel “very happy” if they got to use the computer every day for literacy assignments.

From looking at these results and student work examples (see Table 8 and Table 9) we concluded that all six students, no matter initial motivation level enjoyed using technology during literacy instruction.

Table 8:

Wordle: Examples

□ Student with low motivation

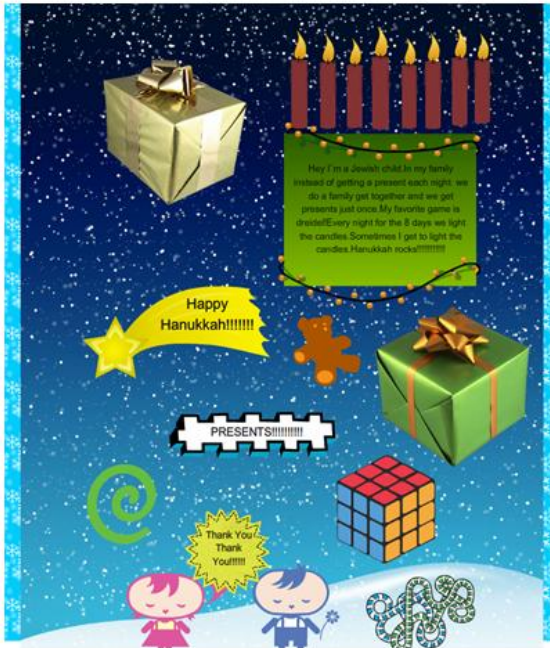
□ Student with high motivation



Table 9:

Glogster: Examples

□ Student with low motivation



□ Student with high motivation



Discussion:

From conducting this research we now know that simple technologies and little changes affect the overall outcome of students' reading motivation. Having students participate in writing on a blog and using technology to create culminating activities about a text can help increase student motivation.

Implementing simple technologies such as Wordle or Glogster in literacy instruction can have a positive effect on students writing as well as students' motivation to read among different areas of literacy instruction (group, whole class, self-selected readings). From data collected we found that students were more motivated to write on the blog after self-selected reading. Students were also more aware of their writing and consistently showed improvement among sentence structure, punctuation, cohesion and higher order thinking skills.

The research we collected is important for teachers because it shows how small changes matter. Technology does not have to be overwhelming and students respond positively to technology interventions during literacy instruction. Reflecting on what we have found we want teachers to be aware that making the slightest effort to integrate technology can have a positive effect on students' motivation during literacy instruction. We think that this is important for teachers because there is a push for 21st century learning and we need to adapt our instruction to fit the needs of all students. Research found during our study also addressed the need to incorporate technology to help develop 21st century skills.

The results of our study are important for students because they are consistently exposed to technology in their daily life. This exposure occurs not only in school but outside of school. If students are consistently motivated they have the opportunity to become more successful in both, school and life.

Journal writing about self-selected reading was a common grade level assignment at the school where we conducted our study. As a result of our study, many teachers have adopted blogging and other technology interventions into their literacy instruction. We found that being an advocate for integrating technology can initiate small changes in classrooms everywhere.

Future Research:

As a result of our research we think that the next step would be to find appropriate technologies to integrate into literacy instruction and to help promote awareness in this area.

Resources:

Link to Wordle: <http://www.wordle.net/>

Link to Glogster: <http://edu.glogster.com/>

Modified Garfield Survey

Link to Survey Monkey: <http://www.surveymonkey.com/>

Link to Class Survey Monkey: <http://www.surveymonkey.com/s/BLQ96CB>

Link to Blog: <http://edublogs.org/>

Link to Class Blog: <http://mrsjackson42011.edublogs.org/>

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