CREATING ONLINE ACCESS AS A COMMUNICATION BRIDGE: IMPACT AND EFFECTIVENESS ON MIDDLE SCHOOL SCIENCE

By

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STATEMENT OF PERMISSION TO USE

In presenting this professional paper in partial fulfillment of the requirements for a master's degree at Montana State University, I agree that the MSSE Program shall make it available to others under the specified rules of the MSSE program.

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ABSTRACT

The purpose of this study was to create a sense of accountability in eighth grade science students. The project was designed to assess whether students who were required to access information needed in class by using a teacher created website showed academic improvement. Data on student and parent perceptions regarding the efficacy of the website were also measured. The intent was to see if students could become more independent learners as they are being prepared to enter the high school system in the fall of 2013. The results of this study demonstrated that there was a modest improvement in overall academic achievement of students required to use the website compared to those who did not. Parent and student perceptions regarding online education were more difficult to measure quantitatively due to low numbers of surveys returned. Qualitative methods led me to conclude that the website was not only effective, but it gave students a chance to experience mixing their academic expectations with their frequent use of online tools. Parents informally reported that the website provided a platform for them to oversee their student's academics while allowing the student to maintain some degree of autonomy.

INTRODUCTION AND BACKGROUND:

I came to teaching as a second career after working for five years in a medical research laboratory at a major medical teaching university. One of my duties was to train third year medical students in laboratory techniques. When I found that I enjoyed the teaching aspect of my position more than the pure research, I went back to school to become a teacher. After starting in the elementary program, I found myself missing my science background, and so I changed to secondary education. Upon graduation, I landed a position as an eighth grade science teacher, and have never looked back. Having come to teaching with the perspective of a student who loved school, I was shocked during my first few months of my first school year at the poor quality my students produced in homework assignments, note taking strategies, and test taking skills. As the years have progressed, I have found that despite my ever-increasing skills as a teacher, the lack of recognition of what it takes to be an academically successful student has not changed very much. Of particular concern to me are the attitudes of students and, often parents, have on what is the appropriate time and place for homework. As an educated person, I see the value and necessity for students to practice the skills learned in school beyond the school day just as I work on my teaching in the evenings and on weekends.

While student effort has changed very little, the tools available to me as a classroom teacher have dramatically changed. On the first day of my first school year, I was handed a hardback grade book, a list of class rosters, and a hearty “good luck” from my Principal as I headed down the hall to my new classroom. The tools I use today as a classroom teacher have evolved to the point that I am not sure how I did my job without the Internet, document cameras, LED projectors, PowerPoint, Word, an online grading program, and the many other tools

available with the improvements in technology. Gone in our building are overhead projectors, ditto machines, filmstrips and movies, all replaced by more efficient and engaging options.

As teachers in the Bozeman School District, Montana, we talk all the time, both formally and informally, about teaching our students 21st Century skills, and, to me, part of this is having students able to access the information they need to get their job done. The job they need to get done is the homework and practice we give, including the attainment of the study skills they will need to succeed in the increasingly competitive academic environment. Students can most frequently accomplish these tasks by using a computer and having access to the Internet. As a veteran classroom teacher, I have heard and answered the same questions countless times from my students. The most frequent of these questions include "I was gone yesterday, what did I miss," "I didn't understand my homework when I got home and I couldn't find the information in the book," and "I lost my homework, can I get another copy."

In the early days of my career, the only way to answer student questions was face to face. Now with the tools available in most school districts in Montana, we are finding ways to empower students in becoming more independent learners. This independence becomes increasingly important as students get older and look to high school and beyond where the expectation is independent learning. To help the eighth grade student to achieve this goal, communication about expectations needs to be expanded from the traditional model of teacher-to-student communication to school-to home communication. As the family unit has changed over the years, so has the interaction between parents, students and teachers. Parents of teens have for centuries tried to get information about school from their teens. My action research project is designed to kill two birds with one stone.

Over my 17 years of teaching middle school science, I have tried to bridge the gap between what happens at school and what gets communicated at home. In my early years of teaching, I tried to accomplish this task with phone calls, the only technology available at the time. Since we did not have phones in our rooms back in the day, I would use my preparation time to use the office phone, when available, to make contacts. I would also send home letters, often hand-written, sometimes by student, sometimes by mail. Eventually, phones were placed in the classroom, making contacting parents easier, though no more enjoyable. Like my surprise at the lack of accountability of my students, I was shocked in the early years by the number and variety of parental excuses I was subjected to. Most often, parent contact was seen as accusatory rather than helpful in nature.

The birth of the Internet as a public forum for exchange of information to be used by the masses has changed many aspects of my job. No longer did I leave messages that may never be delivered, nor receive an unpleasant surprise when a parent picked up the phone. The Internet let me contact parents on a more neutral platform, sending them information regarding their child's progress. By this point, I should not have been surprised to find the same problems with regard to information. Parents were still not hearing about school news, particularly homework assigned and due dates, from their teenaged children.

As technology further developed, my school district went to an online grading program that allowed parents and students to access homework grades and other means of quantifying performance at the touch of a button. When I found that students and parents were not taking advantage of that tool to its fullest extent, I decided to set up a list serve and send the information directly into their homes and onto their screens. While the "weekly science update" email did some to improve communication, I was still underwhelmed by the overall apathy I perceived in

my students and their families regarding the school-to-home connection and how that affected student performance.

As such, I have created an Internet site devoted only to the activities of the eighth grade team of teachers I work with. With this site, students and parents have access to much more information than what use to be available in my school days. The Internet and the website have provided an answer for the lack of up-to-date textbooks, excuses about forgotten supplies at school, and the excuse of not knowing what is due from both the student and parent. On this site, all homework, tests and quizzes are posted. Any information handed out in class, such as upcoming field trips, dates of importance (e.g. school picture day), are posted for parents as well as students. When I find a good video, website or podcast, I post it to our team website and we, as team teachers, encourage the students to go online to see what we have posted.

While the website I created has links for all the core classes (math, communication arts, social studies, health enhancement, and science), I focused my research on the affect it has on student achievement in science as measured quantitatively by grades earned though homework, tests and projects, and qualitatively by student and parents attitudes. In addition to investigating this question, I will also focus research on the following questions:

1. What differences in achievement occur between students with Internet access at home compared to those who have access only at school?
2. What are the effects of the use of the website by students and parents on the rate of homework completion in science?
3. What are the effects of a class website on students and parents who use the website daily compared to those who do not?

4. How does the increase in information availability to students and parents affect my teaching?

I feel fortunate to work with an amazing group of teachers and support staff who will act as my support team for my action research project. Four of the individuals on my support team and I work closely with the same group of approximately ninety-eighth grade students. This is our third year as a team of teachers working together, so I value their insight into my action research project. My support team includes:

Kevin Guettler-8th Grade Algebra and Pre-Algebra Teacher

Kevin and I have been colleagues for the past five years working closely together on the same middle school team. While I teach all the science and some social studies for our team, Kevin teaches all of the math classes and some of the health enhancement. Science and math are so closely related, and for that reason, having someone you know, respect, and get along with is crucial to building the science-math connection with the students. In addition to being a math and health enhancement teacher, Kevin also has a Master's Degree in Special Education. Because Kevin and I are friends as well as colleagues, we have been working together for a number of years, and our educational philosophies match. I value and respect his opinion. Kevin does not pull any punches, and I am not one to shy away from the truth. We have an open and honest working relationship, and his feedback was very useful in my action research project.

Landon Lundy-8th Grade English and Social Studies Teacher

Landon is my other teaching partner, and together, Kevin, Landon and I make up the 8A team here at Sacajawea Middle School. Landon teaches all the English classes as well as some of the social studies. This is Landon's third year with us as a team, and his experience with younger students (he was a kindergarten teacher at Hyalite Elementary) as well as his experience with a

more economically deprived school community (Rifle, Colorado) helps to bring a different perspective to what we do here in the 8th grade. Prior to moving to Montana to teach, Landon, like myself, taught science classes in Colorado. Kevin, Landon, and I work closely together with the same ninety students in our classes. Their insights into what is happening in my science classes compared to their core classes, math, health enhancement, and English will give me clues to how our same students perceive the different disciplines.

George Scott-Special Education Teacher-Sacajawea Middle School

George acts as the inclusion and special education teacher on our team. George has been with us three years, and he brings a lighter-hearted approach to his academically and behaviorally challenged students. Because of his easy-going and friendly nature, as well as his willingness to engage with students outside his scope, George has become a valuable resource for all the students on our team. He can be found during class time moving around the room helping to check for understanding for all students. George teaches the pull out communication arts and math classes on our team as well as providing classroom support for students with Individual Education Plans (IEPs).

Judy Schofield-Special Education Para-Professional-Sacajawea Middle School

Judy has been in her position as paraprofessional for six years, and as such, she has a firm grasp of the eighth grade expectations. This is her third year working with our team, and as such, she is well aware of the level of instruction and expectations of our team. Between George Scott and Judy, all core classes have an additional pair of ears and eyes that were instrumental in helping our students achieve academic success. I have included Judy on my support team because I felt she brought a different perspective than a classroom teacher. Because she moves between our rooms, she sees the variety of teaching styles our team teachers have and how our students are

responding. In addition to her classroom experience, Judy also has experience as a parent in the Bozeman School District, in particular, Sacajawea Middle School. Her own children moved through our school, and as such, I often get her opinion on how she would react as a parent to my expectations as a teacher.

Eileen Zombro-Sacajawea and Chief Joseph Middle School Instruction Coach

Eileen has the experience as a classroom teacher as well as the knowledge of what good teaching is, and for those reasons, she was on my support team. Eileen has a very incisive way of looking at how teaching is occurring in the classroom, and her judgment and advice is both appreciated and valued. One of Eileen's strengths is looking at and analyzing data so that the maximum benefit can be achieved from any endeavor. While Eileen shares duties at two schools, she is at Sacajawea often enough and is readily available to help with my action research project. Eileen has taught math and English in the 7th grade, math and reading strategies for grades 6-8, and is currently our instructional coach.

My support team worked closely with me in implementing my action research, and I am grateful for their support and input.

CONCEPTUAL FRAMEWORK

Looking at research studies was an excellent way to help clarify what areas I studied in my AR project. In the article "Purposes for Doing Homework Reported by Middle and High School Students," (Xu, 2005) the author's research focused on two factor structures, intrinsic and extrinsic reasons for doing homework. In relation to middle school students, the article stated that "middle school students benefit from clear expectations regarding how to arrange the homework environment, as well as from adults showing them how to cope when doing homework becomes difficult or distractions arise (Xu, 2005, p. 48). As adults, I think we

assume that students know what they need before they start to work so that they can sit down and focus. Yet after reading this study, I think about how students in my classroom behave after I have assigned work and have given them time to start. Some students will immediately get up and sharpen pencils or get supplies and get started, others will sit and think, but not act, still others open a book and then constantly get up and down as they remember different supplies they need to complete the work. This study made me realize that at the beginning of my AR project, I needed to teach a short study skills lesson that addressed these issues.

A second research article, "Promoting Independent Learning in the Middle Grades: The Role of Instructional Support and Practices" by John Thomas (1993) addresses many studies done at the middle school level. As the title implies, this article focuses on what the teacher can do to increase learning and make students independent learners. The article addresses three barriers to independent learning, and by understanding these barriers, I can be an instrument in increasing the independent learning of the students involved in my AR project. The first barrier discussed in the article is that while middle school students are "capable of engaging in sophisticated independent-learning activities, they tend to not engage in these activities spontaneously." Secondly, "teaching conditions that characterize typical middle grade schools are not ideal for providing instruction in independent learning." Lastly, "middle grade teachers appear to engage routinely in certain additional instructional practices that discourage the development of productive independent-learning activities in their students" (Thomas, 1993, p 576). By understanding these barriers to independent learning at the middle school level, I was able to change my teaching to help students overcome them.

One article I found by Jianzhong Xu, "Validation of Scores on the Homework Management Scale for Middle School Students" (2008) provides useful method ideas for my AR

project. Xu‘s article contains a student self-assessment that breaks homework variables in to twenty-two easy to answer items. This was something I used in my initial survey with my students regarding their feelings about homework, providing me with qualitative data. A second article by the same author gives some ideas on measuring homework interest among students (Xu, 2008, p. 1183.) A second methodology given in this article is another survey to determine what factors make homework interesting to students. I did use parts of this survey with the students who were part of my AR project at the beginning of project to understand what the students found interesting, and tailored some of the homework assignments to those interests. I found the methods proposed in these two papers useful to me because my project involved increasing student participation in the homework component of school. Both papers outlined student-centered approaches to data collection, which I felt would be needed to get results.

The overall purpose of my AR project was to increase the interest, completion and learning that homework provides by providing access to all assignments on a teacher created website. Two articles, “Interactive Homework in Middle School: Effects on Family Involvement and Science Achievement” by Frances L. Voorhees (2003), and “Middle-School Homework Management: More than Just Gender and Family Involvement” by Jianzhong Xu (2007), provided me with ideas for homework assignments that involve the family. Both articles assert that when homework involves not just the student, but also the family, there is a positive correlation between the two.

When deciding that my action research project needed to incorporate homework, I looked for articles that could help me address the need to help foster communication between school and home so that parents could act as partners in their child’s education. Reenay Roger’s (2012) article “Assessing Technology’s Role in Communication between Parents and Middle Schools,”

addresses the issues that foster development of the relationship between school and home. As stated in the article and obvious to anyone who teaches, at the middle school level, there is a sharp decline in parental participation in the school day from elementary to middle school. Some of these reasons include the sheer number of teachers the middle school student encounters on a typical day. Most elementary students spend the vast majority of the day with one teacher in one classroom compared to the middle school student who may see seven different teachers over the course of the day. In addition, students at the middle school level are working on finding their individual self, a developmentally important step, and for this reason, demand a certain amount of independence from parents. Yet in a number of the research articles I read, (Rogers, 2008; Ziegler, 2012) all state the link between parental involvement at the middle school level and student success is significant.

Another important piece in communication is providing a format where students, teachers and parents feel comfortable. In the research article by Steinberg, "Listening to Their Voices: Middle Schoolers' Perspectives of Life in Middle School" (2012), Steinberg reports that students are familiar with and enjoy using technology. Because of its ubiquity in our district, the Internet is a perfect medium as a communication tool as our students overwhelmingly report that they have computer and Internet access at their homes. Parents frequently use email as a communication device between themselves and teachers. The goal of my project is to get students and parents viewing the website in their homes and communicating about what has happened at school.

My literature review reaffirms the necessity of my action research project for my classroom. By increasing communication between school and home and by getting parental involvement at home, I hope to see a positive correlation with student achievement. Students

need to develop the skills necessary to be independent learners, but being in middle school, many have yet to develop these skills. I hope that by providing the tools the students will be expected to use in their educational futures, I can smooth the path that lays head of them.

There is much research done on the role of homework, yet every classroom has its own dynamics and every student has their own ideas on what homework means to them. My interest is in helping each student in my classroom reach their full academic potential. One method I use is promoting and encouraging my students to fully engage in their education, and while most don't like it, I believe relevant and reasonable homework assignments are part of this. Through my literature review, I have found articles that both support my beliefs on the importance of homework and challenge me to adapt my expectation to meet the needs of future students.

METHODOLOGY

Treatment:

The treatment I used involved creating a website where our team of eighth grade teachers could post school related information and work that could then be accessed by our students in and outside of school. I researched a number of different models, including Edmudo and Moodle, and chose a model from Google that I felt was easiest for students to use.

Once the format was chosen, I set up the homepage with links to each of the student's core classes. When more than one teacher taught the same class, e.g. social studies, sub pages were created so that students could select their teacher and get more specific information on that class.

The teachers I work with were committed to making sure their individual pages were updated on a daily basis so that the site did not become stagnant, resulting in student's being frustrated with it and disinclined to use it.

While the site had been available since the start of the school year, at the start of my AR project, the teachers made use of the site to get copies of assignments that were lost or that students had missed due to an absence mandatory. For my science class in my treatment group, I required these students to go online before class and download assignments, view videos, review websites in preparation for class. The students in the non-treatment groups were given all the information they needed in class.

When I initially set up my study, I planned to use students with access to the Internet as my study group and those without as my non-treatment group. In my initial survey (See Appendix B), all but one of my eighty-nine students reported having Internet access at home. I chose as my study group one of my three science periods, and my non-treatment group was composed of another class of comparable ability. My non-treatment class is not acting as a control group, as control groups are an impossibility in the educational classroom setting, but rather as a means to compare to my treatment class. This comparison will help me validate that my treatment is effective. Those students in my study group were required to use the website for all aspects of science class and my non-treatment group were not required to use the website.

Table 1
Treatment and Non-Treatment

Non-Treatment Group	Treatment Group
-Students' grades at the end of the first trimester, Friday January 25th will be recorded -Students' will be taught the same curriculum -Students will be provided copies of assignments in class -Students' absent from class will be given work that was missed in class -Students who lost assignments will be given copies -Videos, podcasts and useful websites that are posted on the team website will be available before and after school and at lunch for students to view at school	-Students' grades at the end of the first midterm, Friday, January 25th will be recorded. -Students' will be taught the same curriculum -Students will be required to download and print off assignments to class -Students' absent from class will be expected to come to class with the missing work printed off the team website -Students who lost assignments will be expected to print off a copy from the team website -Videos, podcasts and useful websites that are posted on the team website will be available on the website for students to access outside of school -Students will fill out a short survey in class on Fridays asking how often they viewed the website at home by themselves and with their parents -Students will be sent a link to a weekly Survey Monkey website asking about their website use and its affects on their achievement -Parents of students in the treatment group will be sent a weekly survey on Survey Monkey asking about their usage of the
Non-Treatment Group	**Treatment Group**
	website, how often they viewed it with their student, and how they see it affecting their students achievement. The study will conclude on Friday, March 8th at the end of the second trimester

Student Sample:

Our student population is between six hundred fifty and seven hundred students in grades six through eight, with a student to teacher ratio of approximately 30:1. The majority of our population, 98 percent, identify themselves as Caucasian. We have approximately eight percent of our students receiving free and reduced lunch. For the most part, the families that live in our school boundaries are upper-middle class, and many parents hold college degrees and professional positions in the community.

I teach 89 students science during the school day. The students are divided into three class periods of 32, 31, and 26. I have chosen to focus my research on the first science class of the day. This class has the following demographics:

Table 2
Student Demographics Treatment Group (N=32)

Science Class Period	Total Number of Students	Male	Female	Special Education Students	Gifted and Talented Students
Period 2 9:41-10:32	**32**	**16**	**16**	**6**	**6**

I chose this class because it had the closest representation to the Bozeman School District population. The special education population in this class does not include any student who requires their own aide, though there is a paraprofessional in the room to assist all students. Since this person is part of my support team, I felt that this was a particularly good choice for a sample population. The gifted and talented students are not in an honors class; rather they are divided evenly among the classrooms during the day. The research methodology for this project received an exemption by Montana State University's Instructional Review Board and compliance for working with human subjects was maintained (Appendix A).

Table 3
Student Demographics Non-Treatment Group (N=31)

Science Class Period	Total Number of Students	Male	Female	Special Education Students	Gifted and Talented Students
Period 7 2:32-3:20	**31**	**16**	**15**	**7**	**3**

My non-treatment group is similar in numbers to my treatment group. The biggest difference is in the special education population. Of the seven special education students, three have significant emotional issues requiring special accommodations. In addition to the paraprofessional educator who is a part of my support team, there are two special education teachers, one of which is part of my support team, to provide support to the special education student population in this group.

Research Design:

My treatment started with an introductory survey (see Appendix B) to assess how my students use the Internet outside of school. I used this survey to assess how often students use the Internet for school work, how they felt about using the Internet for school, and how they see themselves using the website to access information about class. During the first week of the treatment I conducted the initial student interviews (See Appendix C) using ten students selected at random. These interviews were designed to assess how students see themselves using the website, how confident they were navigating around it and finding information and assess how they thought access to the information would result in increased achievement.

At the end of each week for six weeks, students and parents were asked to complete separate online surveys (see Appendices D and E) that were designed to give me weekly data into how often and how effective the website was in helping the students and parents to get

school information and how that affects the student's achievement in my science class as measured by homework completion. Two more student interviews were completed, one half way through and one at the end of my study.

In addition to student and parent data, I kept a teaching journal of how I see the creation and use of the website changed my teaching. I am a big fan of public radio and television, and as I listened to radio and television shows, I often thought that I wanted my students to hear and see them. In addition, I subscribe to a number of science and general interest websites, and I posted links to them. Occasionally, I have used some of these podcasts as teaching tools in the classroom.

I was very interested to know how my students used the Internet and how often their parents checked in on them. The student and parent surveys were designed to provide me this information. To assess how website usage was correlated with achievement, I used their grades as an indicator of academic success.

Table 4
Research Questions and Data Sources

Research Questions	Data Source 1	Data Source 2	Data Source 3
Question #1	Student grades on homework assignments will be recorded and used as data to assess achievement	Student grades on quizzes and tests will be used to assess achievement	Student midterm and trimester grades will be used as a tool to measure achievement
Research Questions	**Data Source 1**	**Data Source 2**	**Data Source 3**
Question #2	Students will self-report the number of times they check the 8A team website at the end of each week	The website used for this research project has a tool that records the number of responses to the survey and will be checked each Sunday evening	Students will be asked to complete a weekly survey on Survey Monkey that will assess whether they feel that the website has increased their achievement.
Question #3	Parents will be asked to self report on a weekly basis on whether they check the team website with their student	Parents will be asked to complete a Survey Monkey weekly determine whether the team website has helped to increase the school-to-home communication.	

My treatment schedule can be found in the Appendices (See Appendix F).

The students in my treatment group were required to use the website to get any assignments needed for class in addition to when they are absent or when assignments were lost. In addition, any information in the form of videos, podcasts, and resources was posted and students were required to watch, listen or read outside of the school day and be prepared when they came to class. The students who make up my non-treatment group were given all the information at school that the treatment class was expected to do on their own.

To be sure that the students in the treatment group understood the expectations, we used the first five to ten minutes of class the week before the study began to review the expectations and practice using the website. Students' questions and concerns were addressed, and we talked about what problems they could foresee. The main issues were 1) what would happen if they forgot to print out work, and 2) what if their printer ran out of ink. The solutions we developed included that there would be no grade penalty for the forgetting to print out work, but the student would still be required to do so as soon as possible, and that if a printer were out of ink, a student would call a friend and ask the friend to bring in a second copy the next day.

Once the study started, the students found their concerns to be bigger obstacles in their heads than they were in reality. One student quote from the student interview (See Appendix C) was "I was really afraid that I would have trouble with the expectations of Mrs. Juroszek, but once I started going online, I found out it wasn't that hard to do what I needed. I even got to like doing this on my own. It made me feel more grown up to be more responsible for myself." A view of the website can be found at http://www.google.com/a/bsd7.org/study-skills-resources.

DATA AND ANALYSIS

There were a total of 63 students in my treatment and non-treatment groups. In the initial student survey (See Appendix B), all students reported having access to and using the Internet. My first data collection involved looking at the grades earned by students in my treatment and non-treatment groups at the beginning of my AR project. In the treatment class of thirty-two students, half earned a 90% or better, the remaining spread out as shown in Figure 1.

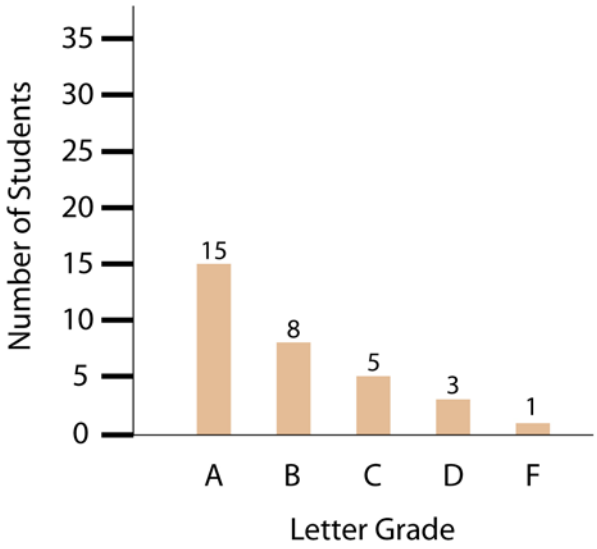

Figure 1. Grades earned by students in the treatment group prior to the start of my AR project, *(N*=32*).*

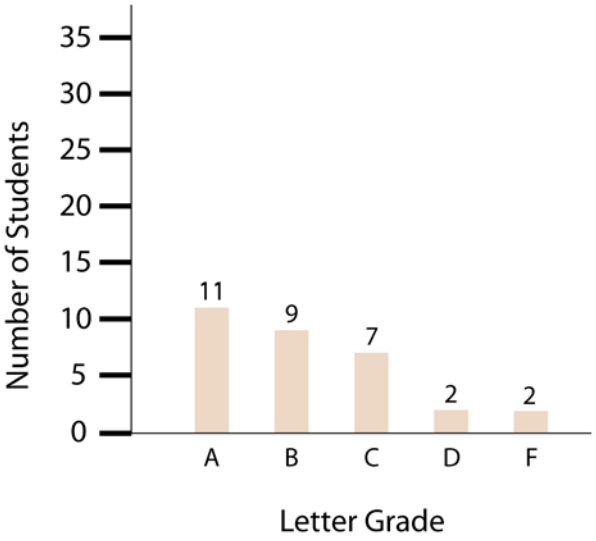

Figure 2. Grades earned by students in the non-treatment group prior to the start of my AR project, *(N*=31*).*

This data was taken from PowerSchool grading program used by Bozeman Public Schools. Because students in Bozeman are not held accountable for grades earned through the eighth grade, I didn't expect the grades earned pre and post treatment to change very much, and in fact, I was correct as evidenced by the post-treatment grades shown in Figure 3.

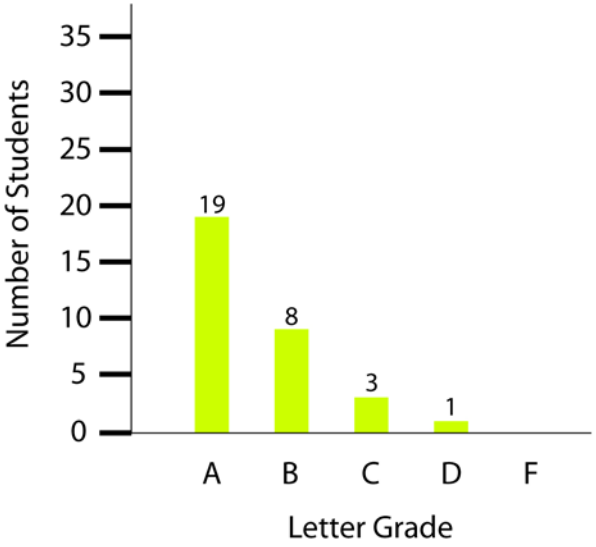

Figure 3. Grades earned by students in my treatment group at the conclusion of my AR project, *(N*=32*).*

Data was collected from PowerSchool grading program used by Bozeman Public Schools.

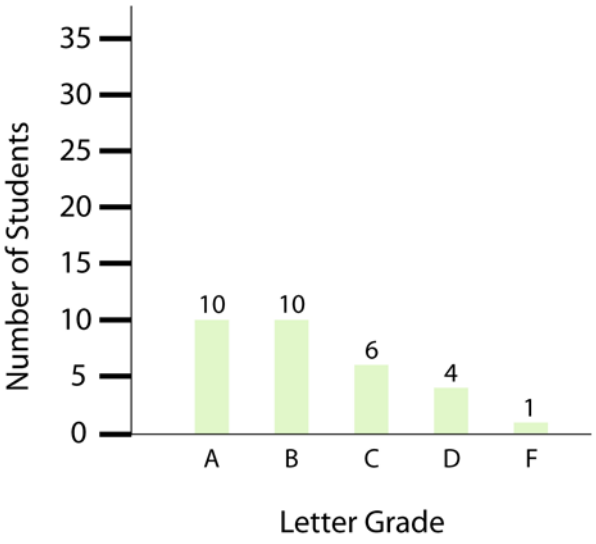

Figure 4. Grades earned by students in the non-treatment group at the conclusion of my AR project, *(N*=31*).*

This data was taken from PowerSchool grading program used by Bozeman Public Schools. While there was a moderate overall upswing in grades in my treatment group compared

to the non-treatment group, there are many factors that account for this. The students at Sacajawea Middle School are mainly the children of educated parents, and such, expect a certain level of attainment. As encouraged by our administration, teachers are expected to do whatever is necessary in order for students to achieve at the levels expected of them. This means that the grades earned are not always reflected in the initial effort put forth by the student. For example, students are routinely given opportunities to redo assignments or retake exams as many times as needed to attain mastery.

While this may seem anathema to encouraging student accountability, the students that leave Sacajawea Middle School are largely successful at Bozeman High School. This I believe is a combination of factors. First, when the students enter the high school as freshmen, there are many supports in place (e.g. math lab, writing lab, study halls) that are not available in the middle school setting. In addition, the fact that students need to earn credit toward graduation is a powerful carrot lacking through the eighth grade. It is reported by Bozeman Public Schools that 25% of freshmen fail a class, generally health enhancement (HE) or math, and as such, need to repeat that class the next semester. While failing math can be explained on the difficulty of the subject for many students, one would not think of HE as a class that is often failed. The reason it is commonly failed at the freshman level has to do with the social promotion policy in place in the K-8 grades. When students miss school in the elementary grades, they often do not make up missed work, especially in HE. At the high school level, the HE teachers require students to make up the class time they missed. This requires them to come in before or after school, over their lunch period or during their study hall to do the required work. Students, particularly freshmen, do not think HE is an important subject with homework, so they end up failing because of absences. This is not enough to put graduation in danger, and repeating a

class is generally enough to encourage freshmen to put in the required work to pass the class. However, as the alternative program at the high school has grown, more pressure has been coming down on the middle schools and the preparations we have in place to help students succeed once graduation requirements become a part of the expectations. It is in this spirit that I under took my action research project. By talking to the high school science teachers, I got an understanding of what they expect of incoming freshman, and structured my project around these expectations. I believe that homework and accountability are the ways in which I was able to measure the achievement of my students, and as such, I focused my AR project on increasing student awareness and accountability for schoolwork.

In my initial student survey, I wanted to see how my eighth grade students in both my treatment and non-treatment groups currently used the Internet and how many hours per week they spent on it. Figures 5 and 6 show the results of that survey.

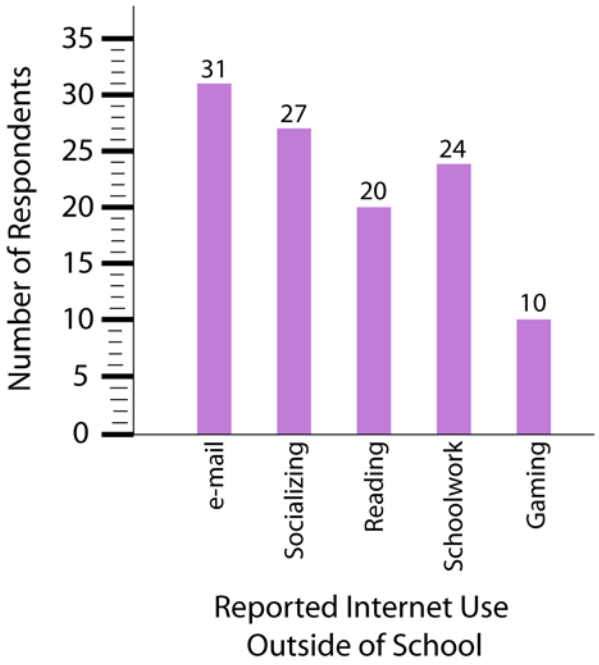

Figure 5. Student use of the Internet outside of school by treatment group *(N*=32*).*

This data was taken from the Student Survey (Appendix B).

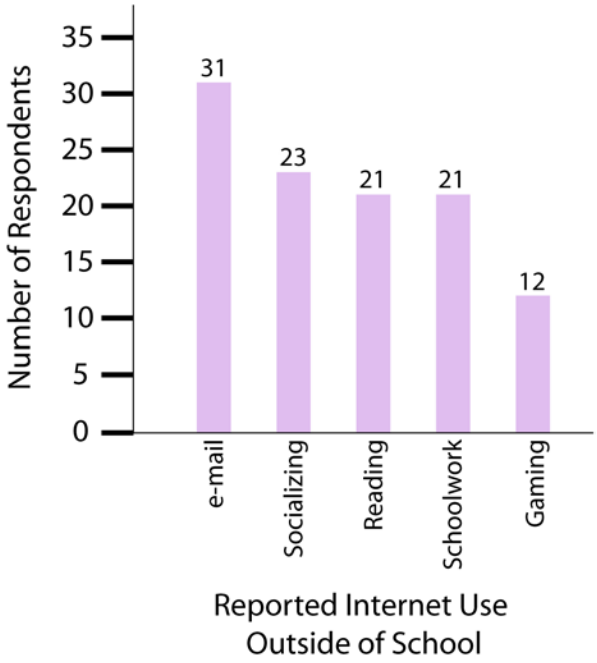

Figure 6. Student use of the Internet outside of school by non treatment group. *(N*=31*).*

This data is from the Student Survey (Appendix B). As Figures 5 and 6 imply, the students in my treatment group and non-treatment group frequently use online technology in similar ways for a variety of aspects. Communicating through email and socializing (e.g. Facebook) are the most common areas of use. Not far behind is reported usage of the Internet for schoolwork. As part of the Student Interview (See Appendix C), I asked students to tell me how comfortable they were using technology to access schoolwork. Of the ten students interviewed, all reported that they are not only comfortable, but see it as a necessity in today's learning environment. As part of the interview process, I handed the student a laptop and asked them to locate and find information on the team website used in my project. I wanted to know how proficient they were on being able to locate resources. Without difficulty, the students I interviewed (N=10) were successfully able to locate anything I asked. Part of this could be due to the time we took as a class the week before the study began to be sure students were able to use the website effectively. I was also interested in knowing how much the reported reading and

schoolwork portions of the Internet use overlapped, and by far, the students reported that approximately half of the reading done using technology was related to school work.

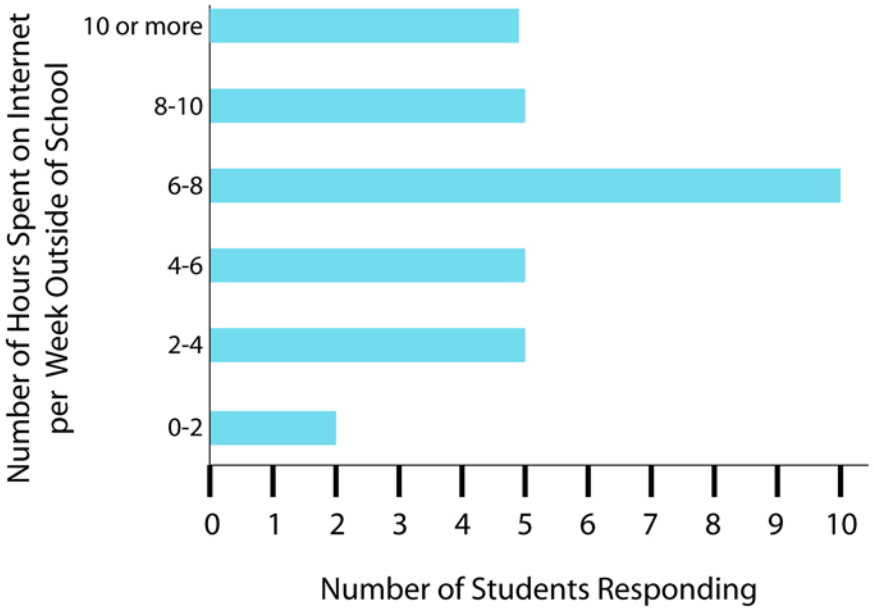

Figure 7. Average time spent on the Internet by treatment group *(N*=32*).*

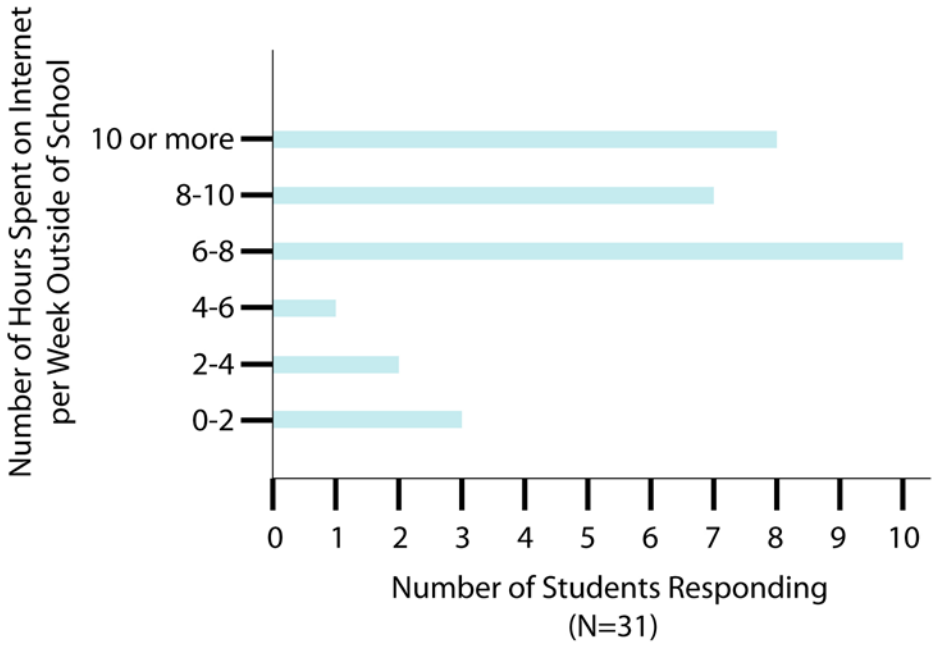

Figure 8. Average time spent on the Internet by non treatment group *(N*=31*).*

This data is taken from the Student Survey (Appendix B). From Figures 7 and 8, I concluded that two-thirds of students spend eight or more hours a week on the Internet. This averages out to over an hour per day over the course of a week. This does not include the time spent at school, leading me to conclude that one way to reach students was through an online platform.

One of my main purposes was to increase the rate of homework completion by my students as a measure of accountability. I was particularly interested in this question in relation to the number of student absences. While the Bozeman Public Schools does have an attendance policy, it is not very well enforced, especially at the K-8 levels. Over the course of the six weeks of my project, I taught thirty periods of science to each of my treatment and non-treatment groups. During the six-week time period, seventy-six absences were recorded in my treatment group, meaning on average, each student missed 2.76 days of instruction. The attendance in my non-treatment group was even worse. In my non-treatment group, there were one hundred-twenty two absences recorded, meaning on average, each student missed 3.93 days of instruction. The non-treatment class had five girls and three boys who were part of a traveling soccer team. During the treatment time, most of these eight students missed Fridays and/or Mondays as they traveled to out of town tournaments. Of course, not all students are absent in equal amounts. In my teaching journal, I noted which students were absent on which days of the study. Figures 9 and 10 shows the results of student absences in both the treatment and non-treatment groups.

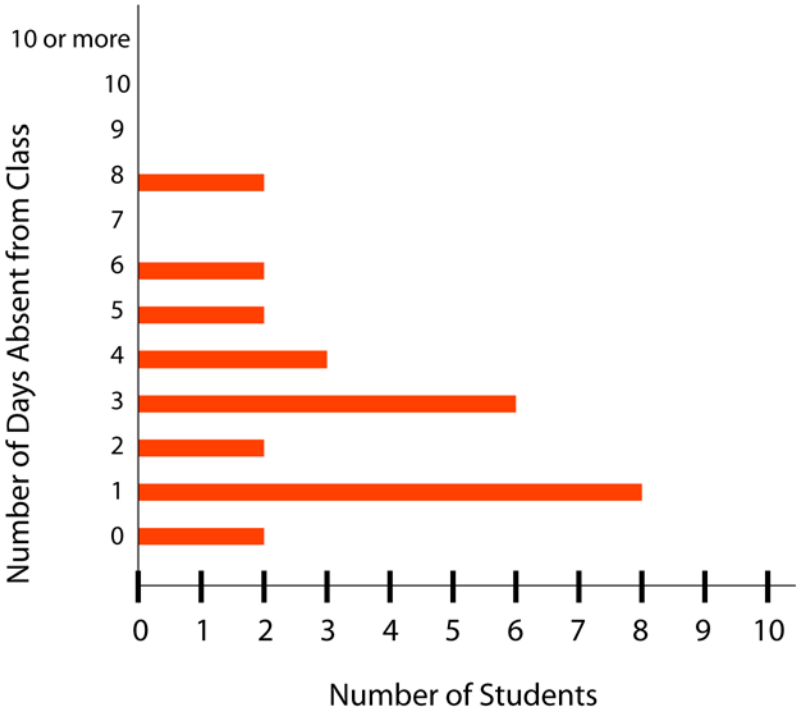

Figure 9. Number of student absences recorded by teacher journal for treatment group, (*N*=76).

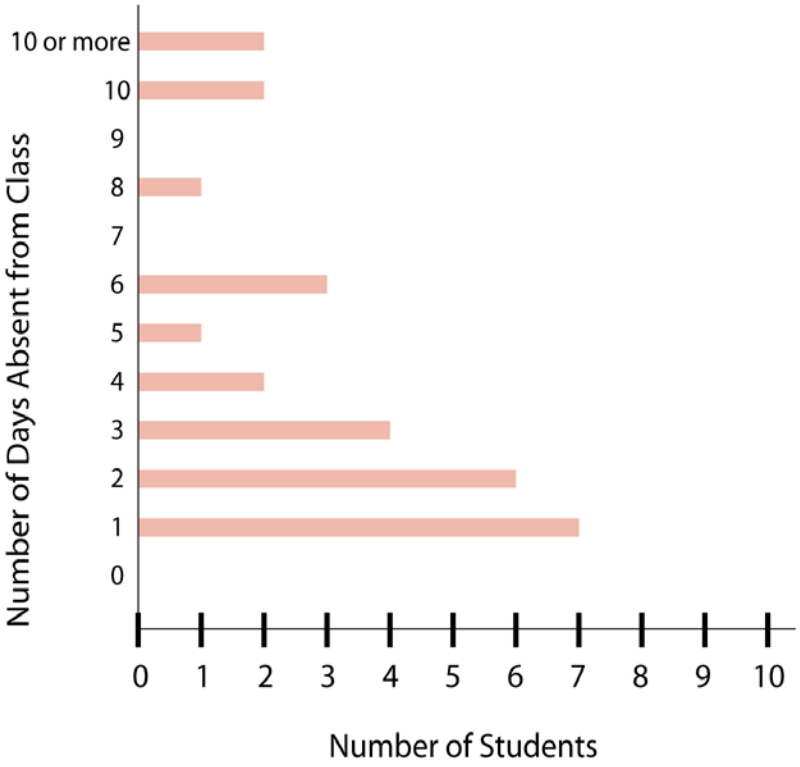

Figure 10. Number of student absences in non-treatment group recorded in teacher journal, *(N*=122*).*

By referring to the absences recorded in my teaching journal, I was able to determine that fifty-six of the seventy-six times (73.6%), absent students in my treatment group had gone to the website and downloaded work assigned, watched a required video or listened to a posted podcast, before returning to class. The most frequent response when a student did not fulfill their responsibility was that they had forgotten. Because of the leniency of the grading policy at Sacajawea Middle School, students had an almost unlimited number of opportunities to demonstrate mastery of an assignment. For this reason, a comparison of grades between students who missed school and those who were present did not show a measurable difference.

The most disappointing aspect of my project was the response to the weekly student and parent survey (see Appendices D and E). While I did not expect all thirty-two students and their parents to complete the survey each week, I did expect to gather enough information from the surveys to make some conclusions. Over the course of the six weeks I did my project, I only received five survey responses, three from students and two from parents. Because of the poor response, I did not feel I had enough data to analyze. The few responses I did receive seemed to be sent to me specifically to vent frustration at the amount of homework students were receiving. This was consistent in all five of the survey responses I received. It is my belief, based on years of teaching, that like most people, when you have a bad experience, you are more likely to share that information. Many of our students a Sacajawea Middle School are overscheduled outside of the school day. When students get stressed out, they often lose perspective and lash out at the thing, in this case, school, that they perceive is causing their discomfort. My survey provided an easy and anonymous way to get out frustration while not fearing some sort of reprisal. .

In my teaching journal, I did keep track of parent meetings, both formal and informal, held during this six-week study period. I had nine scheduled meetings with parents, and in each, I specifically asked the parent(s) about their use of the website to track their child's school requirements. Eight of the parents (89%) reported using the site after checking PowerSchool and seeing that their student had a zero or a low score on an assignment. One parent we met with was new to our school, so at this meeting, I showed her how to use the website to make herself aware of what was happening at school. When looking at the demographic data available on PowerSchool, it is clear that almost every parent has a web address, either at school or at work. Despite sending the parent survey to all the listed web addresses, I got only a few back.

I had many opportunities to informally ask parents about the website use in their house when they would come to school to pick up or drop off their student. Overwhelmingly, the parents reported that the site is bookmarked on the family computer and that it is accessed frequently. A few (less than 5) reported that they or their student had struggled to locate an assignment, but overall, the informal comments I got were positive. I feel that the parents and students did not return surveys because they were anonymous, and therefore, as the teacher, I didn't keep track of who was using the survey or not. Had I offered extra credit or given a grade for participation in the survey, I am certain the response would have been better. I think parents and students looked at the survey as just one more thing that they are asked to do. While not responding to the survey, parents were not hesitant to contact me directly at my school email address to ask questions specific to their student. In every email interaction with a parent, I cited the website, going as far as sending the address with each email. I know that parents were able to access it and get directly or help their student find what they needed.

As I reviewed the final grades earned by my treatment group compared to my non-treatment group, I found that only one student earned a grade below a 70% in my treatment group compared to five students in my non-treatment group. When I look at the individual students who fell into this category, a number of similarities were apparent. The six students all report having Internet access at home, but only one of them (a student in the non-treatment group) reports that they have accessed the website. When I casually asked the other five students about the website, they all admitted that they do not do this at home, and their parent does not check on their schoolwork or Internet use. In this day and age and with all the trouble students can get into on the Internet, I find this information appalling, yet not every parent is equally involved in their student's life, be it school or private.

Though a small number in my action research project, the example cited above is in part what drove my action research project. One of the questions I was documenting was the notable differences between students and parents who did report using the website daily compared to students and parents who did not use the website. I have accumulated anecdotal evidence regarding this question for years, and now my project has given me documented proof that parents who are uninvolved in their student's academic life have children less likely to be academically successful students.

One of my greatest frustrations as a classroom teacher was and continues to be the number of student absences. When I was a student, schools routinely had perfect attendance awards at the end of the school year. That no longer happens in Bozeman, Montana. I can remember some years ago, a Bozeman student who was graduating did have perfect attendance, and it was such an anomaly that the local newspaper wrote a front-page story about it. I certainly understand students missing school for illness, but it seems that at Sacajawea Middle School,

students miss too much school for a variety of reasons. When I was a student, dentist and doctor appointments were scheduled for after school, and in order to stay home from school, a fever was necessary. As I look through my journals at the reasons students report for being absent from class, I see that many miss for appointments, sports trips, “epic” ski days, and long weekend vacations. It was not uncommon for a student to report they needed to stay home to watch a younger brother or sister who was ill. There were even two students who reported they didn’t feel like coming to school and their parents let them stay home.

In general, I don’t feel that school attendance has the same priority as it once had in many households, rather, it is more about what fits for students and parents. Most of the students in my treatment group (78%) who reported being absent for a one-day interval reported being sick. When a student comes back from a one-day absence looking hearty and hale, I find the sick excuse to be overused. It seems students are allowed to stay home and miss school for trivial reasons. This constant string of student absences and the accompanying requirement on my part to get the students caught up is in part what led to the conception of my action research project topic. What I found is that often a student or parent would email on an absence day asking what work was being missed. In my journal, I had notes that show in my treatment group, I was contacted seventeen times by email. In each case, I sent the link to the website along with an email stating the work was uploaded on the website. When checking the next day, fifteen out of seventeen (88%) of these exchanges resulted in the student bringing the required work in the next day. The two students who did not follow through after the initial email and response to it by me (12%) were underachieving students in class. We met with both of these students and their parents three times this past school year, but there was little to no change on homework completion, motivation and as a result, grades.

The second trimester and the end of my study concluded on Friday, March 8. Because that was the day before spring break vacation, Sacajawea had an overall 35% absenteeism rate. Among our eighty-nine eighth grade students, thirty-three (37%) were absent. I intentionally gave a science homework assignment that day to see what impact my treatment had had on that class. While the assignment was not graded until after my study was concluded, I was interested to see how many of the students would download, print off, complete the assignment, and include it in their science journal for grading. When I collected and graded science journals on March 29, 98% of the students in my treatment group (the treatment class had a 37.5% absentee rate on March 8) had the assignment complete compared to only 63% of students in my non-treatment group (the non-treatment group had a 35% absentee rate on March 8.

INTERPRETATION AND CONCLUSION

Sacajawea Middle School was opened in 1996 in response to the southward growth of the Bozeman community. The housing developments around the school are mainly single- family dwellings with an average home price in excess of $250,000. As a result, it was not surprising that of the 89 students I teach, only one reported not having access to the Internet outside of school. As such, the Internet is a powerful tool that could be used to aid in academic accountability and achievement.

My students have grown up with the Internet and know no other reality. As one student said in an interview, “I’m usually on the computer anyway, so it is nice to just check the website while I am there.” Their lives are so entwined with technology, making it part of their educational experience is a natural fit.

While having technology available at school and in the classroom was nothing new for my students, for most, it was the first time that the Internet was directly tied to their science

class, and the first time that parents also had access to the same information. This was not always seen as a positive by the students. In the student interview, a student reported that "I don't like having this website because it makes it easier for my parents to know what is going on and then bug me about school." This response, and others like it, answer my research question on whether parent and student use of the website was effective. When parents are aware of what is happening at school, there is an increase in student awareness also. The students who reported using the website and who had parents that checked on them showed an increase in achievement as measured by homework completion.

Change is always hard, and it was no exception in my action research project. For most of their public school education, my students had been able to get away with excuses regarding missing work. Commonly the reason a student misses work is that they are absent, a situation that is too common in the school I teach at. Part of my project was to make students accountable to themselves, parents, and to me by giving them access to information that was once only available from the teacher during the school day. In addition to the work, resources to complete the work in the form of videos, links, podcasts, and reproduction of textbook pages were made available to students also. In this way, students who were absent or those who did not "get it" in class had the opportunity to go back and review the material on their own so that on their return to the classroom, they were not that much further behind.

The change from being dependent on the teacher to independent learners was difficult for some, challenging for others, and for some, it was a natural step in their educational progress. Responses from students showed that for those who wanted to take charge of their education, the website provided the vehicle for them to do so. Not all students are the same, and especially in middle school, we deal with a wide range of physical, maturity and motivational levels. What

was impressive to me was that some of those students who I did not anticipate would embrace independent learning were the ones to jump on board first. In a one interview, a student said "I really, really, REALLY like being able to do my homework online, because it is easy, fun, and I can keep up on everything." Many student comments (27% of respondents) dealt with the issue of forgetfulness and how the website let them check on what they needed to complete for the next day. A still more frequent response dealt with students missing school. A typical response on the student survey to the question "please tell me why you do or do not like accessing your homework online was "I like being able to access homework online because if I am gone I can get caught up easily". This response was given by 46% of student respondents.

VALUE

The world my students live in is becoming increasingly more and more technical. In my seventeen years as a teacher, I have watched the online world take root, hold on, and now grow exponentially. The vast majority of my students come to class with much better technical skills than I possess. They are online, not only at school, but also in the car, at home, and in social situations. It is unlikely that in the future my students will lose interest in the Internet and technology, and for that reason, my action research project has demonstrated to me that integrating technology into their educational lives is a must. In my initial and final surveys, I found that students, on average, are spending over an hour a day online. If I can integrate their online and educational lives, it can only benefit the students and me as the teacher.

As adults, we need to harness the power contained within the student's technological world and use it to help them apply it to their lives as students. The Bozeman Public Schools has been slowly amending their electronic use policy. Only three years ago, all students K-12 were prohibited from bringing any personal electronic device into classes. Bozeman High School has

since changed their policy to allow teacher discretion when permitting students to use personal electronic devices. As the "flipped" classroom model has been adopted by more and more teachers, and technology budgets have allowed some classrooms to have classroom sets of devices like iPods and iPads, technology and Internet use during the school day is finding its place.

When I see former students who have moved to the high school, I always ask about the use of technology. Without exception, they report that they use the Internet as part of their academic coursework. Students report that their high school teachers post assignments, lectures, reviews, quizzes, and tests online for them to access outside of class. When I ask them about the transition from middle to high school, they have reported that the expectations on finding information for themselves has caused stress until they become used to the new expectations. For this reason, I feel that my project has value. By making my middle school students accountable to school information via a website, I am "training" them for the next level of their education. I will be interested to hear how this current group of eighth graders makes the transition to high school having had the better part of a year to practice in an environment that is less forgiving of academic mistakes.

Not only will students use technology and the Internet as part of their middle school and high school experience, many will take online college courses. Bozeman High School also has programs where students can take online classes while still in high school either as part of a credit recovery program or to accelerate the pace at which they earn credit towards graduation. Because of the affordability that online education offers, all students need to be experienced online learners. With my students, I use myself as an example of an online learner. Over the course of the past six years, I have completed a history minor, allowing me to become an

endorsed history teacher, and nearly completed a graduate degree, through which most has been done online. Students can benefit from example, and I am living proof.

As the public rhetoric regarding education continues, schools, mainly teachers, are on the front line. Criticism regarding student performance on standardized tests as well as how teachers are preparing students for career and college is increasing. I think that by making what happens in the classroom less of a mystery and more open can only help increase student and parental involvement. I cannot speak for other places, but I can say that I work with a dedicated group of people who have the best interests of their students at heart. What I see as most lacking is the involvement of both students and parents in a meaningful way in improving the educational experience.

In response to my final AR question on how this impacts me as the teacher, I found the online aspect of education to be a useful tool for students as well as myself. The availability of information on the Internet is too extensive and too current to ignore its impact on teachers and students of today. Having created this website and run it for the better part of a school year has made me a more knowledgeable teacher. During class, I found myself referencing material I read online, shown pictures found online, and even started using primary sources in my science class, something I have always done in history class. There were just so many resources available, and the students responded positively to the podcasts, videos, and images I made available.

Too much focus is placed on the grade earned with not enough emphasis on the learning. In response to this, the alternative program at the high school has gone to a performance-based model. While still in its early stages, there is talk of moving this model down to the middle school in a pilot program. I have been involved in the early discussions of this potential change,

and have volunteered to be part of the pilot program. Having created this website for my AR project has shown me the power and influence self-directed learning can have for a student. I will continue to develop the online portion of my class in the years ahead, regardless of the performance-based model of education reaching the middle school or not.

On Thursday, April 4, I visited Bridger Alternative School to view the performance-based model of learning. While much needs to be worked out in terms of how to accurately measure what and how well students are learning, I was interested as I talked with individual students. On each of the informal interviews I did, when asked what students were working on, they invariably reached for a laptop computer and accessed that information online for me to see. These students were clearly accountable to themselves regarding what they needed to do to succeed, and they were using technology to be informed. If my action research project helps my students to become more independent learners prior to entering Bozeman High School in the fall of 2013, I will feel my work has been worthwhile.

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APPENDICES

APPENDIX A

IRB APPLICATION

Appendix A: IRB Information

IRB Application:

MONTANA STATE UNIVERSITY

Request for Designation of Research as Exempt

MSSE Research Projects Only

(10/14/11

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THIS AREA IS FOR INSTITUTIONAL REVIEW BOARD USE ONLY. DO NOT WRITE IN THIS AREA.

Confirmation Date:

Application Number:

****

DATE of SUBMISSION:
November 4, 2012
Address each section – do not leave any section blank.

I. INVESTIGATOR:

Name: **Sheri Juroszek**
Home or School Mailing Address: **Sacajawea Middle School 3525 South Third Avenue Bozeman, MT 59715**
Telephone Number: **406-522-6462**
E-Mail Address: **sheri.juroszek@bsd7.org**
DATE TRAINING COMPLETED: **November 3, 2012** *[Required training: CITI training; see website for link]*

Investigator Signature: **Sheri Juroszek**

Name of Project Advisor: **Walt Woolbaugh**
E-Mail Address of Project Advisor: **walter.woolbaugh@ecat.montana.edu**

II. TITLE OF RESEARCH PROJECT: **What Effect Will Increasing School-to-Home Communication by Providing 24/7 Access to Information, Assignments and Due Dates Via a Teacher-Created Website Have on Student Achievement?**

III. BRIEF DESCRIPTION OF RESEARCH METHODS (If using a survey/questionnaire, provide a copy). **Students in my Period 2 science class will fill out an initial survey describing current internet use outside of school for baseline information. For the next six weeks, students will be surveyed to check on how often they and their parents checked the website to attain school information.**

IV. RISKS AND INCONVENIENCES TO SUBJECTS **(do not answer 'None')**: **There will be almost no risk to students. Online surveys given to students and parents will be conducted anonymously. The initial survey asking about current Internet use could cause some embarrassment if students were to admit to using inappropriate sites, but I doubt this would occur. Students and parents will be asked to take a short online survey once a week, so this may cause a minor inconvenience, but as there is no penalty to not completing the survey, this is unlikely. Some students will be interviewed three times during the study, but they will be students who volunteer and will be informed that their participation is completely voluntary and may be ended at any point they no longer want to participate. Please see Appendix 1 for the initial student survey, Appendix 2 for the Student Interview Questions,Appendix 3 for Weekly Student Survey, and Appendix 4 for Weekly Parent Survey.**

V. SUBJECTS:

A. Expected numbers of subjects: **32**
B. Will research involve minors (age <18 years)? **Yes**
(If 'Yes', please specify and justify.) **The 32 students involved in my Action Research Project make up my Period 2 science class. They are all 8th graders whose age ranges from 13 to 14 years. None of the 32 are required to participate in my study, but they will all benefit because access to the website, whose efficacy I am studying, will be available to all regardless of participation.**

C. Will research involve prisoners? **No**

D. Will research involve any specific ethnic, racial, religious, etc. groups of people?
(If 'Yes', please specify and justify.) **No**

VI. FOR RESEARCH INVOLVING SURVEYS OR QUESTIONNAIRES:
(Be sure to indicate on each instrument, survey or questionnaire that participation is voluntary.)

A. Is information being collected about:
Sexual behavior? **No**
Criminal behavior? **No**
Alcohol or substance abuse? **No**
Matters affecting employment? **No**
Matters relating to civil litigation? **No**

B. Will the information obtained be completely anonymous, with no identifying information linked to the responding subjects? **Mostly. The initial survey will have a name on the papers, all the online surveys will be anonymous, and the interview subjects will obviously be known to me.**

C. If identifying information will be linked to the responding subjects, how will the subjects be identified? (Please circle or bold your answers)
By name**Yes** No
By code Yes No
By other identifying information Yes No

D. Does this survey utilize a standardized and/or validated survey tool/questionnaire**? (If yes, see IRB website for <u>required wording</u> on surveys and questionnaires**.) Yes

VII. FOR RESEARCH BEING CONDUCTED IN A CLASSROOM SETTING INVOLVING NORMAL EDUCATIONAL PRACTICES:

A. This research project must be approved by your Principal or School Administrator, unless there are circumstances or policies that do not make this possible. **Provide a copy of the principal's signed approval.** If such approval is not possible, please explain.

B. **Participation of your students in research must be voluntary** and can never affect their rights. Please make this issue clear on all of your research surveys (use introductory text, see below) and/or interviews (use introductory verbal statement, see below). The following wording or something similar can be used for the introductory text or statement: **Participation in this research is voluntary and participation or non-participation will not affect a student's grades or class standing in any way.**

C. Extra credit should not be used to encourage participation. If you absolutely need to use extra credit, then an alternative activity involving the same amount of time and effort must be provided for those who choose not to participate. This must be clearly described in your IRB application.

E. Depending on your school policies, **consent forms may or may not be required for your research.** Please indicate whether you will be using consent forms or not. If you are not using consent forms, please justify (e.g., school policy, etc.). **If you do use consent forms, you must include signature lines for parental consent AND student assent.** (Please use accepted format from our website and provide a stand-alone copy. Do not include form here.)

CITI Collaborative Institutional Training Initiative

Students Curriculum Completion Report
Printed on 11/3/2012

Learner: Sheri Juroszek (username: sherijuroszek)
Institution: Montana State University
Contact Information Phone: 4065864077
Email: sjuroszek@msn.com

Students - Class projects: This course is appropriate for students doing class projects that qualify as "No More Than Minimal Risk" human subjects research.

Stage 1. Basic Course Passed on 11/03/12 (Ref # 9108940)

Required Modules	Date Completed	
Belmont Report and CITI Course Introduction	11/03/12	2/3 (67%)
Students in Research	11/03/12	9/10 (90%)
History and Ethical Principles - SBR	11/03/12	4/5 (80%)
Defining Research with Human Subjects - SBR	11/03/12	5/5 (100%)
Informed Consent - SBR	11/03/12	5/5 (100%)

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

Return

SMS
FALCONS
Bozeman Public Schools

Sacajawea Middle School
3525 South 3rd Avenue
Bozeman, MT 59715
Phone: (406)522-6470
FAX: (406)522-6474

Gordon Grissom, Principal
Patrick McClellan, Assistant Principal

Administrator Approval

I, Gordon Grissom, Principal of Sacajawea Middle School, verify that I approve of the classroom research conducted by Sheri Jurgens.

[signature] 11/5/12
(Signed Name, Title of Position)

Gordon Grissom
(Printed Name)

11/5/12
(Date)

Administrator Exemption Regarding Informed Consent

I, Gordon Grissom, Principal of Sacajawea Middle School, verify that the classroom research conducted by Sheri Jurgens is in accordance with established or commonly accepted educational settings involving normal educational practices and that I approve the project. To maintain the established culture of our school and not cause disruption to our school climate, I have granted an exemption to Sheri Jurgens regarding informed consent.

Gordon Grissom, Principal
(Signed Name, Title of Position)

[signature]
(Printed Name)

11/5/12
(Date)

INSTITUTIONAL REVIEW BOARD

For the Protection of Human Subjects
FWA 00000165

MONTANA STATE UNIVERSITY

960 Technology Blvd. Room 127
c/o Immunology & Infectious Diseases
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Telephone: 406-994-6783
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Chair: Mark Quinn
406-994-5721
mquinn@montana.edu
Administrator:
Cheryl Johnson
406-994-6783
cheryljj@montana.edu

MEMORANDUM

TO: Sheri Juroszek and Walt Woolbaugh

FROM: Mark Quinn, Chair Mark Quinn CJ

DATE: November 5, 2012

RE: *"What Effect Will Increasing School-to-Home Communication by Providing 24/7 Access to Information, Assignments and Due Dates Via a Teacher-Created Website Have on Student Achievement?"* [SJ110512-EX]

The above research, described in your submission of November 5, 2012, is exempt from the requirement of review by the Institutional Review Board in accordance with the Code of Federal regulations, Part 46, section 101. The specific paragraph which applies to your research is:

_X_ (b) (1) Research conducted in established or commonly accepted educational settings, involving normal educational practices such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

_X_ (b) (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

____ (b) (3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

____ (b) (4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available, or if the information is recorded by the investigator in such a manner that the subjects cannot be identified, directly or through identifiers linked to the subjects.

____ (b) (5) Research and demonstration projects, which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

____ (b) (6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed, or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the FDA, or approved by the EPA, or the Food Safety and Inspection Service of the USDA.

Although review by the Institutional Review Board is not required for the above research, the Committee will be glad to review it. If you wish a review and committee approval, please submit 3 copies of the usual application form and it will be processed by expedited review.

APPENDIX B

STUDENT SURVEY

Appendix B

Student Survey: YOUR PARTICIPATION IN THIS STUDY IS COMPLETELY VOLUNTARY AND WILL NOT AFFECT YOUR GRADE IN ANY WAY.
Name _____

1. I have Internet access at home.
   _____Yes _____No

2. I access the Internet only when I am at school.
   _____Yes _____No

3. I access the Internet other places (check all that apply).
   _____Public Library _____Parent's Work _____Friend's House _____Other (Please list)

4. I can access the Internet on these devices (check all that apply).
   _____Family Computer _____Own Computer _____Smart Phone _____Ipod
   _____Tablet Computer (e.g. Ipad) _____Other (please list)

5. I have my own computer in my bedroom.
   _____Yes _____No

6. My parents check on my computer use.
   _____Always _____Often _____Rarely _____Never

7. I use the Internet outside of school to do the following things (check all that apply).
   _____Email _____Socialize (FaceBook, Chat Rooms, etc…) _____Read
   _____Schoolwork (research, homework, etc…) _____Play Games
   _____ Other (Please list)

8. During the week, on average, how much time do you spend on the Internet?
   _____0- 2 Hours _____2-4 Hours _____4-6 Hours _____6-8 Hours
   _____ 8-10 Hours _____More than 10 Hours

9. How much of this time do you spend on school-related activities?
   _____ Hours (please fill in your answer_

10. I like getting information from the Internet more than from a book.
    _____ Yes _____No

11. I like having access to my schoolwork online.
    _____ Yes _____No

    Please tell me why you do or do not like accessing your homework online:

12. Having my schoolwork available online will make me more responsible for my learning.
    _____ Yes _____No

13. I would expect that having 24-hour access to my schoolwork will result in my grades increasing.
    _____ Yes _____No

    Why or why not?

14. I expect to use the team website to contact my teachers if I have any questions on my homework.
    _____ Yes _____ No

15. I expect that I will use the website when I am absent from school to see what I missed before I return to school.
    _____ Yes _____ No

16. Please provide three ways your teacher can you help meet the educational goals we have established for you.

    1. _____
    _____
    2. _____
    _____
    3. _____
    _____

APPENDIX C

STUDENT INTERVIEW QUESTIONS

Appendix C: Volunteer Student interview questions: YOUR PARTICIPATION IN THIS STUDY IS COMPLETELY VOLUNTARY AND WILL NOT AFFECT YOUR GRADE IN ANY WAY.

1. Please tell me what has gone well for you this year and what has not go well.

2. What has helped you succeed? (and/or) What could be done to help you be more successful?

3. Do you feel comfortable using a computer at home to access school information?

4. Do you use the website I have developed to help you with remembering your schoolwork? How often?

At this point in the interview, I will hand the student my laptop and ask them to access the following information from the website to determine how proficient they are at it.

5. Let's assume you were ill yesterday and missed school. Will you demonstrate for me how you would find last night's homework assignment in science?

6. If you wanted to review an assignment that has already been graded, and you cannot find your paper, will you demonstrate how you would access it on the website?

7. Can you show me where a review is for your upcoming math test?

8. Can you show me how to access the last science podcast posted on the website?

9. Do you have any questions for me about the website?

APPENDIX D

WEEKLY STUDENT SURVEY

Appendix D: Weekly Student Survey

YOUR PARTICIPATION IN THIS STUDY IS COMPLETELY VOLUNTARY AND WILL NOT AFFECT YOUR GRADE IN ANY WAY.

1. How many times did you check the team website this week?
   _____0 _____1-2 _____3-4 _____5-6 _____>6

2. How many days were you absent this week?
   _____0 _____1 _____2 _____3
   _____4 _____5

3. When you were absent, did you check the team website before you returned the next day?
   _____ Yes _____No

   Why or why not?

4. When you were absent, did you download and print off the work you missed before returning to class?
   _____Yes _____No

   Please explain your answer.

5. How many times did you check the team website with your parents?
_____0 _____1-2 _____3-4 _____5-6 _____>6

6. This week, did you refer to the daily email for nightly homework?
   _____Yes _____No

   If you answered no, please explain why you did not?

7. Did your parents ask you about homework assignments contained in the daily homework email this week?
   _____Yes _____No

8. How many homework assignments did you not complete this week?
   _____None _____Some but less than half _____Most _____All

9. Did the team website help you remember any homework you would have forgotten this week?
   _____Yes _____No

10. Did you use the team website to contact one or more teachers regarding questions on your homework this week?
    _____Yes _____No

APPENDIX E

WEEKLY PARENT SURVEY

Appendix E: Weekly Parent Survey

YOUR PARTICIPATION IN THIS STUDY IS COMPLETELY VOLUNTARY AND WILL NOT AFFECT YOUR STUDENT'S GRADE IN ANY WAY.

1. How many times did you check the team website this week?
   _____0 _____1-2 _____3-4 _____5-6 _____>6

2. How many days was your student absent this week?
   _____0 _____1 _____2 _____3
   _____4 _____5

3. When your student was absent, did you ask them to check the team website before you returned the next day?
   _____ Yes _____No

   Why or why not?

4. When your student was absent, did you ask them if they downloaded and printed off the work they missed before returning to class?
   _____Yes _____No

   Please explain your answer.

5. How many times did you check the team website with your student?
_____0 _____1-2 _____3-4 _____5-6 _____>6

6. This week, did you refer to the daily email for nightly homework?
   _____Yes _____No

   If you answered no, please explain why you did not?

7. Did you ask your student about homework assignments contained in the daily homework email this week?
   _____Yes _____No

8. How many homework assignments did your student not complete this week?
   _____None _____Some but less than half _____Most _____All

9. Did the team website help your student remember any homework they would have forgotten this week?
   _____Yes _____No

10. Did you use the team website to contact one or more teachers regarding questions on student homework this week?
    _____Yes _____No

APPENDIX F

TREATMENT SCHEDULE

Appendix F: Treatment Schedule

Week 1: January28-February 1, 2013

1. Administer Likert Survey to all science classes **(see Appendix B)**
2. Conduct student interviews during the week **(see Appendix C)**
3. Post student and parent survey online **(See Appendix D and Appendix E)** and ask them to complete it for week 1 by February 3
4. Write daily reflections and weekly summary in teacher journal

Week 2: February 4-8, 2013

1. Post student and parent online surveys for week 2 and ask students and parents to complete by February 10
2. Write daily reflections and weekly summary in journal

Week 3: February 11-15, 2013

1. Post student and parent online surveys for week 3 and ask students and parents to complete by February 17
2. Write daily reflections and weekly summary in journal
3. Mid study interview of students

Week 4: February 18-22, 2013

1. Post student and parent online surveys for week 4 and ask students and parents to complete by February 24
2. Write daily reflections and weekly summary in journal

Week 5: February 25-March 1, 2013

1. Post student and parent online surveys for week 5 and ask students and parents to complete by March 3
2. Write daily reflections and weekly summary in journal

Week 6: March 4-8, 2013

1. Post student and parent online surveys for week 6 and ask students and parents to complete by March 10
2. Write daily reflections and weekly summary in journal
3. Collect midterm grade data
4. Complete final student interviews