The Effects of Digital Communication on Motivating Third-Grade Student Writing

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Abstract: This paper documents the results of an action research study focused on addressing student motivation for writing in a third grade classroom at a public elementary school in Hawaii. The concept of digital communication was introduced to the students through the use of digital pen pals at a neighboring elementary school. The digital correspondence was composed on word processing software on laptop computers and was exchanged through a private network server shared between the two participating schools. Classroom observations and feedback from the students revealed that many students were excited to access the network server to receive the reciprocal letters from their pen pals. However, the pressures of writing to an actual audience resulted in a decrease in confidence and heightened anxiety level for some of the students due to the comparative nature of the exchanged letters. Additionally, the keyboarding and computer skills training integrated into the letter writing process appeared to be overwhelming for some of the students as well. Future plans call for an increase in weekly keyboarding practice, general computer based writing exercises, and comparative writing lessons in order to lessen any anxiety for writing that was produced as a result of the digital writing project.

Introduction

This action research study is based on a classroom writing exercise designed by a third grade public school teacher in Hawaii who was faced with the dilemma of addressing the level of real world writing practices that the students were receiving in their normal classroom curriculum routine. Due to the inconsistent nature of the current writing practices in the researcher’s classroom, the motivation levels of the students for writing have been generally lower in contrast to other curriculum subjects such as mathematics where the students’ attitudes and motivation levels are more outwardly and noticeably positive. This particular study was designed to evaluate the effectiveness of a digital communication exercise and how it affected students’ overall motivation for writing. The digital communication exercise chosen for the duration of this study was a digital pen pal project focused around a personal letter writing unit done on the computer.
Literature Review

Increasing motivation to write is often times associated with the opportunity to write freely about whatever topic interests the writer. In addition, researchers state that, “providing an authentic writing experience is one way to address students’ lack of motivation for writing” (Evans, Harmston, Strong, 2001, p. 46). Students often times measure the authenticity of writing tasks based on the level of relevance that the writing task may have on them personally in a real world or real life setting (Evans, Harmston, Strong, 2001).

In terms of writing within the bounds of the course curriculum, researchers state that, “many of the activities associated with pen-pal letter writing can be directly correlated with a school’s curriculum as well as national standards” (Lemkuhl, 2002, p. 720). Studies have also shown that using electronic or digital pen pals is an excellent means of raising student motivation by offering the real world writing experiences that the students desire while covering cross-curricular topics that are required by the educational standards (Barksdale, 2007). By combining the traditional aspects of the pen pal letter writing process with more modern digital communication methods, digital pen pal projects allow teachers to address both the curricular and technological needs of a wide range of students.

Researchers report many different impacts that digital technology tools have on traditional writing tasks. One such study has shown that the use of technology tools has the potential to impact student motivation for writing tasks based on the novelty and perceived newness of the technology tools used (Barrera, 2001). When students are excited about the use of a new technology tool or unique element of instruction, there is a strong correlation between the use of the tools and their effort level, attention, and motivation for the assigned tasks. However, this research study also warned that the effects of the initial excitement and motivation may decrease as the students become accustomed to the use of the technology tools (Barrera, 2001).

With motivation being the keystone element for the research of this project, the ARCS model of motivation (Keller, 2008) was used as an overall guideline for the facets of student motivation that were monitored and evaluated throughout the course of the study. According to research about motivation and writing, providing authentic and meaningful writing experiences is a vital aspect to building and retaining students’ motivation to actively and successfully participate in activities related to writing tasks (Brunning & Horn, 2000). Therefore, the five aspects of the ARCS model, attention, relevance, confidence, satisfaction, and volition offer more specific aspects of motivation to be observed in the students throughout the course of the digital pen pal writing project.

Project Description

This action research study focused on evaluating the use of a digital pen pal project to affect the motivation levels for writing in a third grade class in Hawaii. The overall purpose of the digital pen pal project was to support the current writing practices of the
third grade curriculum by integrating the use of keyboarding and word processing skills to compose personal letters to an actual recipient. The overall writing goal for the digital pen pal project was slated for a total of three letter exchanges between two third grade classes over the course of a two month timeframe beginning in January of 2011 and ending at the end of February.

Researcher Information and Classroom Environment

The main researcher of this action research study is one of two third grade teachers at this elementary school. The classroom environment of the researcher’s third grade class is an open classroom designed for two separate homeroom classes taught by two teachers in tandem and at times simultaneously. Writing curriculum is taught in both small group and whole group instruction by both third grade teachers at this school. A majority of the pen pal project instruction and writing process was done in a whole group setting involving all students at the same time.

Project Participants

The research participants of this action research study consisted of 61 third grade students in two homeroom classes at the researcher’s school. The receiving pen pal participants were from another elementary school located in the same school complex area and were arranged through the technology coordinators of each school. The pen pal arrangements and assignments were done through the exchanging of information by email between the teachers at both schools. At the start of the pen pal project, there were an equal number of students to be matched as pen pals for the duration of the project. Although two separate schools were involved in the pen pal project, the results of this action research study focus only on the results at the researcher’s school.

Technology Skills and Materials

Students at the researcher’s elementary school are familiar with using technology tools such as laptop computers, interactive whiteboard technology, student response system (SRS) voting devices, and other digital tools within the classroom on a daily basis. The classroom is assigned a laptop computer cart with 32 laptops available for daily use, with access to additional laptop computer carts for additional computers when needed for whole group instruction and writing participation. Each of the laptop computers were equipped with identical word processing software installed. The classroom is also equipped with wireless Internet connectivity which allows the students to log into various Internet and network based programs for nonfiction reading support, keyboarding practice, and essay writing practice during class time.

Pen Pal Project Procedures

For the digital pen pal writing project, the students were given specific instructions for their letter correspondence and followed a personal letter writing unit plan designed around basic letter composition. The students used laptop computers to compose the
digital letters for their pen pals and included specific information in each of the letters following a simple guideline for content. The procedures for writing the letters followed a traditional three step process of drafting, composing, and editing the letters.

The digital letters were drafted directly into a basic word processing program installed on each of the laptop computers and were submitted digitally through a shared folder connected to the school’s computer network server. The students followed a specific protocol for naming each digital letter file saved on the network folder. This was done to specify the sender and intended recipient of each letter. The school’s network server hosts the school’s website, data, and file storage. Students were provided with unique usernames and passwords that provided security and privacy for the individual user. For the specific purposes of the pen pal letter writing project, students were given an additional username and password for use when accessing the network server folder when submitting and exchanging their digital letter files.

For each letter exchanged, the students were responsible for following a prescribed template for content and topics to be covered in each of the letters. The digital letters were then filtered and reviewed by each teacher for content, grammar, and format before being shared between the two participating schools. All teachers involved in the pen pal project communicated the progress of the letter writing process through the use of email and were able to coordinate with each other when the letters were to be submitted and received by the students.

Research Methods

This action research study focused mainly on the motivation levels of third grade students for writing in relation to their current classroom writing practices. The motivation levels for writing that were evaluated throughout the course of the research study were based on the ARCS model of motivation which is made up of five related components: attention, relevance, confidence, satisfaction, and volition (Keller, 2008). Data based on these aspects of motivation were collected, monitored, and evaluated throughout the course of this research study through daily classroom observations during writing instructional time, field notes taken on verbal feedback and comments during daily class discussions, and from analysis of comments written in student reflection letters.

Observations

The observations were made each day by the researcher during classroom instruction and writing practice times. Observational data collected throughout the study was mainly based on handwritten field notes taken by the researcher during the instructional process.

Feedback Field Notes

Feedback from the students was also collected through field notes taken during class discussions during the writing instruction and writing practice times on a daily basis.
These field notes were examined for repetitive comments, attitudes, and questions brought up by the students throughout the pen pal writing process.

**Student Reflection Letters**

The reflection letters were handwritten by the students and were noted by the researcher for consistent and similar commentary feedback, and were compared to the digital letters composed during the writing process. These letters were written at the end of the second letter exchange and were assigned to the students as an interim check on how they felt about the writing process. Students were asked to write freely and candidly about their learning experiences during the letter writing process.

**ARCS Model of Motivation Guidelines**

The ARCS model of motivation served mostly as a guideline for the overall comparative aspects of motivation that were monitored for change within the students. The first aspect of the ARCS model of motivation is attention, where it is defined as gaining, building, and sustaining of active engagement in the learning activity. Secondly, the motivation of the students was evaluated based on the students’ own perception of the relevance and real world implications of the pen pal writing project in their own lives. Relevance is defined in the ARCS model of motivation as a strong relationship between the current instruction of a topic to a student’s goals, learning styles, and past experiences.

The third aspect of the ARCS model, confidence, is defined as the student’s feelings of personal control and expectancy for success which allows them to judge their own level of competency, excitement, and comparative skill level while participating in the pen pal writing project. The fourth aspect of the ARCS model, satisfaction, is defined as a positive feeling about the learning experiences related to both intrinsic and extrinsic motivational factors. Lastly, the fifth and final component of the ARCS model of motivation, volition, is defined as the self-regulatory strategy that is employed by the students to complete the tasks of writing the pen pal letters on their own time outside of the regular classroom environment.

**Results**

The start of the pen pal letter writing process began as planned at the start of the third quarter of the school year in January of 2011. The students were given multiple lead up lessons on personal letter writing prior to beginning the pen pal letter writing process and were given basic instructions for the key aspects of computer word processing and formatting. The concept of the pen pal project was well received by the students and there was a general sense of both excitement and nervousness felt by both the students and teaching staff involved in the process.

The initial pen pal writing unit plan called for a total of three letter exchanges, but at the writing of this paper, only two letter exchanges were able to be made with the conclusion
of the pen pal project to be completed by the end of the school year. Nevertheless, the overall motivation levels of the students became very evident throughout the progress of the project. The initial reaction of the students in regards to the pen pal project was of open and outward excitement to participate in the project. A large majority of the students in the grade level had never written a letter to a pen pal before making the task of composing a personal letter to an audience outside of the classroom environment a very new and novel task for the students. The added element of composing the letters on the computers created a noticeable sense of excitement and determination for the students to embark on a project that was never introduced to them in any of their former grade levels. One student commented specifically, “I always wanted a pen pal somewhere else.” This student stated in their reflection letter that they had never had the opportunity to write a personal letter to someone before and would like to continue the process after the completion of the writing project.

Based on the five aspects of the ARCS model of motivation, many observations were made regarding the students’ level of motivation for writing throughout the course of the pen pal writing project. Addressing the first aspect of the model, attention, the students showed a high level of attention and interest during the instructional process of the pen pal letter writing unit. During the instructional process, there were very few instances when students showed disinterest or became distracted when given the specific instructions for the letter writing process. Due to the curiosity of the students, there was additional attention focused on the possibility that the students would have the opportunity to meet their pen pal counterparts face to face at a later time in the school year.

In terms of the second aspect of the ARCS model of motivation, relevance, the students truly felt as though they were able to communicate effectively with their pen pal counterparts on a real world level. One student indicated this optimistic attitude by concluding their first letter by stating to their pen pal partner, “I hope that we can become best friends.” Another student was very ecstatic knowing that they had found a similar area of interest with their pen pal stating, “My pen pal is just like me!” Throughout the writing process, the students truly were able to gain a sense that they were writing to a true audience that was very similar in many aspects to their own self. This real life aspect of the project raised student interest and motivation levels to write their letters based on their own experiences and interests.

The third aspect of the ARCS model of motivation, confidence, was the area that showed significantly lower levels of student motivation for writing. Due to the comparative nature of the pen pal letter writing process, and the high level of technological competency that the students needed in order to compose their letters appropriately, there was a heightened level of anxiety and nervousness which negatively affected many of the students’ motivation to write. A majority of the students commented both verbally, and in their reflection letters that they were worried about the writing quality in their letters since they were afraid that their letters would be lower in academic quality than their pen pal’s letters. One such student commented that, “I (also) was scared that if I didn’t write a good letter they would write a mean letter back to me.” This type of residual fear was
not commonly written in the reflection letters, but was very prominent amongst the students’ verbal feedback and commentary during class discussions.

This lower level of confidence in their writing skills was evident in that many students commented that they didn’t want their pen pal to have a negative perception of who they were as a student as a result of their letter writing ability. Additionally, many of the students did not feel confident in their skills using the computers to access the network server and competently use the word processing software on the computers. Although this can be attributed to a mere lack of experience, some of the students found it motivationally difficult to transition from writing letters traditionally with a pencil and paper to composing the letters directly onto the computer in a digital format. One student commented that the process of logging into the school’s network server on the computers was an “easy, but sometimes hard” process to perform which took a lot of practice over time to master. Additionally, some students specified that it was difficult to think of things to type directly onto the computers for their initial letter drafts. Since the students were instructed to draft their letters directly on the computers, this contrasted the students’ regular drafting process which involved aspects of brainstorming and outlining on paper prior to the letter composition.

The fourth aspect of the ARCS model of motivation, satisfaction, showed mostly positive effects on the students’ motivation to write considering that the students were noticeably excited about receiving their response letters from their pen pals. The extrinsic motivation of receiving actual responses to their letters had a positive effect on the students’ motivation levels to write since the students felt as though their writing efforts had given them positive returns in the form of responses to their actual written work. Intrinsically, students who noticed that their writing abilities were stronger than that of their pen pal counterpart gained an additional sense of satisfaction and sense of positive motivation to continue their writing efforts. One student commented that they “felt confident because I knew that I can do my best and I know I can make the best letter.” Additionally, the reminders that the students would have the high likelihood of meeting their pen pals sometime during the school year created a definite sense of reward based motivation to continue their writing practice through the exchanged correspondence with their pen pal. One student excitedly commented, “I can’t wait to meet my pen pal!”

Lastly, the fifth aspect of the ARCS model of motivation, volition, was an area of motivation that was not strongly indicated by the students throughout the course of the pen pal writing process, but was alluded to in some students’ feedback in their reflection letters. Most of the students did not show any increases in personal motivation to continue their letter writing outside of the assigned class time. A large majority of the students continued their writing practice only when they were instructed to do so, and only three students had an increase in personal volition to request additional time outside of the regular instructional time to continue their letter writing. Although very few students actually showed a proactive approach to their volitional motivation for extra-curricular writing, one student expressed an increased interest in writing on the computer by commenting, “Now everyday I want to go on the computer, use Word, and type things!” This type of feedback and student sentiment offers promising future results.
Discussion and Action Plan

The overall impacts of the pen pal writing project can be seen as positive when looking at the results that were generated by the study. However, the results can also be considered inconclusive that the digital pen pal project alone was successful in increasing the motivation levels of all students to write. Since the data collected from this study did not measure actual academic gains that the students produced throughout the letter writing process, the results can only suggest whether or not the digital communication methods were useful in affecting more than just the basic aspects of motivation for writing which were observed and discussed throughout the study.

In terms of the technological aspect of the study, the students were required to learn many aspects of computer file management such as file naming and saving the digital letter files correctly, as well as following the proper procedures for connecting and logging into the school’s network server in order to have access to the proper folder and file locations. This resulted in a noticeable learning curve that the students faced. This steep learning curve impacted the overall pacing of the writing practice instructional time. Many students had difficulties with the many steps in each of the processes required for the letter writing process. The difficulties faced by the students had an overall negative impact on the perception and motivation geared towards the pen pal letter writing process.

While the technological aspects of the project may have had some negative effects on the students’ motivation levels to write within the context of this particular study, there is also the possibility that this would have had less of an impact under different circumstances. In order to continue the positive progress of the students’ motivation levels for writing, future plans call for an increase in weekly keyboarding practice and a continuation of computer skills training for both word processing and basic file management skills. To aid in the confidence levels of the students, an increase in comparative writing exercises would also be helpful in decreasing the anxiety levels of students. This would help to address the difficulty when faced with writing tasks that involve the comparison of their writing skills with those of their grade level classmates and other students elsewhere.

Conclusion

For school teachers of all grade levels, the integration of technology tool use and digital communication skills is a must for the 21st century learner. It is the duty of all classroom teachers to supply students with a wider range of technical skills and experiences that can be applied to more complex and rigorous academic environments of the digital age. The integration of modern day advancements in education may have the potential to increase student motivation to learn in many aspects and should thoroughly be considered by teachers of all subjects and grade levels. However, traditional academic topics such as writing still need to be approached with delicate handling considering the diverse and complicated nature of writing practice and instruction.
References


