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The effects of using digital storytelling for fourth graders' literacy learning

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Abstract

The dual purposes of this action research project were to investigate how the inclusion of digital learning techniques helped impact students' perceptions towards literacy instruction, and any impact on parents' perceptions. The action research was conducted in a fourth grade classroom of twenty-one participants in a rural school, engaging students in the whole process of creating a digital story.

The major results indicate that: a) student motivation towards writing increases when introduced to the concept of using some sort of digital device to write the story; and b) parents were enthused about the level of work their students submitted when using digital techniques to produce writing. This report concludes that using digital storytelling strategies and techniques helps students with learning impairments produce higher quality writing, and recommends further research be conducted on the issue.

**The Effects of Using Digital Storytelling
for Fourth Graders' Literacy Learning**

A Graduate Action Research Report

Submitted to the

Division of Instructional Technology

Department of Curriculum and Instruction

In Partial Fulfillment

Of the Requirements for the Degree

Master of Arts

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by

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Abstract

The dual purposes of this action research project were to investigate how the inclusion of digital learning techniques helped impact students' perceptions towards literacy instruction, and any impact on parent's perceptions. The action research was conducted in a fourth grade classroom of twenty-one participants in a rural school about engaging students in the whole process of creating a digital story. The major results indicate that: a) student motivation towards writing increases when introduced to the concept of using some sort of digital device to write the story; and b) parents were enthused about the level of work their students submitted when using digital techniques to produce writing. This report recommends that using digital storytelling strategies and techniques helps students with learning impairments produce higher quality writing as well as further research be conducted on the issue.

Keywords: action research, digital story-telling, 4th graders, writing,

The Effects of Using Digital Storytelling for Fourth Graders' Literacy Learning

Digital storytelling shows the promise of engaging students in literacy instruction and giving students a chance to have their voice heard by a larger community outside the four walls of the classroom. Digital storytelling also gives students a chance to collaborate faster with students and teachers because of tools like Google Classroom. With more and more Iowa schools moving to 1:1 environments, and the push to change the way instruction is delivered to students, teachers are afforded more innovative teaching opportunities when incorporating digital storytelling into their literacy instruction.

Literacy instruction has been a topic under scrutiny within my district as literacy scores have been documented by the government in recent years. Low proficiency ratings were earned through test scores as described by the now defunct "No Child Left Behind" federal law. With the recent push to "Standard-Based Grading" in the past year the district has since given curriculum development over to teams of volunteer teachers to create the K-12 literacy curriculum and assessments. The district has gone through many literacy instruction adaptations in the past four years since I was hired. As a fourth grade classroom teacher, my school has been listed on the "School In Need Of Assistance Improvement List" as stated by the federal government for multiple years. It is one of four elementary schools located within a rural northern Iowa city forty-minutes from the Minnesota border. As of the 2014-2015 school year, my school had a total population of 360 students. The student population consisted of 1% Spanish, 2% Native American, 2% Asian, 5% African American, 8% Pacific Islander, 75% Caucasian, and 7% multiracial making the district diverse. 223 of the 360 students were enrolled in the "Free or Reduced Lunch Program" at school (71%). Our current student population is transitional. Many students come and go as the year progresses because many live in rental

properties by the school. Many also know that they will be leaving again when their families' rent is due and don't care about the traditional method of literacy instruction. This has led to many teachers struggling to find ways to engage their students and to fight the lax mentality their parents have towards literacy instruction. The administrators share this frustration with teachers, which is evident by the recent push for the creation of a new "21st Century Learning Committee" within the district.

Recently, my school provided thirty Chromebooks for the three 4th grade classrooms. The adoption of the Chromebooks came after the district chose to adopt more of the Google Apps For Education products to be used with staff and students. The 4th grade team had also stressed an issue when trying to use the building iPads for teaching typing skills as the iPads had no physical keyboards attached like Chromebooks do. Generally speaking, literacy instruction is one area of the curriculum that suffers from lack of engagement and collaboration opportunities as students in elementary have mainly focused on writing for the teacher and teacher only. The problem that I am facing is the lack of motivation in students when it comes to the literacy curriculum and instruction the teachers use with their students. Many teachers in my building would be considered "digital immigrants" compared to the students, which then causes tension when technology is involved.

The key stakeholders in this problem include the teachers, students and families, and district administration. The teachers I currently work with see technology as something trivial and refuse to learn how to incorporate it into their classrooms. The 4th grade teachers at my building currently have access to one cart of 30 Chromebooks. However, many times the Chromebook cart goes unused. This is more present with the 3rd grade team and their district issued Chromebook cart because I do not have as much influence with 3rd grade as I do the 4th

grade team in using these devices. The responses of teachers are, “Why do we have another thing we need to learn?” The students see the computer lab and Chromebooks as “gaming devices” with no real educational purposes as this is how they have been taught in the past. Parents have shown mixed feelings towards the inclusion of various technological supports within the classroom. Many parents like the idea of including more technology into the classroom, while others see it as another income tax increase. Administrators within the district have made a strong push towards incorporating devices into all buildings to eventually become a “1-to-1” device district.

The dual purposes of my action research are: a) to investigate how the inclusion of digital learning techniques can help impact students’ perceptions towards literacy instruction, and b) any impact on their parents’ perceptions of instruction. I would gain a better understanding about my students’ learning experiences and their views about the difference between using traditional tools versus digital tools so that I could improve my teaching. My hopes are that it would open up more opportunities for collaboration between the students, parents, and myself, the teacher for our literacy instruction as well as help improve the students’ learning environment.

My action research directly benefited the literacy instruction format the district has adopted along with impacting student gains in literacy education. I also hoped through continuous talks with the superintendent and principal about my action research project, I will help improve literacy instruction and curriculum development in our district.

Literature Review

The purpose of this literature review is to explore the impact digital storytelling has on student learning compared to the traditional method of paper-and-pencil. A total of seventeen

peer reviewed journal articles have been reviewed. The peer-reviewed articles selected highlight the use of digital storytelling techniques and concepts used in elementary, secondary, and postsecondary education systems. This review will inform its readers about the effects that can be gained when using digital storytelling with elementary students nine to ten-years old. Two major themes emerged from this literature review, the importance of storytelling in general for students and that digital storytelling can be used with students of varying academic levels, but struggling writers specifically.

The Importance of Storytelling

"Digital storytelling" is a relatively new term that describes the new practice of ordinary people who use digital tools to tell their 'story'. Digital stories are often presented in compelling and emotionally engaging formats, and can be interactive. But, before considering digital storytelling as a viable strategy, one must start by examining the importance of story in their daily lives. Storytelling is a part of human nature, whether it is through dialogue with coworkers, a person's children, phone conversations, or even instant messaging, such as Facebook Chat. Storytelling however, is an essential part of their early lives and educational development.

Storytelling is a skill that has been around for as long as people can remember. It will still have a place in society well into the future. Digital storytelling will continue to be a viable learning strategy for classrooms of the future. Robin (2006) stated the outlook of digital storytelling tools as "When it comes to the future of digital storytelling, we're just starting to scratch the surface...stories will never die, but the ways we tell them are changing and will continue to change" (p. 6). The responsibility of the teacher is to be sure that the students understand the process behind being a good storyteller. They need to have a clear understanding of the writing process and how to get their ideas out to society.

Benefits for Student Learning

Research evidence shows that using various digital storytelling tools not only helps bridge the gap between the technology-filled world outside of school and the traditionally low-tech school setting, but it also provides a number of benefits to students who could not be reached through traditional storytelling tools (Ohler, 2008; Ware & Warschauer, 2005). Ohler (2008), and Ware and Warschauer (2005) also studied teacher responses about including digital storytelling into their curriculum and found that most teachers stated they surrendered a great deal of control in embarking on digital storytelling with students. What effect does digital storytelling have on the struggling students understanding of the writing process? Ohler (2006) studied the impact of digital storytelling on struggling students. It was found that,

Overall, these AP and NWP teachers see digital technologies benefitting student writing in several ways: 96% agree (including 52% who strongly agree) that digital technologies allow students to share their work with a wider and more varied audience, 79% agree (23% strongly agree) that these tools encourage greater collaboration among students, 78% agree (26% strongly agree) that digital technologies encourage student creativity and personal expression. (p. 6)

After this study was completed, teachers who were introduced to the concept of using digital storytelling with their struggling students continued to use these strategies after the study was done.

Digital Storytelling Benefits

More benefits from using digital storytelling tools include promoting depth and understanding of texts, encouragement of student proficiency in the technical aspects of language, and even giving the students a chance to “play” with more vocabulary to become more

comfortable with the whole writing process. Studies have found that students are more willing to experiment with language and make changes when engaged in some form of digital storytelling than standard methods (Hull & Katz, 2006; Ware, 2006; Ware & Warschauer, 2005). Porter (2005) suggested that Digital storytelling (DST) “takes the ancient art of oral storytelling and engages a palette of technical tools to weave personal tales using images, graphics, music, and sound mixed together with the author's own story voice” (p. 1). Porter further suggests that by doing this students will be able to not only capture all the aspects of storytelling, but also engage “21st Century” learning in students by incorporating their love of all things digital.

For instance, Ware and Warschauer (2005) found that when students completed digital storytelling projects students also frequently “re-purposed” the linguistic mode by placing it in a visual context; the words were lent different meanings through their juxtaposition with visuals, meanings that could not have been expressed through words alone” (p. 436). Ultimately, digital storytelling helps connect students to their academic literacy learning experiences.

Implementing Digital Storytelling

By implementing digital storytelling into the classroom, it provides one way to address content in new ways, as well as teaching to the technology standards (Standley, 2003). In 2002, Banaszewski describes a digital storytelling project about the fourth and fifth grade students in Lexington, Massachusetts. After the students started writing they began adding visual dimensions. The students were given the requirement to have a “hook” to introduce their stories, which made the story more than just a slideshow with pictures. The students continuously revised and edited each other's stories while they added digital elements. The technology aspects were taught in a systematic way by modeling and how to use the tools, how to add sound and graphics, but the teacher still kept the focus on the story they were writing. The technology was

always viewed as a secondary aspect to the storytelling process. Throughout the project the focus was still on the storytelling process and the digital tools were used to help tell the story.

Many teachers see the necessity of giving students ownership of their writing, but one should not incorporate digital storytelling tools for the sake of technology inclusion. There is some much needed planning and preparation before integration of the techniques can be successful. Several articles found in this research produced valuable insights into the benefits of digital storytelling tools into a classroom as well as various examples.

Storytelling is a skill that has been around for as long as people can remember. It will still have a place in society well into the future. The responsibility of the teacher is to be sure that the students understand the process behind being a good storyteller. They need to have a clear understanding of the writing process and how to get their ideas out to society.

In sum, a majority of the research mentioned above was conducted at the secondary or collegiate level. This review found a need for more research of digital storytelling at the elementary level. As stated above, the purpose of my action research is to investigate how the inclusion of digital learning techniques can help impact a student's perceptions towards literacy instruction and if it has any impact on their perceptions of instruction.

In order to achieve the purpose of my action research, I used the similar strategies that Hull and Katz (2006) did for their study in which they allowed their thirteen year old participants to explore the dynamic nature of narrative practices; seeing if stories recur and change depending on who is listening or seeing their writing. The only difference was that I would make the student's writing content more age appropriate for pre-teen nine and ten year olds. I also had to allow for more instruction on the basics of writing, as they are younger than their older

counterparts in Hull and Katz study who have had more instruction in that area. My action research will strive to fill the gap for research in elementary literacy education.

Methodology

As mentioned before, my action research was conducted in a public elementary school located in Northwest Iowa to see the effects digital storytelling techniques have on a student's literacy learning. By adopting mixed methods for the research approach, I got a more complete picture about students' and parents' reactions toward digital storytelling techniques. In the next paragraphs, I will describe how I addressed the ethical issues and elaborate on my methodology assumptions including the time frame of my action research.

Context and Participants

I have been teaching 4th grade at my current school for four years working primarily with behavior-identified students with the help of a certified paraprofessional in my room. I have access to ten Chromebooks for my classroom, along with direct access to a computer lab of thirty computers down the hallway every day at a set time in the mornings.

I currently have 21 students in my classroom with two that only participate in activities with my class during special curricular areas physical education, art, music, and library checkout times. I have two students currently on Individual Education Plans for behavior. Another student has an Individual Education Plan for mathematics learning. Two other students are on Individual Education Plans for reading and writing education, and five students who receive special "Title I" pullout reading instruction. This current class of 4th graders is one of the larger sections in the building and recently showed low-test scores in the area of reading on a state administered test.

Since I only teach one section of 4th graders, an experimental design of research was not appropriate. Because of this, I chose to use action research because I found the benefits of using

my own personal findings would be beneficial for me to improve my own teaching, as well as to fill a research gap of lacking research evidence about parents' perception found in the literature review above. My hope was this action research would be used to solve the immediate problem our district has had with its literacy curriculum and instruction in recent years.

Sampling

As stated before, I chose to conduct the action research in my class because it is one of the larger classes in the current 4th grade. As mentioned earlier, I have 7 students with some sort of learning difficulties. A permission slip was sent home to the students and parents/guardians and ten students were then randomly selected from a pool of returned forms by the paraprofessional. This random sampling was used as a fair way of selecting the sample participants from the available students since every member was given an equal opportunity of being selected. Ten students participated in the qualitative and quantitative data collection.

See the table for an overall view of the ten participants.

Table 1

Participant Data Collection Summary

Student	Age	Initial competency level	Competency level after 8 weeks
A *	9	Low	Medium
B	10	Medium	High
C	10	Medium	High
D**	9	Low	Medium
E*	10	Low	Medium
F	9	Low	Medium
G**	9	Low	Medium

H	10	Medium	High
I	10	Medium	High
J	10	High	High

* Indicates students with Individual Education Plans in Reading/Writing (IEP)

** Indicates two cases with parental involvement in the study

Procedures of Action

The length of this project was from February 2016 to March 2016, a total of 8 weeks.

Students were given writing tasks to be completed on Chromebooks located in the room or in the school computer lab on the day my class had access to it. Students were also given the choice of starting and finishing the assignment on paper instead of on a computer if not comfortable with the procedures. Major activities during the implementation of this study include:

Table 2

Major Activities During Study

Major Activities	Format	Time period
Script: First draft--Three two-paragraph pieces of writing	Google Classroom and Google Docs	First week
One short research projects	Pen and paper	4 weeks
The whole writing process on the final individual writing eventually publish their writing into eBooks to be read on various digital devices.	Pen and paper eBooks	8 weeks
Creating personal blog posts	Classroom blog	8 weeks

Data Collection and Analysis

For the data collection and analysis process, I used both quantitative and qualitative research methods--the mixed research methods--to measure the impact of digital story-telling on

student engagement and performance in the literacy learning environments and parents' reaction. I primarily used qualitative research methods that allowed me to have an in-depth understanding of the students and their overall attitudes towards digital storytelling techniques versus the more traditional methods. The qualitative data collection included each student's interviews, small group discussion, sample of students' work both from the traditional method of paper-and-pencil and digital version. These included their first draft, second draft, and final draft of writings, student created two paragraph stories written on Google Classroom and Google Docs, and my teaching reflective journals.

In terms of the quantitative data, I collected the initial survey and the end of the unit survey. For instance, I used an initial survey to measure the student's understanding of digital storytelling techniques in order to give me background information on the students. I compared the initial survey with the data of the post-survey to measure how their perspectives changed from the beginning to the end of the research process.

The ten students interviewed were audio recorded. After each interview, I immediately transcribed the answers, read it, and then start highlighting any keywords or phrases I notice to start the initial coding phase. The ten participants involved in group discussions were randomly selected to participate in the interviews and small group sessions to give their students another chance to communicate their thoughts about the project. When alone, 4th graders sometimes tend to be quieter than when they have others with whom to share their ideas. Through the interviews I got to better gauge of student feelings and perceptions towards the literacy instruction methods on individual levels. Elementary students tend to latch onto another student's idea or answer when they are in a group together, so seeing the difference of answers in both the large group and small group settings helped me get a better idea of their personal perceptions.

Major Findings

The major findings from my eight-week action research study showed that a) student participants tended to enjoy the opportunity to use a Chromebook for writing purposes, and b) parents of the participants also seemed supportive of what their children were doing during the eight-week study. After observation, the ten participants experienced a positive change toward writing in general and digital storytelling in particular.

Student's Positive Reaction toward Learning through Digital Storytelling

After administering the pre-survey and interview questions, five recurring themes were present in the students who participated. These themes included: a) Playing games at home or at school rather than use digital tools for educational purposes, b) Students were unsure what a digital story was, c) That storytelling consists of reading, d) Fourth graders love using computers whenever they get a chance, and e) Many 4th graders have a digital device at home that they use on a constant basis.

Playing games. According to the pre-survey data, 100% of the students in the survey said they would rather use digital devices for playing some sort of game along with other entertainment purposes like watching YouTube videos than using it for educational purposes. Many showed a disconnect from the potential uses a digital device could have for promoting educational learning. The interview findings confirmed the survey finding in such a way: students love to consume media. Student's E, F, G, and H all had similar responses backing up this information. When Student E was interviewed about what s/he uses a digital device for s/he responded with, "I use my iPad for YouTube all the time! I even have my own channel that I use to collect videos on. Mostly videos on Minecraft and how to create things." Student F followed this sentiment by stating, "I use my tablet to play Minecraft Pocket edition. My parents were

okay with me playing that since we don't have enough money for a Playstation 4 or Xbox One (console)." Lastly, Student G and H both stated that they, "have tried to create their own YouTube channels but can't figure out how to make (their) own videos yet." Similarly, from my observation, I found that when I gave a Chromebook to a student her initial response to the devices was to try and open up YouTube on the Chrome web browser.

Unsure what a digital story is. One aspect of a typical 4th grade curriculum is to discuss the parts of a story and how to make them more engaging to the reader. This is also present in 3rd grade curriculum statewide. The emphasis has been on using quality penmanship and even still some districts require 3rd graders to learn cursive handwriting. This would lead to the common theme found that 4th graders do not understand the connection that a story can exist outside of the traditional paper-and-pencil format. One student responded, "I still like making my own paper versions too. Makes me feel like I'm creating a book! I like doing that at home."

Storytelling and reading. Many students, when asked if they wanted to use digital devices for reading and creating stories, responded with a look of bewilderment. The most popular response from the interviews about reading and storytelling was that it was something that existed outside of school. Many students' referenced daily homework of reading for 20 minutes at home or just simply, "You read a story at home" (Interview of Student C).

Love of computers. When asked if they would rather use a digital device or paper-and-pencil to create a story 90% of students responded with using a computer. The one student who did not want to use a computer said, "I don't like using computers to type. When you have a topic to write about, with a pencil it's easier. You usually get done fast with pencils. "Home Row" on a computer is not useful at all." When asked what all these students would rather use in

their spare time all 10 responded with how they liked using computers, but not necessarily for creating digital stories.

The following tables show how each surveyed student answered each interview question before the testing period began and after the testing period ended as a collective group based on percentage of the participants.

Table 3

Survey Question Responses Part 1

Question	Pre-survey	Post-survey
Do you use computers for entertainment?	32%-All the above 24%-Playing video games 20%-Watching YouTube videos 12%-Unanswered 8%-Chatting with friends/family	32%-All the above 24%-Playing video games 32%-Watching YouTube videos 8%-Chatting with friends/family
How often do you use computers for academic learning at home?	28%-Seldom 56%-Sometimes 12%-Frequently 4%-All the time	20%-Seldom 64%-Sometimes 12%-Frequently 4%-All the time

Use of digital devices. All students responded favorably to how they liked to use digital devices, but rather more for playing games like Angry Birds or games similar to Grand Theft Auto than for educational purposes. My observations would also back up this theory. When observing my students in the hallway before school would start all I would hear them talking about was a “new” game they either were playing at home or wanted to get for their tablets or other devices. Much of my instruction has also been modeled around gamification to try and help motivate these students more in the classroom.

Table 4

Survey Question Responses Part 2

Question	Pre-survey	Post-survey
How would you rate your skills with computers?	48%-Rockstars 36%-Fair 16%-Not that great	54%-Rockstars 36%-Fair 10%-Not that great
I would work harder if I could use computers more often.	52%-Strongly Agree 28%-Agree 20%-Disagree	52%-Strongly Agree 38%-Agree 10%-Disagree

When asked, “How would you rate your skills with computers?” 48% of 4th graders thought they were “Rockstars”. This also had a strong connection to the fact that 52% said they would work harder if given a class assignment on a digital device. This was seen throughout the activities the students participated in ranging from personal blogging to the Google Drive writings. All students (A-J) appeared more engaged when given a computer screen to focus on. Students A-J also appeared to grasp the tasks given to them on the computer quicker than when given a piece of paper-and-pencil. This observation was also backed up by the 60% of students who claimed to be “Rockstars” in their comfort level with using computers at school during the post-survey data collection. 35% of the students also claimed to be “Fair” when it came to their comfort level when using computers at school during the post-survey data collection. The increase of comfort level can be attributed to the fact that many students acknowledged they didn’t have prior exposure to various digital tools until they were presented to them during this eight-week period. When student’s A, B, and C were interviewed in a small group setting they emphatically stated they had never heard of Google Drive prior to my classroom (Group Session 1).

Table 5

Survey Question Responses Part 3

Question	Pre-survey	Post-survey
How would you rate your comfort level using computers at school?	40%-Rockstars 44%-Fair 16%-Not that great	60%-Rockstars 35%-Fair 5%-Not that great

From the students surveyed, 40% during the pre-survey results stated they felt like they were a “Rockstar” at their computer skills while working at school. Viewing the students’ initial reactions and one-to-one informal conversations, it was found that many of them lacked prior experience in a school setting using some form of technological device unless it was for playing games. Many stated how 4th grade was their first formal year of instruction in keyboarding skills. Prior to their 4th grade year many students were confused on how to use a keyboard properly. With repeated instruction on how to use the various digital tools and devices within my class a change in perception was seen from the pre-survey data to the post-survey. The little usage and exposure of digital devices in prior grades also showed up when participants were asked how many hours on average participants would use digital devices for classroom work.

When asked, on average 50% of my students spend 1 to 2 hours per day using a digital device for classroom work. As literacy instruction went on, the number of hours a device used in my classroom went down in the highest category of 26% of 7 or more hours down to 20% during the final week of data collection. This can be attributed to the fact that my district experienced a lot of weather-related issues during the data collection period resulting in many shortened days due to snow. This can be seen in “Table 6” below.

Table 6

Survey Question Responses - Part 4

Question	Pre-survey	Post-survey
The average daily hours I use the computer _____ in my 4th grade class per day.	50%-1 to 2 hours 16%-3 to 4 hours 8%-5 to 6 hours 26%-7 or more hours	50%-1 to 2 hours 22%-3 to 4 hours 8%-5 to 6 hours 20%-7 or more hours

When asked if the participants used computers to create digital content at home ironically, 56% of the students surveyed said they did not. This also backed up the fact that when interviewed, the students' replies during the pre-survey gave the impression that my class was not aware of what digital content creation was. Student E's response was, "I thought those videos on YouTube were just there!" Meaning, Student E did not realize that another person had to go through the creation process to create that YouTube video he watched. This data was also backed up by the fact that only 16 % stated that they "Strongly Agree" to using digital devices at home to complete the storytelling process.

Table 7

Survey Question Responses Part 5

Question	Pre-survey	Post-survey
Do you use computers to create digital content (videos, online material, photos...) at home?	56%-Not at all 36%-Sometimes 8%-All the time	50%-Not at all 42%-Sometimes 8%-All the time
Do you use computers at home for completing the digital storytelling process?	32%-Disagree 28%-Strongly Disagree 24%-Agree 16%-Strongly Agree	30%-Disagree 30%-Strongly Disagree 30%-Agree 10%-Strongly Agree
I think it takes a long time to finish an assignment on the computer.	40%-Agree 36%-Strongly Agree 23%-Disagree 1%-Unanswered	30%-Agree 36%-Strongly Agree 34%-Disagree
Do you use computers at home for completing the digital storytelling process?	50%-Strongly Disagree 10%-Disagree 20%-Agree 20%-Strongly Agree	55%-Strongly Disagree 5%-Disagree 20%-Agree 20%-Strongly Agree

When asked if the participants thought assignments completed on a digital device before the study were harder to finish, 40% initially stated this. Compare this to the ending data found and a different story is shown. In the beginning participants' stories created on digital devices were two to three sentences at max. Many participants complained they didn't know where the keys on the keyboard were located. By the end of the study students became more proficient in their typing skills eliminating the earlier frustration when creation took place. As stated before, during the post-survey interviews many participants stated that the lack of familiarity with "Home-Row" on a computer was a hindrance to any creation online. After the students were given more time to practice.

Majority of participants chose not to complete the digital storytelling process when given the chance at home (Table 7). Homework in a 4th grade classroom is a topic of debate among educators and parents alike. The 4th graders typically have a certain response when it comes to homework assignments too. The response I have seen in 4th graders over the past four years has been one where they don't typically want any form of extra work to do at home. So, it wasn't surprising to see that 60% of the participants said either said they "Disagree" or "Strongly Disagree" to completing the digital storytelling process at home during the presurvey. When observed these students would typically have a resounding groan of complaint when homework is ever brought up (See Table 7). The data didn't change much from the pre-survey to the post-survey as 60% of participants surveyed still said "Strongly Disagree" or "Disagree". However, participant interest in creating digital stories did increase even though no extra work was done at home (See Table 8).

Table 8

Survey Question Responses Part 6

Question	Pre-survey	Post-survey
Do you like creating digital stories?	36%-I like! 16%-I love it! 28%-I don't like to. 8%-I hate it! 12%-Unanswered	46%-I like! 24%-I love it! 10%-I don't like to. 8%-I hate it!

Many of my participants would be labeled by traditional methods as "inartistic" or even "uncreative" as stated by their previous teachers with whom I have had interactions. However, after observing students while they worked on their digital stories I noticed more creativity from

them than I had in the past on my traditional assignments. Student interest in creating the digital stories also increased from 36% "I Like!" in the pre-survey to 46% in the post-survey.

During the presurvey period of testing I received a few responses like Student "E" that showed disdain for the idea of typing a story. Student "E" stated during the presurvey that he didn't like creating digital stories because he thought, "...typing or writing stories are BORING!" The rest of the students surveyed were more positive towards the idea of writing a digital story such as Student "B".

Student "B" responded with "Because I like to type on the computer." This response was more the norm when compared to the rest of the findings. Other participants like Student "A" were thrilled at the opportunity and responded with, "Yes because they're (digital stories) easy to do and it is fun."

Additional evidence of students' positive reaction was drawn from their personal blogging. For additional student writing practice, students created personal blog posts that were read by the classroom teacher and fellow classmates. Students who had access to Chromebooks and the Google Drive function were asked to write multiple versions of a short story on demand writings through Google Docs. The first 30-minute instructional period for writing resulted in the students' first attempt at writing on a Google Doc. The participants produced a couple sentences on their Google Docs. These stories were then published on their blogs. Student F's initial blog post is shown in Figure 1.

Figure 1

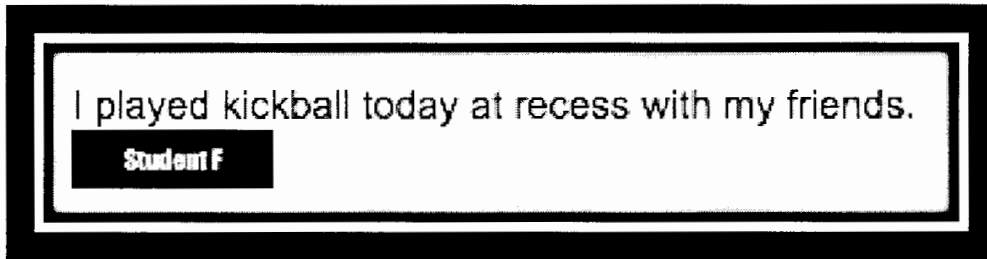
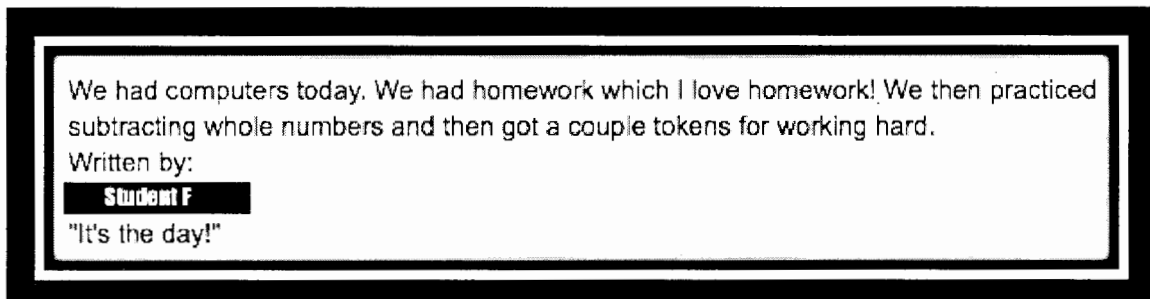
Student F Blog Initial Excerpt

Figure 2

Student F Blog Final Blog Excerpt

As shown in the final excerpt from Student F's blog (Figure 2), his writing stamina increased from the beginning of the eight-week study to the end. Student F was able to use more complex dialogue as well as show more excitement in his writing than before.

Over the next couple of weeks the students' writing stamina began to increase as students asked if they could return to these initial writings and continue their work. The continued practice resulted in faster typing and more awareness of the "Home-Row" on the keyboards. Blogging during the 8-week period students were asked to keep personal blogs about in class activities as a way to let parents know of the happenings in class. At the beginning of the 8-week period students were very unfamiliar to the concept of blogging as they had never done activities like this before in past grade levels. Students chose to write more entries that were one paragraph

or a couple sentences using very basic language like, “Today we did...” followed by “Then we did...” using a lot of repetition.

In the coming weeks participants’ writing began to get longer and more complex. Participants began writing more complex sentences using the Google Chrome add-on “Dictionary” to help them to find more complex words to use. Their repetitive nature in “beginning words” also dissipated and showed more originality. When participants D, E, F, H, I, and J were all interviewed in a small group setting, the group collectively stated that the reasoning behind the more complex wording they began to use in their writing was because they had a bigger audience viewing their work. Each participant could ask multiple classmates for help in finding more complex words to use instead of working with just one participant at a time with paper-and-pencil. Consequently, 50% of all participants surveyed at the end of the data collection period “Strongly Agree” that they can learn more when given a computer to use in regards to literacy instruction.

Table 9

Survey Question Responses Part 7

Question	Pre-survey	Post-survey
I learn more when I can use computers.	48%-Strongly Agree 32%-Agree 15%-Strongly Disagree 5%-Disagree	50%-Strongly Agree 30%-Agree 10%-Strongly Disagree 10%-Disagree

Parents’ Positive Reaction

The second major finding is related to the reaction of participants’ parents. I experienced difficulty in getting parental involvement in this research study which is common at the school used to conduct this study. Parental involvement in student activities is very low with the

administration stating that there was usually a 20% participation rate for school activities.

However, I was able to secure three parents to offer their observations of their student work during this 8-week study. I used emailing back and forth with these three parents as a means of communication for this study. A total of twenty emails were sent in all between all three parents during the 8-week study.

Table 10

Survey Question Responses Part 8

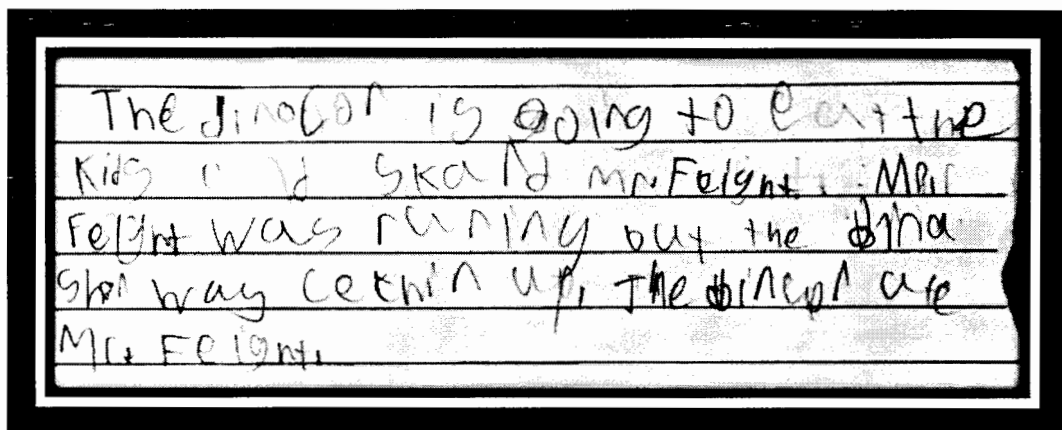
Parent	Student	Age	Profession
A	D	36	Teacher in Same District
B	D	37	Police Officer
C	G	35	Local Business Manager

Parents “A” and “B” are the parents of Student “D” and both seemed very satisfied with how their child performed during and after the 8-week study. When asked if there was any change in their child’s demeanor compared to typical involvement in a paper-and-pencil writing assignment, Parent A responded with,“(Student D) is more willing to complete tasks on the computer than with traditional paper-and-pencil assignments. (Student D) doesn’t understand (or acts like she doesn’t understand) why punctuation and capital letters are important when writing on paper. She becomes very defensive when I make suggestions about fixing writing or spelling. With the computer, she is learning how to use spell check. This eliminates the arguing with me about how to spell something. She can also read her own work when using a computer and is able to say, “That doesn’t look right”. She doesn’t appear to be able to do that with her own handwriting.” Student D’s other parent, Parent “B” had a slightly less positive outlook when they

responded with, “(Student D) said she does like to use the Chromebook, but I’m unsure if her demeanor has changed compared to a paper-and-pencil writing assignment.” Parent B did however notice improvement on his student’s work, “Her spelling seemed to be better when using the digital storytelling. She had at least one spelling error on the digital story, which I think is an improvement from paper-and-pencil writing.” Both parents in person mentioned they had noticed an improvement in their student’s use of punctuation and spelling. Student D suffers from partial hearing loss in their left ear which has caused issues in their ability to “sound out” words in past writing experiences. In Student D’s initial writing example it is evident that her inability to hear the phoneme sounds in words when she tries to spell them out is prevalent. Common errors seen throughout included errors in capitalization of proper nouns unless prompted to, incorrect phoneme sounds, and issues holding the pencil to write.

Figure 3

Excerpt from Student D Initial Writing

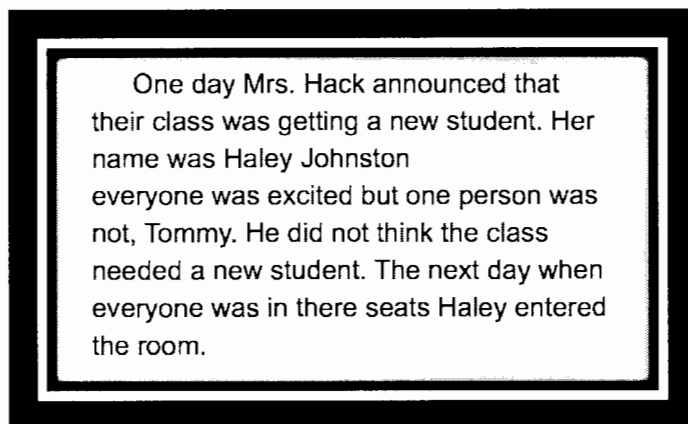


To help Student D with their auditory issues, they were given the ability to use the “Speak-To-Type” feature located in Google Docs. With this tool Student D was able to speak the words she wanted to say in her story instead of focusing on the typing and writing aspects. Student D appeared to enjoy the fact that she didn’t have to concentrate on holding a pencil to

write or trying to sound words she couldn't spell. She also appeared more willing to write than in the initial writing example. During the initial writing Student D took 30 minutes to write her story about a dinosaur chasing after me.

Figure 4

Excerpt from Student D Final Writing



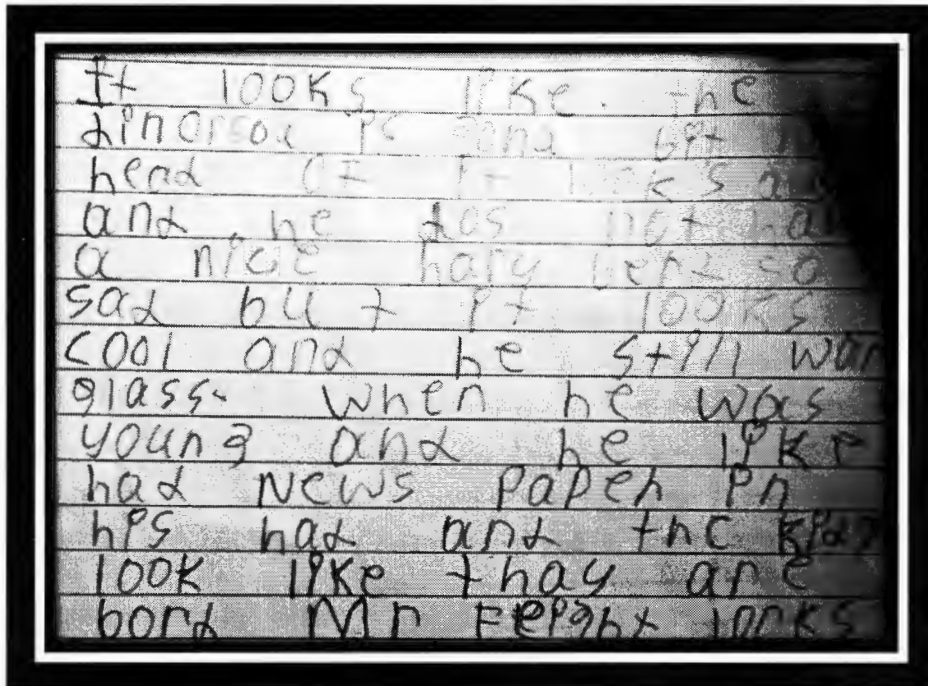
As observed in Student D's final writing, her writing was much more legible and free flowing than before. While observing this student during the final writing I noticed she was more relaxed while she typed. Student D also inserted various pictures into her writing using various apps located within Google Drive. She was not as willing to add illustrations during the initial writing.

Parent "C" a local business owner in the city of this action research study, made it known before the study that she was willing to try anything to help her student with their writing skills as Student G has had issues with manual dexterity in the past in activities such as holding a pencil. Parent C had a similarly positive outlook on how their student performed during the 8-week study. Student G has also struggled with capitalization and punctuation. Parent C noticed a change in Student G's performance in these areas, "I was pleased to see that he remembered to use capitalization and punctuation, which he tends to forget quite often when he's writing with

pencil and paper. His spelling was also better – I didn't see any spelling errors. (Maybe he used "spell check"?) The one constant compared to his normal writing is that I thought the story was too brief and could have been more developed." The issue with the story being too brief could have been rectified had I, the researcher, had a longer research period with this student than the 8 weeks allotted. Like Student D, Student G also has issues with holding a pencil as observed with his struggle to write their initial writing.

Figure 5

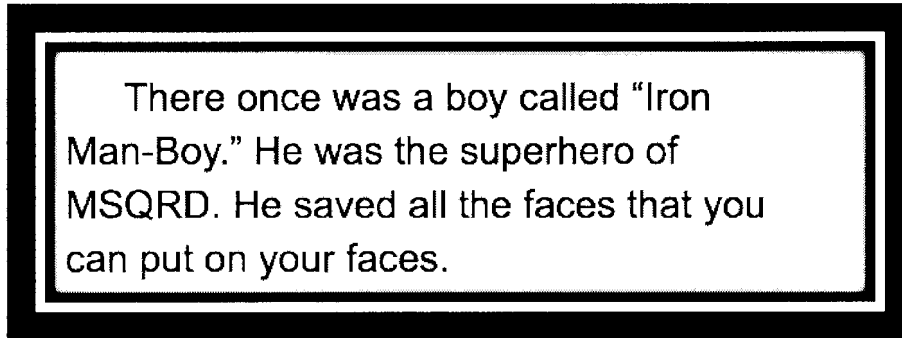
Excerpt from Student G Initial Writing



Student G has struggled all year with remembering correct punctuation in sentences. The majority of the time this student tends to forget periods and other punctuation all together. However, when given the opportunity to use a Chromebook and Google Docs Student G produced much higher quality work.

Figure 6

Excerpt from Student G Final Writing



With the use of the Chromebook, Student G was able to write more legibly and like his parent noticed, add the correct punctuation into his sentences. Student G was also able to write more freely as he had stated in the interview that he "...prefer typing over holding a pencil to write." Similarly to Student D, Student G seemed to enjoy writing more during the final writing period with the use of a Chromebook compared to the initial paper writing.

All three parents involved in this study admitted to strongly supporting literacy instruction for their students. Parent A stated,

We've always read frequently to (Student D). She loves to read. She also loves to act out stories with her sister and her dolls. She enjoys playing school with her dolls and has elaborate stories that continue from day to day. We try to take her to performances that are age appropriate, like puppet shows at MacNider Art Museum or NIACC. She will occasionally write in her journal at home but it's not a preferred activity." Parent B reiterated this sentiment, "We used to read to her often when she was younger but now she is an independent reader and she likes to read to herself before bed. (Email response)

When asked about their beliefs on digital storytelling parents stated how it's a positive technique to use with their students. Parent A remarked, "I think it's great for older students. I

am interested in knowing how younger students would handle using technology. I feel like I don't know a lot about digital storytelling as a teacher or as a parent." Parent B had similar beliefs, "I think digital storytelling is a great tool and prepares the kids for the future. Most jobs require typing or writing on a computer." Lastly, Parent D echoed, "I think it's an excellent tool, particularly for students, like my son, who abhor writing manually on paper. The earlier that students learn how to use and get comfortable with technology, the better equipped and prepared they will be throughout their school years and future careers." Parent D then followed with her statement about her reaction to her child's digital story:

I liked the addition of the photo that he was able to manipulate. I was pleasantly surprised that he is learning this technology in school as it's so important in today's high-tech world. I think it encouraged his creativity in the story and made it more "real" to him. I do wish that he had expanded on the content and typed a longer story.

Summary and Recommendations

Summary: a) student motivation towards writing increases when introduced to the concept through a digital device; and b) parents were enthused about the level of work their students submitted when using digital techniques to write.

I expected that students would respond well to the concept of using digital techniques to produce writing as the generation of students I work with is consumed by the idea of electronics. I had one participant reject the idea of using a digital device during this study at first to write his digital story. This did not sway my assumption that this student would ultimately change his mind towards using a digital device by the end of the study. The reasoning for this assumption

was that during my observations this student loved completing math assignments and other curricular activities on the class iPads. All participants in this study showed minimal gains. I feel that if this research study were over a longer period of time than the two months used more gains would have been seen in all participants.

The parents interviewed in this study also found that their kid's' work increased with the use of devices for better collaborate. Parent A responded, "I really like the concept of students learning how to work together to be better people. Using a device is definitely a great way to teach them this at 4th grade. Especially since, when my daughter gets older she will be expected to use computers a lot more." (Parent A Interview).

The district has limited access to computers for each classroom, thus offering the students enough time to complete each assigned activity was challenging at times. This was especially true when trying to schedule time in the one computer lab the building offers. The district was also doing continuous maintenance on the computers in the lab as a virus was detected in late February during district wide testing. This further limited my access to ready computers. Administrators were interested in how this would impact future literacy instruction within the entire district. The findings will be used towards a district initiative to improve technology instruction in the district along with offering students more options to complete various assignments. They are currently considering incorporating a "21st Century Learning" class district-wide for the coming school year.

This specific study was unique as it gave multiple perspectives of the stakeholders including: teachers, students, and parents. By gaining multiple perspectives of stakeholders this study is able to help formulate a collaborative thought process on how to better affect student learning in a 4th grade classroom.

This study also gave valuable insight into new teaching methods that I will use to improve my instructional practices for years to come. Adding the parental involvement into the study gave a whole new element to the study. Seeing how parents would interact to a different instructional method would also help validate or inform the instructional practice of using computers with young children. Teachers can see how the incorporating digital storytelling into their literacy instruction can help develop creative thinking and higher depth of knowledge learning for their students than the traditional methods have produced in the past. Taking research found by Larry D. Rosen, Ph.D., the basis of this study was founded on the concept that "...today's children have grown up in an environment in which technology is everywhere and much of it is invisible." (Rosen, 2010, p. 26). This would lead to the idea that "iGeneration" students, as Rosen calls them, would be more motivated from more interaction via mobile devices and connection to the internet. Larry D. Rosen continued by giving reasoning for the higher motivation towards the use of digital storytelling by stating,

To put it simply, today's children have grown up in an environment in which technology is everywhere and much of it is invisible. Most children and adolescents have grown up with the largest storehouse of information in history--the internet." (Rosen, 2010, p. 26)

Rosen continued on, "From an early age they have learned to play online games, send email to Grandma and Grandpa, and watch videos. As they got older, they learned to Google anything they wanted to know, consult MapQuest for directions, use Wikipedia for school reports, and go to dictionary.com for definitions." (Rosen, 2010, p. 26)

Being able to better understand the generation of students I work with at the moment has been a goal of mine every year I've taught. Students today learn differently compared with how students learned even ten years ago. This study was used to provide a basis for the inclusion of digital storytelling into a 4th grader's literacy learning experience, but could easily be adapted for younger elementary students as well. The thought behind using tools that students are already accustomed is that it will help promote creation and creativity is one that all teachers strive to find.

Recommendations

Most of the research on using digital tools found for this study was in a secondary or college level. Elementary level research is not as common in this field. Even with the research conducted in my 4th grade classroom, more research is recommended for other lower level grades and how digital storytelling can impact those students literacy education for later years. In

the future I would also recommend doing this project over a year's time to get a more in-depth study going.

Reflection and Conclusion

After completing this action research study many valuable thoughts were found: a) students in an elementary setting can thrive when using computers as their main device for creating writing content, b) students find technology integration as a motivating factor when working on classroom related projects, c) even with the incorporation of technology, there was no increase in motivation to work on literacy projects at home.

Over the eight weeks of action research, I was able to notice a much higher level of motivation in students when they worked on their writing in class or in the computer lab. Students also tended to be more motivated when the project was presented in a "gamified" format as opposed to writing on a traditional piece of paper. Gamification of instruction was not a part of this study, which I think can also attribute to the lack of motivation of continuous work on digital stories at home as the students saw it more as traditional homework then something enjoyable. Taking the fact that these students had limited to no digital storytelling experience prior to this study is another piece of evidence to consider. It could be seen that the students lacked motivation to continue their work at home because they were still so new to the concept of digital storytelling.

However, the major findings of my action research were limited by two factors, including the short period of time frame--only 8 weeks and the subjectivity. Students' increased motivation might be the result of the "novelty effect". It is very important to conduct long-term research. My interpretation of the data analysis and my roles both as a teacher and researcher might project my personal bias. However, my action research is significant for the two contributions: 1) the research evidence of the fourth graders' perspectives was based on a practitioner's action research, and 2) the parents' perspectives filled the research gap. The limited research into using digital storytelling in elementary classrooms has revealed that as an application as well as a pedagogical approach, storytelling with digital media incorporates many of the cultural and social functions of traditional storytelling. Functioning as a tool for learning, digital storytelling adds new dimensions to the purpose of traditional storytelling as it acclimates itself to the classroom. As research in this area matures, new genres may emerge as educators design digital storytelling projects to meet the needs of their students and curriculum.

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*Appendix A***Student Interview Questions:**

I am Mr. Feight. I am carrying out an action research project in order to improve my teaching as well to complete for my master's degree final project at the University of Northern Iowa. The purpose of this interview is to get your ideas about your recent learning experience with digital storytelling. Your participation is voluntary and will not affect your grade. You can stop the interview any time if you don't feel comfortable. Since there is no right or wrong answer for each question, please share as much detailed information as possible. I will use a pseudonym for you to protect your identity for the interview transcription and for any future publications. All information will be kept confidential and destroyed once the research project has concluded.

1. Please share your learning experience with storytelling in general.
 - a. What does storytelling mean to you?
2. Please share your learning experience with digital storytelling in particular.
 - a. What does digital storytelling mean to you?
3. How does digital storytelling differ from the traditional paper-and-pencil storytelling?
4. What have you learned from your learning process of creating a digital story?
 - a. Use one digital story that you created as an example, please explain to me the particular steps that you were involving in creating it. Please explain one step at one time.
 - i. What is your digital story about?
 - ii. How did you start a digital storytelling?
 - iii. What were the other steps involving in creating it?
 - iv. How did you create it?
 - v. How many hours did you spend on creating it?
 - vi. With whom did you share your digital story?
 - vii. How did you share it?
 - viii. How will this experience affect your overall learning in a long run?
5. If you were given a choice for either creating a traditional paper-and-pencil story or a digital one, which option would you like to choose? Explain to me your reasoning as detailed as possible.
6. What suggestions would you like to make for my improvement of teaching?

*Appendix B***Parent Interview Questions:**

1. Has your child told you about his/her involvement in digital storytelling recently at school?
 - a. Is there any change in his/her demeanor compared to typical involvement in a paper-and-pencil writing assignment?
2. How often did he/she continue to work on the digital story at home?
3. How have you been involved in your child's storytelling learning process? (Example: Does he/she write stories with you at home or do you read to him/her often?)
4. What is your reaction after viewing your child's digital story?
5. What's the difference you noticed about your student's writing when he used digital storytelling techniques? (Computer and various apps.)
6. What are your thoughts about digital storytelling?
7. What does storytelling mean to you?
8. What suggestions would you like to make to improve my teaching?

How would you rate your skills with computers? *

- Rockstar!
- Fair.
- Not that great.
- Help!

Appendix C

Student Survey Questions:

- 1) How would you rate your comfort level using computers at home?
 - a) Rockstar!
 - b) Fair.
 - c) Not that great.
 - d) Help!

- 2) How would you rate your comfort level using computers at school?
 - a) Rockstar!
 - b) Fair.
 - c) Not that great.
 - d) Help!

- 3) The average daily hours did you use the computer _____ in your my 4th grade class.
 - a) 1-2
 - b) 3-4
 - c) 5-6
 - d) 7-above

- 4) The average hours did you use the computer per week at home for entertainment during 4th grade.
 - a) 1-2
 - b) 3-4
 - c) 5-6
 - d) 7-above

5) Do you use computers for entertainment?

- a) Playing video games
- b) Watching YouTube videos
- c) Chatting with friends/family
- d) All of the above!

6) The average hours you use digital devices per week at home for continuing academic learning outside the classroom. .

- a) 0-2
- b) 3-4
- c) 5-6
- d) 7-above

7) How often do you use computers to create digital content (videos, online material, photos...) at home?

- All the time!
- Sometimes
- Seldom
- Not at all.

8) Do you use computers for entertainment?

- Playing video games
- Watching YouTube videos
- Chatting with friends/family
- All of the above!

9) Do you use computers at home for completing the digital storytelling process?

- Strongly Agree
- Agree

- Disagree
- Strongly Disagree

10) Do you like creating digital stories?

- Love to!
- I like!
- I don't like it.
- I hate!

10a) Please explain your reasoning in some sentences.

11) I think it takes a long time to finish an assignment on the computer.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

12) I would work harder if I could use computers more often.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

13) I think that using computers are very easy to use.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

14) I learn more when I can use computers.

- Strongly Agree

- Agree
- Disagree
- Strongly Disagree

15) Do you use computers at home for completing the digital storytelling process?

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

14) Do you like creating digital stories?

- Love to!
- I like!
- I don't like to.
- I hate!

Please explain your reasoning.

*Appendix D***UNIVERSITY OF NORTHERN IOWA
HUMAN PARTICIPANTS REVIEW
PARENTAL PERMISSION**

Invitation to Participate: “Your child has been invited to participate in a research project conducted through the University of Northern Iowa by your child’s classroom teacher, Benjamin Feight. The University and school district requires that you give your signed agreement to allow your child to participate in this project. The following information is provided to help you make an informed decision whether or not to participate.

Nature and Purpose: The title of this research project is, “The Effects Of Using Digital Storytelling for Fourth Graders’ Literacy Learning” and will have your student interacting with various digital storytelling and editing tools to complete their regular literacy assignments instead of the traditional method of paper-and-pencil. The goal of this project is to find if 4th grade students are more engaged in literacy instruction when they can use digital tools to complete assignments versus the more traditional paper-and-pencil method. This study will also be investigating student perception of literacy instruction with the inclusion of digital tools.

Explanation of Procedures: This duration of this project will be through January 30, 2016 to March 2016. Students will be accessed at the beginning, middle, and end of the procedure using Google Forms when our class is in the computer lab or is using the Chromebook cart. Your child may be video-taped or audio recorded so I can get a more in-depth view after the school day ends. Any video or audio recordings will be destroyed at the conclusion of the project.

As a secondary part to the research I am looking for any parents/guardian’s who would also like to participate by completing a short eight question interview over their student’s work. The purpose of this interview is to get your ideas about your kid’s recent learning experience of digital storytelling. Your participation is voluntary and will not affect your kid’s grade. You can stop the interview any time if you don’t feel comfortable. There is no right or wrong answer for each question. Please share as much detailed information as possible. I will keep the information confidential. I will use a pseudonym to present you for the interview transcription and potential future publications. If you would like to participate in this portion please place an “X” by the corresponding line at the bottom of this information sheet.

Discomfort and Risks: If student is uncomfortable using the digital tool I present they will be given extra time to get comfortable with using the specified tool and if they get frustrated or can’t figure the tool out they will be given the option to return to a more familiar format (example: paper-and-pencil).

Benefits: Students will receive more chances to receive direct technology instruction from me and potentially find better ways to engage them in their literacy instruction or even improve instructional outcomes.

Confidentiality: Information obtained during this study which could identify your child will be kept strictly confidential. The summarized findings with no identifying information may be published in an academic journal or presented at a scholarly conference.

Right to Refuse or Withdraw: Your child's participation is completely voluntary. He or she is free to withdraw from participation at any time or to choose not to participate at all, and by doing so, your child will not be penalized or lose benefits to which he/she is otherwise entitled. They will just go back to normal classroom activities as scheduled.

Questions: If you have questions about the study you may contact or desire information in the future regarding your child's participation or the study generally, you can contact me at (641) 421-4406 or bfeight@masoncityschools.org or my faculty advisor Dr. Ping Gao at the Department of Curriculum and Instruction at the University of Northern Iowa (319) 273-6832. You can also contact the office of the Human Participants Coordinator, University of Northern Iowa, at 319-273-6148, for answers to questions about rights of research participants and the participant review process."

Agreement:

I am fully aware of the nature and extent of my child's participation in this project as stated above and the possible risks arising from it. I hereby agree to allow my son/daughter to participate in this project. I have received a copy of this form.

(Signature of parent/legal guardian)

(Date)

(Printed name of parent/legal guardian)

_____ Yes I would love to participate in the interview and have my student participate in your research!
(Mark "X" if you wish)

_____ No. I do not wish to participate in the interview, but I am still willing to have my students participate in your research.
(Mark "X" if you wish)

(Printed name of child participant)

(Signature of investigator)

(Date)

(Signature of instructor/advisor)

(Date)

Appendix E

**University of Northern Iowa
Human Participants Review
Informed Assent
(Sample Child/Minor Assent Form)
For young child approximately 6-10 years old**

Project Title: "The Effects Of Using Digital Storytelling for Fourth Graders' Literacy Learning"

Name of Principal Investigator(s): Benjamin Feight

I, _____, have been told that my mom, dad, or the person who takes care of me has said that it is okay for me to take part in an activity about using digital storytelling tools on the computer in Mr. Feight's classroom or the computer lab. It is okay that he uses my classroom work, but will not use my name in anyway or anything else that might identify me in the paper he writes. It is also okay that he will have me take a short survey on Google Forms as well as a short three question interview with Mr. Feight potentially. Random selection will be used to determined who gets selected for the interview and survey. The survey and interview will be conducted once at the beginning of the project, once during the middle of the project, and once at the end of the project. I may or may not be video/audio recorded, but if I am it is only for Mr. Feight to listen to or watch at a later time.

I am doing this because I want to. I have been told that I can stop my part in the activity at any time and return to normal classroom activities. If I ask to stop or decide that I don't want to do this activity at all, nothing bad will happen to me. I can return to normal classroom activities.

Name

Date

Appendix F

MASON CITY COMMUNITY SCHOOL DISTRICT

1515 S. Pennsylvania Avenue, Mason City, Iowa 50401
Business Fax: (641) 421-4444
Supt. Office Fax: (641) 421-4448
Transp. Fax: (641) 421-4429

September 27, 2015

Benjamin Feight
1239 North Rhode Island Avenue
Mason City, IA 50401

Dear Benjamin,

The Mason City School District is pleased to collaborate with you on your project "The Effects Of Using Digital Storytelling Tools In A K-4 Classroom".

We understand that participating in this research will include completing literacy assignments using electronic devices. We had ample opportunities to discuss the research with you and ask for clarifications. Furthermore, it is understood that Benjamin will maintain confidentiality of all research participants in all phases of this project.

According to our agreement, project activities will be carried out as described in the research plan reviewed and approved by the University of Northern Iowa Institutional Review Board.

We look forward to working with you, and please consider this communication as our Letter of Cooperation.

Sincerely,



Dr. Anita Micich
Superintendent of Schools

Appendix G

HARDING ELEMENTARY SCHOOL

1239 N. Rhode Island Ave., Mason City, Iowa 50401

Phone: 641-421-4406

Fax: 641-421-3365

Date: 9/27/15

Name: Benjamin Feight

Address: 1239 North Rhode Island Avenue
Mason City, IA 50401

Dear Benjamin,

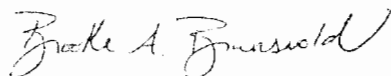
Harding Elementary School is pleased to collaborate with you on your project "The Effects Of Using Digital Storytelling for Fourth Graders' Literacy Learning."

We understand that participating in this research will include literacy instruction through a computer device. We had ample opportunities to discuss the research with you and ask for clarifications. Furthermore, it is understood that Benjamin will maintain confidentiality of all research participants in all phases of this project.

According to our agreement, project activities will be carried out as described in the research plan reviewed and approved by the University of Northern Iowa Institutional Review Board.

We look forward to working with you, and please consider this communication as our Letter of Cooperation.

Sincerely,



Brooke Brunsvold

Harding Elementary Principal