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A Case Study of Classroom Blogging in Three Elementary Schools

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Educational methods which support literacy, the foundational subject of all academic learning, are undergoing profound changes. Computers, and most notably the Internet, are creating new opportunities for students to read, write, and collaborate electronically. Educators recognize the new literacies, social practices, and technologies require new skills for success in contemporary life (Baker, Pearson, and Rozendal, 2010). By changing the way information is absorbed, processed, and used, technology is influencing how students are taught to read, write, listen, and communicate (Holum and Gahala, 2001). With the converging of literacy with technology, today's teachers seek innovative ways to integrate technology into traditional aspects of literacy instruction while engaging students in emerging technology literacies (Taffe and Gwinn, 2007). Overwhelmed by the number of choices teachers might make among the web-based applications, they wonder which Web 2.0 tools can best support literacy learning and meet curriculum objectives?

Among the Web 2.0 tools, blogging has emerged as a powerful instructional tool that can directly support a wide variety of literacy instructional needs. Although there is considerable enthusiasm for the potential of blogging, much of what is written about the uses and affordances of classroom

blogging is anecdotal. Although there is a growing body of empirical research available, most studies focus on middle, high school, and higher education. Since the foundation of literacy instruction occurs in elementary grades one would wonder if blogging would be an effective instructional tool in an elementary classroom. Therefore, this study took up this challenge by investigating how three elementary teachers used classroom blogging as an instructional activity to support literacy instruction.

Literature Review

The impact of the Internet on today's students is powerful and it is hard to ignore the implication for instruction it might provide (Huffaker, 2005; November, 2010). The question is no longer *should* technology be integrated into literacy instruction, but *how* literacy instruction can be enhanced with technology (Hansen, 2008). Of the many applications the Web provides, the Web 2.0 tools show much promise for instruction in support of all aspects of literacy. Web 2.0 tools include weblogs, wikis, podcasts, Really Simple Syndication, social bookmarking screen casting, and photo hosting sites. Rather than static chunks of content, Web 2.0 tools promote conversations and reflections that require the reader to think, analyze, and respond.

A major influence of the acceptance of Web 2.0 tools is the steady movement of educators to online digital environments. Teachers are encouraged to implement digital literacies along with traditional print materials to appeal to a wide range of student interests and reading levels (Lamonica, 2010). In addition, there is an increased emphasis for teachers to implement constructivists' instructional practices that include "building rich learning environments filled with opportunities for authentic, project-based tasks as well as a variety of technology and nontechnology tools" (Bitter and Pierson, 2005, p. 92). With the convergence of literacy with technology, today's teachers seek innovative ways to integrate technology into traditional aspects of literacy instruction while engaging students in emerging technology literacies (Taffe and Gwinn, 2007).

To open up these new possibilities for uses of communication and information in education, literacy practices in schools must be redefined (Leu, Kinzer, Coiro, and Cammack, 2004; National Council of the Teachers of English, 2013; November, 2010; Richardson, 2012; Warlick, 2007). To support this change, Taffe and Gwinn (2007) identified two fundamental aspects of literacy and technology integration which must be addressed: (a) technology must enable the teacher to teach effectively and enhance the learning of skills that *currently* make up a strong literacy curriculum, and (b) technology must teach and enhance the learning of skills that will make up a strong literacy curriculum of the *future* (p. 3).

Many noted authors discuss the need for 21st century students to be able to communicate and collaborate, access information effectively, and use the technology tools available that allow

students to synthesize, evaluate, and create information (Downes, 2004; Richardson, 2012; Warlick, 2007; Wilber, 2010). Professional organizations such as the International Reading Association (2001), National Council of Teachers of English (2013), and the International Society for Technology in Education (2013) recognized the relationship between literacy and technology and have set standards for both teachers and students for acquiring the skills needed for the 21st century. In addition, schools are adopting the Common Core State Standards, which include rigorous technology-based writing and publishing standards requiring technology to become a blended part of all areas of instruction (McLaughlin and Overturf, 2012).

Today's technology tools require teachers to develop new understandings of their students. Some authors believe that 21st century learners think, work, and play differently from previous generations (Prensky, 2001; Richardson, 2006) and enter school exceedingly comfortable using technology, especially the Internet. However, digital age students need to know more than how to use the Web. They also need adults to teach them how to use Web 2.0 tools to become thinkers, problem solvers, and creators. As Prensky (2010) advocated, the teachers' responsibility is to guide and coach students in the use of technology by providing learning opportunities for students to collaborate and be active consumers, managers, and publishers of information (Richardson, 2006).

Of the Web 2.0 tools, Weblogs, or more commonly called "blogs," have emerged as a powerful instructional tool that can directly support literacy and technology skills while utilizing a

cooperative approach to instruction. Simply defined, blogs are websites that allow authors to publish content instantly to the Internet through the use of text, images, and/or links to other related information found on the Internet (Solomon and Schrum, 2007).

Blogging enhances and supports meaningful communication by providing a web platform that provides users an easy way to create, update, and publish content. The readers of the blog then have the opportunity to respond to the author, thus providing an interactive conversation between the author and the reader (Howland, Jonassen, and Marra, 2012).

Adopters of blogging showcase the wide variety of ways blogging can be used in the classroom to enhance and expand teaching and learning (Richardson, 2012). The flexibility of classroom blogging provides many opportunities to implement identified constructivist learning principles such as critical and analytical thinking, collaboration, and reflection. In addition, blogging provides students with opportunities to connect with others within and beyond the classroom walls.

Finally, blogging activities are accessible to students with various learning styles and English language proficiencies (Bellanca and Stirling, 2011; Howland et al., 2012). The value of blogging lies in the many ways teachers can use this collaborative tool to enhance students' creative thought processes while encouraging students to develop valuable literacy and technology skills (Penrod, 2007).

Although there is considerable enthusiasm for the potential of blogging, much of what is written about its uses and affordances is anecdotal. Some of the many educational benefits identified by various authors who write about blogging

are: (a) support of literacy, especially writing; (b) influence of peer feedback on student writing; (c) writing to an authentic audience; (d) creation of a learning community; (e) support of digital literacy and technology skills; (f) allowing for multiple learning styles and educational needs; (g) promotion of higher order thinking skills; (h) flexibility of the tool across the curriculum and age groups; and (i) opportunities to engage students in a real world experience (Brooks-Young, 2010; Downes, 2004; Frey, Fisher, and Gonzalez, 2010; November, 2010).

However, there is some discussion that blogging might be a passing phenomenon (Boutin, 2008). Boutin (2008) made the argument that other social media sites such as Facebook or Twitter have a greater appeal to today's fast-paced, highly connected adolescents. Nevertheless, among blog-savvy educators there remains much enthusiasm for blogging because of the many affordances, especially the emphasis on thoughtful and creative writing and collaborative learning. Regardless of what form classroom blogging might take in the future, what is important now is that blogging can be effectively implemented in a wide range of ways for a variety of audiences while supporting constructivists' key learning principles.

Therefore, given the breathtaking rate of changes occurring in literacy, technology, and education, it is more urgent than ever to investigate the practices, policies, realities, and challenges of Web 2.0 tools, and specifically classroom blogging, to fully realize its potential. From the perspective of effective literacy instruction, implementation of an instructional tool that directly supports literacy would be extremely valuable and useful in a variety of academic settings. In addition,

an instructional tool that uses technology as the delivery platform compounds its potential value. However, for an instructional activity to be deemed successful and effective in improving instruction, it must find its value between innovation and preserving basic elements of our educational system (Callahan and Switzer, 2001). This study adds to the limited but growing empirical research available concerning classroom blogging, especially when applied to literacy, by investigating the use of classroom blogging in three elementary classrooms in order to seek evidence of the use of innovative instructional strategies based on sound pedagogical methods (Huffaker, 2005).

Research Questions

The following four research questions guided this study:

1. How was blogging implemented as an instructional activity by three third to fifth grade teachers?
2. What were the third to fifth grade teachers' perceived literacy and technology benefits of using classroom blogging as an instructional activity?
3. What were the third to fifth grade students' perceived literacy and technology benefits of using classroom blogging as an instructional activity?
4. What recommendations did the third to fifth grade teachers and their students provide to others in the learning community concerning the use of classroom blogging as an instructional activity?

Method

Research Design and Theoretical Perspective

In order to seek an understanding of classroom blogging from the participants' point of view and in the setting of the

blogging activity, a qualitative, multiple-participant, naturalistic inquiry case study method was chosen for the study.

In addition, a social constructivist approach was selected as the philosophical stance, the authors believing that people have their own unique perspectives and develop subjective meanings of their experiences (Creswell, 2005). Both authors have a strong background in instructional design and educational technology and believed the study was both timely and worthwhile given the need for identifying technology infused literacy instruction. The study was also an emic (insider's) perspective in that the first author was an elementary teacher with extensive experience in literacy and technology instruction. This allowed her to better understand the complexities of the teachers' and students' point of view.

Participants

Teacher-participants. Three third to fifth grade teachers who were using classroom blogging as an instructional activity were purposely sought by advertising on the International Reading Association listserv. Five teachers responded and three met the blogging activity criteria and could attain district consent for the study. A letter of introduction was provided for each teacher-participant explaining the purpose of the study, the criteria for the blogging activity, and the proposed time frame for the observations and interviews. To protect participants from being identified, each teacher created a pseudonym.

Demographic characteristics of the teacher-participants were: Ms. Sheriff, a third grade teacher at a public PreK-5 elementary school; Mr. Smith, a fourth grade teacher at a private PreK-8 faith-based elementary school; and Ms. Martinez, a fifth grade teacher at a public K-8 charter elementary

school. All three teacher-participants held bachelor's degrees in elementary education, had taught for 7 to 11 years, and served on their school's and/or district's technology committee. The teacher-participants had blogged with their students throughout the year. The observed activities were culmination projects of literacy units. This was Ms. Sheriff's first experience using classroom blogging. Mr. Smith and Ms. Martinez had implemented classroom blogging with previous classes.

Student-participants. Five students were selected by each teacher-participant from their classrooms to serve as a representative sample for the student focus group interview. The teacher-participants were encouraged to select students who reflected his/her classroom demographics. These traits included, but were not limited to, academic achievement, gender, race, ethnic origins, special needs, or limited English speaking. Letters of assent and consent were sent home with the selected students to their parents or caregivers explaining the study. To protect the identity of the 15 student-participants, each participant was given a pseudonym.

Data Collection and Procedures

Four types of data were collected: (a) observational field notes, (b) researcher's personal journal, (c) teacher interviews, and (d) student focus group interviews. The purpose of collecting multiple types of data was to enhance the trustworthiness of the study.

Observational field notes. The observations were conducted while teacher-participants implemented a classroom blogging activity of their own design with their students. These observations occurred in a computer lab or in a classroom. Each observation session

lasted approximately one hour. The primary focus of the field notes was to record a description of the classroom blogging activity; specifically how the classroom blogging activity was implemented and how the participants prepared their students to participate in the activity. Immediately after each observation, the initial field notes were transcribed into more formal observational notes as electronic documents.

Personal journal. The second source of the data was a researcher's personal journal. Because personal views can never be kept separate from a qualitative research study, the "experiences, opinions, thoughts, and visible feelings were an acknowledged part of the research design, data generation, analysis, and interpretation process" (Ortlipp, 2008, p. 703). These hand-written accounts were included into the final analysis and report.

Teacher interviews. A third source of data was an electronically recorded and transcribed semi-structured interview with each teacher-participant. The teacher interviews were held at the school either before or after the classroom blogging observations were completed. Each interview was electronically recorded and lasted approximately 45 minutes. The interview questions were designed to inquire into the participants' intent in using this activity with students, what skills students needed to have to participate, and what obstacles the teacher-participants had encountered in implementing classroom blogging. Inquiry was made into the teacher-participants' perceived benefits in using this activity in support of literacy and technology skills and what recommendations they would give to others in the learning community concerning the use of classroom blogging.

Student focus group interview.

A fourth source of data was the electronically recorded and transcribed 30-minute student focus group interviews. The student focus groups consisted of five teacher selected students. A single interview was held at each school after the classroom blogging observations were completed. The focus group interviews began with an explanation of the purpose of the study and why the session was recorded. Students were asked if they thought the classroom blogging activity had helped them to acquire and practice literacy and technology skills, to describe what skills they had learned, and why they thought those skills were important. Recommendations student-participants made to others in the learning community about classroom blogging were also solicited and recorded.

Data Analysis

The data were read multiple times to establish familiarity and arranged chronologically, and then by participant, site, location, and/or some combination of these topics (Dana and Yendal-Hoppey, 2003). As the interviews were transcribed into text data, an analysis was made of the interview transcripts and field notes following an inductive approach. The purpose was to classify the text into themes and then create a thematic codes system based on the research questions (Bogdan and Biklen, 2007; Glesne, 1999). This analysis process provided a progressive way of grouping and organizing the data into data clumps (Corbin and Strauss, 2008). In addition, dialogue was analyzed and included in the final report to provide support for the identified themes (See Table 1).

Table 1

Summary of Data Analysis

Coding	Description
Initial Coding	<ul style="list-style-type: none"> • Observational, interview, and focus group records coded into broad categories by research questions • Create proposed outline/table of contents • Monthly field reports: progress, problems, and plans
Focused Coding	<ul style="list-style-type: none"> • Create a code book with alphabetized lists of categories/sub-categories • Mark transcripts information encompassed by the code • Search for patterns and relationships
Analytic Coding/Interpretation of the Data	<ul style="list-style-type: none"> • Seek linkages between data • Create data displays • Expand the code book, as needed • Arrange key code clumps into logical order

Four criteria were established to enhance the credibility of the study: trustworthiness, transferability, dependability, and confirmability. To insure trustworthiness, multiple data sources were used to develop reliable explanations. Member checking allowed the results to be reviewed by teacher-participants to establish credible results. The described blogging activities were determined to be applicable to other participants and settings thus establishing transferability of results (Tracy, 2010). The data and results were reported in ways accessible to readers to address dependability (Kirk and Miller, 1986). Through the use of transparency of methods (Huberman and Miles, 1994), opportunities for a secondary analysis of the raw data and supporting documentation were provided. Finally, the results were confirmable, as a clear description of the research path, including the research design and data collection decisions and the steps taken to manage, analyze and report data were reported, thus providing a transparent audit trail (Lincoln and Guba, 1985).

Results

Research Question One: Implementation of Blogging

Each teacher-participant embedded the blogging activity into existing instruction, using the activity to support and reinforce literacy and technology skills. However, each used a different technology platform and interface. For example, Ms. Sheriff taught her class in an iMac computer lab using MOODLE, a web-based course management system for educators to create online learning sites. She used blogging to support her students' investigation of a favorite author of picture books. Students wrote a short persuasive

paragraph based on information they gathered from the Internet. The posts were assembled into a list and each student was to respond to at least three of their classmates' posts. Mr. Smith used classroom-based iPads with Kidblog, a web site where students can publish and comment in a secure blogging environment. He integrated blogging into his poetry study as a way for his students to showcase poems they wrote throughout the school year. Students were to type their three favorite poems as a blog and add a graphic to their writing. Students then read each other's poetry and made comments concerning the poems. Ms. Martinez used classroom-based Chromebooks® with the Google Apps platform, which provided her students the ability to collaborate on documents in real time both from school and home. She incorporated blogging into her unit of non-fiction books. Students wrote a descriptive paragraph of their diorama project and received feedback from fellow classmates.

During the interview, inquiry was made as to how the teacher-participants initially introduced classroom blogging to their students. All described four similar phases of their blogging instruction. The first phase was an introduction to blogging. Ms. Sheriff said, "When I first started, we just did a practice blog that I showed them on the computer projector." Mr. Smith's approach was similar: "I first start by introducing students to what blogs are and then we look at a lot of different examples." Ms. Martinez concurred, "I first show students what a blog looks like, how it is formatted, and how it is used in the real-world."

In the second phase, teacher-participants showed students how to access the blogging site and where to post

comments. Ms. Sheriff described her instruction: "I show them how to log into the MOODLE blog site. They have an information sheet with directions and we just go step-by-step." Mr. Smith said, "I slowly introduce students to the ins and outs of the program Kidblog. I then show students how to post their writing." Ms. Martinez's students were already familiar with Google Apps, so they did not need as much introduction. She shared, "They are pretty technologically savvy. The main things that I talk about before I set them on the blog are safety on the Internet, to be respectful, and only use school appropriate language in their posts."

Phase three began with teacher-participants asking students simple questions. Ms. Sheriff asked, "Are you excited about blogging?" and they responded with a simple "yes" or "no". Mr. Smith used his students' interest in sports as his beginning blogging topic. He said, "At first I let them choose what they want to blog about so it is often about the football game." Ms. Martinez started with her students writing a short paragraph related to a book they were reading. She said, "I posted a general question and they responded first to me, and then to each other."

In the fourth phase, the teacher-participants increased the difficulty of the questions and required more complicated answers. Ms. Sheriff used her district's standards to create her blogging questions. She said, "One of our district's standards is looking at author's purpose and multiple books by a given author. So I used those standards to write blog questions." Mr. Smith said he had his students write a short persuasive essay or their thoughts about a field trip and eventually had other students comment on their ideas.

Ms. Martinez's approach was similar. Once her students were comfortable with writing and responding, she expected her students to discuss not only why they liked a certain book, but also provide specific examples and reasoning. She said, "I post weekly questions and encourage thoughtful and error free responses." She then transitioned students into higher level discussions about topics such as an author's purpose, bias, or reliability of the information.

Intent for blogging. The teacher-participants stated they chose to implement blogging as a way to teach digital literacy skills and meet instructional needs. Ms. Sheriff began by looking at her district's standards for literacy and 21st century technology skills. She thought blogging was a way for her students to "produce a piece of writing in a timely manner, while utilizing computer skills to search and produce something online and respond to others in written form." Mr. Smith also focused on the additional opportunities for writing which blogging could offer as ways to address the 21st century skills his school is striving to meet. Of particular importance to him was the authentic audience blogging affords. Because he had blogged with students before, he had experienced how powerful it was for students to write for someone else besides the teacher. He also wanted to introduce his students to blogging because he saw it as a new way for students to communicate their ideas. Ms. Martinez saw blogging as a way to challenge her advanced learners in a "new and different way." She also used blogging to address her instructional needs for literacy by intentionally designing her blogging activity to introduce and practice very specific skills required for state assessments.

Skills needed for participation.

The teacher-participants did not think students needed any particular skills to participate in the blogging activity other than the ability to read and write.

Ms. Sheriff described her thinking: "I figured whatever skills they had were hopefully enough to get us through." Because of Mr. Smith's prior experience with blogging, he understood students could get by with a minimal amount of technology skills. Ms. Martinez knew her students were adept enough at their technology skills that they would be able to participate in the blogging.

Obstacles encountered in blogging.

The teacher-participants described two obstacles to their blogging activities: scheduling in a computer lab and students' inefficient keyboarding skills. Computer lab access was a major obstacle for Ms. Sheriff. The demands of computerized testing conducted in the computer lab at her school dramatically limited the amount of time she could blog with her students. She said, "With the assessments and different interventions we have running in the computer lab daily; it is hard to get a class in to do any projects." Mr. Smith and Ms. Martinez also described great frustration with blogging with their students in the school's computer lab in prior years due to the demands of scheduled classes. However, the acquisition of the iPads and the Chromebooks® for classroom use eliminated the problem and allowed them to use the technology as a daily tool rather than occasional instruction given outside of the classroom.

All three teacher-participants thought better keyboarding skills would help students blog more efficiently. However, providing students opportunities for keyboarding practice was problematic and

gaining access to the computer labs for keyboarding lessons was again challenging. Ms. Martinez noted that although her students did have some keyboarding lessons during their regularly scheduled time in the computer lab, the instruction and practice were not very consistent.

Research Question 2: Teacher-Participants' Perceived Literacy and Technology Benefits

Literacy benefits. Ms. Sheriff and Mr. Smith said it was difficult for them to determine to what extent the blogging contributed to students' improved literacy. Ms. Sheriff wished she could have blogged more with her students. She noted, "I do not see a great influence as of yet. I think if students could continue blogging, it would have a positive effect on their writing." Ms. Smith said, "I think that blogging has helped. I do see my students doing more of the necessary editing...correcting for capital letters and punctuation. They just need a lot more practice." Ms. Martinez's perspective was a bit different. She saw her students implementing their writing skills in blogging, rather than seeing their blogging skills influence their writing. She stated, "Students have been writing and writing their entire school life, so now they are applying those skills to the platform of a blog."

The power of the authentic audience on student writing was noted by each of the teacher-participants. Ms. Sheriff mentioned, "The thing that is great about blogging is when students post their writing, everyone can see it. They want to spell correctly...make it look correct, so it is readable for their audience." Mr. Smith also had strong feelings about authentic audience. He said, "I think blogging is motivating to my students. They want to edit better and put more effort into their writing." He added, "I do see them

correcting more. It is becoming more automatic for them to look for their mistakes instead of me always having to remind them.” Ms. Martinez wanted to provide her students with an authentic audience because, as she said, “I am always looking for different ways for students to publish their work. I talk with students about the importance of once you post; you post it for the world to see.”

Technology benefits. In discussing their students’ technology skills, it was again difficult for the teacher-participants to make a direct connection as to what technology skill benefits classroom blogging afforded students. Teacher-participants thought blogging provided students opportunities to acquire and practice essential technology skills because blogging requires electronic writing, Internet web searches, navigation, keyboarding, and digital publishing. However, because students also acquired skills elsewhere, the technology skill levels varied greatly among the students, making it difficult to determine the extent of the influence blogging.

For example, Ms. Sheriff added to her students’ technology skills by using computer-based programs such as math and reading games. She also allowed her students to use her iPad to Tweet short messages to parents who had iPhones or Smartpads. Mr. Smith noted that his students had access to computers in other environments such as home, libraries, and parents’ mobile devices. He observed, “Some students are a little bit further ahead in having technology skills because their brothers or sisters use Facebook or their parents have an iPhone, while other students do not have any access except here at school.” Because of her schools’ robust technology instruction in every

grade, Ms. Martinez’s students were, as she described them, already “technology savvy”. She liked that classroom blogging added and reinforced technology skills already acquired, while providing opportunities to experience social networking and cooperative learning.

Research Question 3: Student-Participants’ Perceived Literacy and Technology Benefits

Literacy benefits. Students held positive attitudes about how blogging supported the acquisition and practice of their literacy skills. Students identified six literacy benefits that blogging provided to them: (1) a fun way to read, (2) a new way to write, (3) improved reading and writing skills, (4) expanded vocabulary, (5) influence of writing for an authentic audience, and (6) the enjoyment of helping each other with their writing.

First, students saw blogging simply as a fun way to read. Colton commented, “I think that blogging has helped me a lot in reading and I really enjoyed it.” Kofi said, “I used to think that reading was not fun and I would just never get the hang of reading because it was just pencil and paper...stuff all of us really do not like. And then as we got into blogging, I started getting an interest in reading.” Parker said simply, “I just thought it was fun reading.”

Second, students saw blogging as a new way to write. Ashley said, “I know I can comment to someone all the way across the world if they have a computer, and you can have a conversation. It is not the same as face-to-face, or writing a letter.” Nathan said, “It is great for classes to blog because you can write what you are thinking, and share it with your class.” Sasha shared, “Blogging has helped my writing skills, because I have learned new techniques.”

Third, students thought blogging improved their reading and writing. Colton observed, "I think it helped me with my reading, because of instead of looking at a paper, blogging is on a screen with comments from different people." Kofi thought, "Blogging has helped me with my punctuation and spelling." Ryan reflected, "I think the blogging is helping me be a better reader." Viviana shared, "I've always been a really slow reader, but this is helping me a lot."

Fourth, students said reading other students' posts helped them expand their vocabulary and language use. Darius said, "I can describe things better because of blogging." Lalya observed, "Some people used our new vocabulary words in their blog. I think explaining the definitions to somebody else who might be reading the blog will help them learn the word." Maria shared, "Blogging helps my language use a lot." Ryan said in support of increased vocabulary, "Blogging helps me when I use bigger words."

Fifth, several students commented on the influences of writing for an authentic audience. Ashley was enthusiastic about writing for others: "You can actually comment and then read someone else's comment. It was just fun reading." Javier said, "Whenever you finish a post and somebody comments on it, if you made a mistake and they tell you about it, you will not make that mistake again." Kofi thought, "Even when you are not blogging, it just helps you with the way you need to write things, especially if you are writing something important for somebody else to see." Brianna reflected, "You really realize that it is not just going to be the teacher reading it this time. It is going to be other students, your friends. You want to write better."

Finally, students saw blogging as a way to help each other in writing and be a community of learners. Lalya shared, "I really think that reading the comments to your post can give you an idea for something else to write about in your next post. I think it just encourages you to write more." Ashley shared, "When you get a comment on your blog it sometimes encourages you to write more and keep blogging." Teegan also reflected, "I think it helps when people comment on your post, because it helps you to know what they like, so you can post more things that they would like, and you can get more comments."

Technology benefits. Students were also very affirmative about the technology benefits of blogging. Four key technology benefits were identified by students: (1) a way to learn how to use social media, (2) a way to acquire technology skills necessary in their future, (3) improved keyboarding skills, and (4) electronic writing allowed students to identify and correct grammar and spelling mistakes more easily.

First, students thought blogging was a good way to learn how to use the social media. They saw their parents, older siblings, friends, and society in general embracing social media and they are eager to learn how to participate. Darius said, "I was not interested in blogging before, but blogging taught me how to use technology because I have not used computers that much until now." Javier observed, "I just think blogging is a good thing for kids to know how to do. This is just getting us started." Parker said, "I am just enjoying learning about the whole thing." Viviana summarized her feelings about blogging: "Blogging has helped me a lot because I know that every

time I am on the computer, there is going to be something new that I can do.”

Second, students had ideas of what necessary technology skills they would need in their future. Colton and Ethan said respectively, “I think it is going to help me in the future” and “I think it will be good for me to know how to blog in the future.” Nathan thought, “I will use it a lot more when I get older.” Teegan reflected, “I think it is important, because somewhere in the future, computers will be the number one.”

Third, students thought blogging improved their keyboarding skills. They had a strong sense of what proper keyboarding looked like; a few tried to follow the “home row keys” model, especially those in Ms. Martinez’s class. Brianna commented, “Blogging helped me become more efficient at typing. When I started I only knew where a few keys were.” Javier observed, “You start out slow, but after that, you are a lot faster because you are finding where all the right letters are on the keyboard.” Teegan said simply, “Blogging helped me to type faster.”

Finally, several students thought electronic writing, especially the spelling and grammar check features, helped them identify their grammar and spelling mistakes more easily. For example, Ethan remarked, “If I spelled something wrong, the computer would correct it and put an underlined word that I would see, and then I could spell it right the next time.” Parker observed, “When I am on the computer I seem to notice my mistakes more often, and it improves my ability to see those mistakes.” Viviana’s comment was similar: “If I spell a word wrong, I know that the computer is going to underline it in red, and that always catches my eye, so I go back and choose the correct spelling for the word.”

Research Question 4: Recommendations to Others in the Learning Community

All teachers and student focus group participants were enthusiastic about their blogging experience. The teacher-participants and students offered the following eight recommendations. Recommendations one through five were made by teacher-participants and student-participants, while recommendations six through eight were made by student-participants (See Table 2).

1. Both teacher-participants and students agreed that a simple-to-complex approach to blogging instruction was most effective. Students suggested a similar approach but many focused on what types of questions teachers should ask. Ethan said, “Make sure you have your questions thought out...make them so kids do not spend too long thinking about how to answer the question.” Sasha proposed, “I would start with a limit of maybe a paragraph, and then as you get more advanced with blogging, set the limit higher.” Teegan recommended asking questions that could have more than one answer: “Make sure the questions are specific, but not too specific. Ask the kind of questions so there could be different opinions and answers.”

2. Both teacher-participants and student suggested setting high but achievable goals for the blogging activity. Ms. Sheriff reflected, “I just kept adding more skills into the blogging. Once they get the writing part down, I showed them how to pull in pictures and documents off of the Internet.” Mr. Smith thought the use of a rubric kept his students on track: “The rubric has helped me a lot to keep my goals in mind. My students know exactly what I am expecting of them.” Ms. Martinez said, “I took the different skills that my students

needed for the literacy assessment, and formed my blog questions to address those goals." Students also suggested setting goals. For example, Ashley remarked, "At first just post one question, but as your students get better at answering the questions, then pose two or three questions so students have to write more." Viviana said, "Set the goal high and achieve whatever you can achieve while blogging."

3. Both teacher and student participants recommended teaching students how to write effective comments. Mr. Smith suggested creating activities to introduce students to commenting: "I have some commenting activities I do with my students where we look up some blogging sites together, like their favorite sports players, and see how they use their site." Ms. Martinez modeled good commenting for her students: "I read a book along with my students and post and comment. I try and present a good example." Similarly, students recommended looking at examples of good blogging. Ryan said, "I suggest the teacher should model good posts so the students kind of know what you expect." Teegan supported this idea: "Read several posts that are on the same topic. It helps you to get a feel for what you do in a blog because blogging is so different than writing on paper."

4. Both teacher-participants and students suggested changing the topic often, allowing students some choices in topics, and looking for students' interests. Ms. Sheriff recommended, "Keep the ideas fresh so students are not just doing the same activity all the time. And whatever they get excited about, go with it because that is where the biggest learning and the most engagement is going to happen." Mr. Smith suggested giving students opportunities to choose their own topics to

blog so students felt some ownership of their writing. Ms. Martinez shared what she tells her students: "Someday you might find a passion that you want to blog about and this is just the beginning of that journey." Students also suggested adding variety to blogging by giving students some choices in the blogging topics. Javier said, "It is fun having the challenge of doing something new, but other times it is fun just doing but other times it is fun just doing your own thing." Likewise, Maria proposed, "Sometimes I like what my teacher picks for us to do, but I also like the opportunity to pick what I want to blog." Ryan added, "I would just like some free time to choose what I want to blog about."

5. Both teacher-participants and students thought comments from the teacher were important. Ms. Martinez stated, "I thought it was very beneficial for me to actually post, as well as comment, on what my students were saying...It allows me to understand the work flow that the kids are experiencing. This is beneficial for me and more engaging for my students." Brianna offered, "The questions my teacher asks me helps me think more about my reading" and Nathan added, "When our teacher poses questions back to you, it helps you analyze the text further... something you don't usually do when you are reading by yourself. At least, I do not."

6. Students thought teachers should try blogging with their students because they considered it an enjoyable and worthwhile activity. Colton said enthusiastically, "I have gotten more of an interest in blogging because people complimented me and I liked writing back. I just thought it was pretty fun." Kofi added, "It is great for classes to blog because you can express how you are feeling and you can write what you are

thinking about.” Lalya expressed a similar thought: “I think blogging is fun and it helps students with reading, writing, English, and lots of their other subjects.” In the same fashion, Parker shared, “It is really good to know there are other students, other people that you know are out there. You get to share your ideas and you get to see what their ideas are. It is just a fun thing to do.”

7. Although students did not directly advise teachers to instruct students in how to use spell check, almost all mentioned how important spell check was to them. For example, Darius shared, “I catch my mistakes easier on the computer because you can do spell check, which is so easy. I wish there was spell check on a piece of

paper.” Similarly, Sasha shared, “I think spell check does help. Sometimes, the computer will correct it as a different word...one you do not want. But I think it is still better to have spell check.”

8. Students suggested teachers arrange students in small groups for blogging. Maria thought, “Sometimes posting your blog online can make you feel intimidated because you know other people are reading it. Knowing everyone in your group helps with not feeling that way.” Vivianna likewise agreed and added, “I think that if you are considering blogging, start out with a small group of kids, maybe four or five. Once you kind of know how to blog, you can move into larger groups.”

Table 2

Suggested Recommendations for Using Classroom Blogging with Elementary Age Students

Recommendations	Examples
1. Use a simple-to-complex approach to blogging instruction	“I would start with a limit of maybe a paragraph, and then as you get more advanced with blogging, set the limit higher.” (Sasha)
2. Set high but achievable goals for the blogging activity	“I took the different skills that my students needed for the literacy assessment, and formed my blog questions to address those goals.” (Ms. Martinez)
3. Explicitly teach students effective commenting	“Read several posts that are on the same topic. It helps you to get a feel for what you do in a blog, because blogging is so different than writing on paper.” (Teegan)
4. Change the topic often, allow students some choice in topics, and look for students’ interests for topics	“Keep the ideas fresh so students are not just doing the same activity all the time. And whatever they get excited about, go with it because that is where the biggest learning and the most engagement is going to happen.” (Ms. Sheriff)
5. Comments from the teacher are important	“When our teacher poses questions back to you, it helps you analyze the text further... something you don’t usually do when you are reading by yourself.” (Nathan)
6. Sharing students’ ideas with other students is important	“It is really good to know there are other students, other people that you know are out there. You get to share your ideas and you get to see what their ideas are. It is just a fun thing to do.” (Parker)
7. The use of spell-check is important to students	“I catch my mistakes easier on the computer because you can do spell check, which is so easy. I wish there was spell check on a piece of paper.” (Darius)
8. Arrange students in small groups for blogging	“I think that if you are considering blogging, start out with a small group of kids, maybe four or five. Once you kind of know how to blog, you can move into larger groups.” (Vivianna)

Discussion, Implications, Limitations, and Future Research

Discussion

This study presented an authentic look at how three upper elementary teachers used classroom blogging as an instructional activity to support the acquisition of students' literacy and technology skills. The teacher-participants thought the blogging activities did directly support their students' acquisition of literacy and technology skills. For two of the teacher-participants, the obstacles of access to the computer lab were overcome through the use of mobile devices in their classrooms. Student-participants were highly enthusiastic about the support classroom blogging gave them in acquiring and practicing essential literacy, and especially technology skills. These findings support and broaden previous studies, articles, and books written about classroom blogging. A comparison of the findings to the available literature follows.

Implementation. All three teacher-participants followed a similar instructional model for implementing their blogging activity. Each began with an introductory phase, followed by a demonstration, a hands-on activity, and finally provided feedback to students as the project was in progress. This commonly used form was based on instructional methods such as researched and exemplified by Marzano, Pickering, and Pollack (2001). The progression of the instruction was arranged so the complexities of the tasks increased incrementally, thus allowing the student to build on previously learned information.

Besides following a prescribed format for implementing blogging, each teacher-participant embedded the activity into

existing instruction. The teachers had taught the same subjects before, but without the inclusion of blogging. Analogous to the teacher-participants in this study, empirical research concerning academic blogging involved teachers embedding blogging into existing instruction designed to meet instructional needs. Piontek and Conklin (2009) supported this approach: "To be most effective, the blogging activity should be project-based, aligned with learning standards, and coupled with the knowledge of ways in which students learn effectively" (p. 23).

The teacher-participants stated they chose to integrate blogging into their instruction as a way to teach digital literacy skills and meet instructional needs. The malleable nature of blogging allowed it to be used in a wide variety of ways and subject matters, which is perhaps its greatest strength (Penrod, 2007). As Richardson (2006) stated, "Because blogging involves reading and writing, it is a fairly obvious tool to use for teaching and reinforcing those skills" (p. 29).

All three teacher-participants shared they had not given a great deal of consideration to what existing skills their students might need to blog. Similarly, little was reported in the literature about what pre-blogging skills students might need. It was generally assumed students would need basic reading and writing skills and perhaps some technology abilities. Like many authors, Piontek and Conklin (2009) encouraged teachers to adopt a "jump in, explore, and experiment" attitude about getting started in classroom blogging (p. 18). However, Taffe and Gwinn (2007) specifically directed teachers to think about what skills their students might need to

acquire to be more efficient and effective at blogging.

The primary obstacle identified by the teacher-participants was access to the computer lab. Frey et al. (2010) described the issue of access to hardware as a digital divide which is a social as well as an educational issue. Although the amount of technology available in schools has steadily increased, it is important that all students, especially at-risk populations, have access to the hardware and bandwidth needed for using today's Web 2.0 tools. In addition, the topic of inadequate keyboarding skills as being a possible obstacle to blogging was mentioned by the teacher-participants. In Nichols' (2012) study investigating how blogging supported upper elementary students' writing skills, she noted that students possessed weak keyboarding skills. However, she later concluded students were able to participate in the blogging process and enjoyed writing despite the wide variety of keyboarding skill levels the students possessed.

Teacher-participants' perceived literacy and technology benefits. The two most important perceived literacy benefits of blogging given by the teacher-participants were the additional opportunities for students to read and write and the positive influence of authentic audience. This supported Allington's (2006) research that additional opportunities to read and write improve students' literacy abilities. However, as suggested by the teacher-participants, for these influences to be truly successful, teachers must teach students how to read critically and respond effectively to the blogging posts. According to Solomon and Schrum (2010), although the primary purpose in teaching effective commenting is to provide ideas and feedback that will help the blogger

improve their writing, it also is the foundation for building a sense of community among bloggers.

Although the teacher-participants were less certain about the technology benefits blogging provided for their students, they thought their students were acquiring and practicing technology-based skills. The literature was somewhat mixed about this concept. The trade literature discussed profusely the support blogging provides students' technology skills. However, empirical research was more focused on the support which blogging provided literacy. Technology skills were not discussed or only reported anecdotally. However, Drexler, Dawson, and Ferdig (2007) reported that even when no official technology instruction was provided, they saw students' technology skills improve. Drexler et al. (2007) also listed improved keyboarding skills as an unintended result of the blogging activities they implemented.

Student-participants' perceived literacy and technology benefits.

The student-participants identified six literacy benefits: (1) a fun way to read, (2) a new way to write, (3) improved reading and writing skills, (4) expanded vocabulary, (5) positive influence of writing for peers, and (6) helping each other with their writing. Despite the enthusiasm for blogging described in the trade literature, little attention was given to students' perceptions of the educational benefits of classroom blogging. Some researchers reported positive student attitudes, thoughts similar to those of the students in this study. Nichols (2012) reported that 55% of upper elementary students thought blogging was fun and 70% enjoyed writing blogs. Chen, Liu, Shih, Wu, and Yuan (2011) mentioned that students thought blogging was a pleasurable experience and

giving and receiving peer feedback helped students improve their writing. Drexler et al. (2007) stated their students enjoyed giving and receiving comments and found the feedback they received improved their writing. Lamonica (2010) shared that students thought blogging positively influenced their writing because of the good ideas their classmates provided.

The student-participants also identified four technology benefits of classroom blogging: (1) a way to learn how to use social media, (2) a way to acquire technology skills necessary in their future, (3) electronic writing allowed students to identify and correct grammar and spelling mistakes easier, and (4) improved keyboarding skills. Again, precious little information was available in any type of literature concerning students' perspectives about the academic benefits of using blogging technology. The one exception was Chen et al. (2011) who reported students thought the editing process was easier because of the use of technology.

Suggestions and recommendations.

Teacher and student-participants provided eight key ideas to share with others interested in implementing blogging: (1) use a simple-to-complex approach to blogging instruction; (2) set high but achievable goals for the blogging activity; (3) explicitly teach students effective commenting skills; (4) change the topic often, allow students' some choice in topics, and look for students' interests for topics; (5) acknowledge comments from the teacher are important; (6) enjoy blogging as a worthwhile activity; (7) use the important spell check tool; and (8) arrange students in small groups.

Suggestions one and two, as discussed before, are well-established teaching strategies. Suggestion three is important

because effective commenting is a critical part of the blogging process as it encourages students to read and respond to each other. This allows students to present their ideas to their peers and is a powerful motivator of student writing. As Richardson (2006) discussed, commenting is the cornerstone of the connective aspect of classroom blogging. However, how to effectively comment must be directly taught. As Mr. Smith and Ms. Martinez stated, students replied with meaningless statements such as "awesome" or emoticons such as a smiley face because they had not been taught how to comment constructively. Parisi and Crosby (2012) discussed the importance of changing blogging topics (suggestion 4) to keep the interest of students and are further supported by the theories of intrinsic motivation (Ormrod, 2006). Regarding suggestion five, teachers providing timely feedback for students is a valuable component of effective instruction. Timely feedback happens in the classroom blogging process, as Sturgeon (2008) suggested, when the teacher includes him/herself into the blogging.

Such inclusion helps build the feeling of community and provides good examples of what the teacher expects from the student.

Suggestions six, seven, and eight were made primarily by the student-participants. These excellent suggestions were not discussed in the literature, but offered the greatest insight into how students viewed the blogging activity. First, the student-participants in this study were highly enthusiastic about blogging and many expressed a desire to blog more often, a good sign of successful instruction. Ivey and Broaddus (2001) wholeheartedly supported the suggestion because the blogging activity met the needs of the

students at their instructional level and connected students to a real-life skill. Second, student use of spell check is frequently undervalued by teachers. Pintrich and Schunk (2002) advocated that by allowing students to use tools they deem important, students place value on a tool's use because they find it effective and helpful. Third, the use of small groups was important to the success of the blogging activities in this study. Small groups allowed the students to get to know one another and feel more comfortable in providing and receiving feedback from each other. It also encouraged students to work collaboratively, thus creating a community of learners, highly valued by constructivist educators.

Implications

Identified benefits of classroom blogging. Based on the findings of this study, the following six pragmatic benefits were identified by the participants to share with teachers, administrators, instructional technologists, and others in the learning community who are interested in using classroom blogging to support student learning. Classroom blogging provides teachers with an instructional activity which:

- Is a project-based student-centered learning opportunity shown to increase student engagement and motivation
- Promotes collaborative learning through the use of technology
- Affords elementary students the opportunity to write for an authentic audience
- Embeds readily into existing instruction
- Offers students opportunities to attain and practice essential literacy skills
- Offers students opportunity to attain and practice 21st century technology skills

Limitations

Each research study has limitations and the identification of limitations helps readers decide to what extent the findings can or cannot be generalized to other people and situations (Creswell, 2005). Three limitations of this study were: (1) it presented a snapshot of three teacher-participants using classroom blogging rather than an in-depth look; (2) it only included a small pool of participants; and (3) it did not try to link the blogging activity to student achievement.

Future Research

Although this study adds to the current literature which deems classroom blogging an effective instructional strategy, additional research is needed. More research, especially at the elementary level, is necessary to investigate how blogging can be effectively used to support all aspects of learning, and especially literacy, how to adapt current lesson plans to include blogging, the benefits of different blogging platforms (i.e. Kidblog, Google Apps, Edublog, or Blogger), and the influence of authentic audience on the quality of electronic student writing. Additionally, because of the rapid adoption of mobile learning devices such as the iPad and Google Chrome® Books into classrooms, future research must examine the impact these devices have on all instruction, especially literacy, including how to increase communication between the student and their audiences, both formal and informal. Finally, there is a need to explore how the technology requirements of the Common Core Standards can be effectively addressed through the use of Web 2.0 tools, and specifically blogging.

Conclusion

This study presented a thorough and authentic look at three elementary teachers who implemented classroom blogging as an instructional strategy for their students to acquire and practice essential literacy and technology skills. Perhaps the most important finding of the study was that classroom blogging mattered not only to the teacher-participants, but more importantly, to the students. Besides being engaging and fun, students saw blogging as a way to acquire skills needed for their future lives. This is a significant time in the evolution of literacy and technology instruction. As educators seek strategies to support not only the traditional literacies, but the ever-expanding array of digital literacies, some may find classroom blogging an effective way to support literacy and technology instruction.

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