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Abstract

The purpose of this study was to implement digital portfolios using Seesaw (Student Driven Digital Portfolios) to explore its possible effect(s) on home-to-school communication and facilitate the use of technology in a classroom setting. Previous educational research had clearly established that parent-teacher communication can be beneficial and technology's continuous evolution can spur change to more traditional practices of home-to-school communication. Multiple interventions to the digital portfolio were conducted during this action research project and pre/post questionnaires were used to gather participant perceptions of school-to-home communication in a rural Maine middle school.

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Introduction

Educating a child combines the efforts of many, including but not limited to teachers, parents, coaches, and community members. Among these, parents clearly have the ability to influence their child from birth, both in and out of the traditional school setting. Parental involvement in a child's schooling can take the form of help on homework, volunteering in the classroom, or attending school functions. Multiple studies have shown that increased parent involvement in school correlates with overall student success (Grant, 2011; Olmstead, 2013; Smith, 2002). For instance, Smith (2002) found an improvement in academic achievement and behavior in adolescents' whose parents were meaningfully involved in their education. Olmstead (2013) supported this finding with evidence that children with involved parents have higher grades and test scores, and are more likely to graduate and pursue further education.

Years of evidence have noted a positive link between parental involvement and student success. With this in mind, it is not surprising that schools attempt to keep a strong communication link between school and home. What is surprising is that many schools are not doing an adequate job of maintaining meaningful communication with parents (Olmstead, 2013). In fact, several of the traditional forms of communication used are out of date and infective. This study seeks to explore the use of digital communication with parents of middle school aged students in order to increase home-based parental involvement.

Literature Review

Defining Types of Parent Involvement in School

Parent involvement in school encompasses a wide range of participation. Joyce Epstein, a leader in research surrounding teacher practices of parent involvement, developed a framework for defining six different types of parent involvement. There are six types of involvement: parenting, communicating,

volunteering, learning at home, decision making, and collaborating with the community (Epstein 2004). Parent involvement in school can be promoted when schools focus on implementing aspects of each type of involvement included in the framework.

It's important to recognize that parental involvement is more than simply attending a parent-teacher conference. In addition to participation in school activities and parent-child communication, Keith (1993) identified two other forms of parent involvement in his overall definition. Educational aspirations, or parents expectations throughout their child's school career, and the amount of home structure, the rules about grades and homework completion also come into play. Trusty (1999) simplified the definition even further, by splitting parental involvement into two factors: school-based and home-based. School-based involvement includes attending meetings and acting as a volunteer, while home-based involvement includes discuss school curricula and postsecondary education with their child. This research study will attempt to reach out to parents to increase home-based involvement through digital portfolio communication.

Background and Benefits of Parent-Teacher Communication

Studying parental involvement in schools is not a new venture. In fact, numerous studies have researched the potential impact parent involvement has on student achievement in schools. Epstein alone has conducted extensive research since the early 1980s. In 1987, Epstein understood that families, schools, and communities are not isolated spheres of influence on students. By encouraging the three spheres to work together and overlap as a partnership, Epstein (1995) found evidence of a greater teacher acceptance and understanding of students and their families. These partnerships are necessary to improve student chances of success in school (Epstein, 2000).

The effect of parental involvement on students has been studied across multiple grade levels, socio-economic backgrounds, and population demographics. Miedel and Reynolds, (1999) found that early parental intervention in preschool and kindergarten for disadvantaged students made a significant

difference in their achievement later in school. Similarly, Trusty (1999) studied parental support for eighth graders and found that involvement led students to have positive attitudes toward high school and post-secondary education. Parental involvement combined with school support has also been found to ease the stress of transitioning from one grade to another (Gutman & Midgley, 2000).

Parental Involvement as a Protective Factor

Because of the vast benefits, increased parental involvement and overall communication with schools has on student achievement, studies have also looked at whether parental involvement varies across socio-economic status. Ho Sui-Chu and Willms (1996) found that working-class parents place a similar amount of emphasis on the importance of schooling. If schools reach out and attempt to involve parents from all SES backgrounds equally, most will respond in turn. After studying the parental involvement of hundreds of disadvantaged, low-income students, Miedel and Reynolds (1999) felt that parental involvement programs could act as a buffer against risk conditions that lead to low achievement.

Barriers of Communication and Parental Involvement in School

Existing barriers to parent-teacher communication and parent involvement in their child's schooling revolve around time and distance. Traditional forms of communication between school and home includes letters, telephone calls, and progress reports. Other means of communication consists of newsletters, open houses, and parent-teacher conferences (Smith, 2002). Many leading communication programs are volunteer opportunities and parent education, but these attempts, although used with some success, can be costly (Bennet-Conroy, 2012). These expenditures of money and personnel time place strain on many low-resource districts. Olmstead (2013) mentioned other difficulties including parent education, language barriers, and busy work schedules interfering with communication. Training is also needed to help teachers foster positive school communication with parents who may have negative attitudes toward school or lack ownership of their child's education. Timeliness is necessary, albeit difficult with traditional forms of school-home communication. A study by Grant (2011) showed that

parents surveyed were not satisfied to wait until parent-teacher meetings, held twice a year, to hear feedback on their child. Teachers echoed this frustration, and both parties hoped digital communication would improve timeliness. The closer the feedback is to the event, the more impact it has on positive improvement in the classroom.

Although barriers to communication exist to some degree at all levels of schooling, there is evidence of a steep decline in parent involvement at the middle school level (Beghetto, 2001). Middle school is usually a transition from self-contained classrooms to a rotating schedule. Adolescents often view the transition as a sign of independence. This increased need for autonomy coincides with decreased parental involvement (Smith, 2002). Although parental involvement tends to decline in the middle school years, the importance of maintaining communication between school and home does not. Beghetto (2001) noted the irony of middle school students' simultaneous need for autonomy and parent involvement. Beghetto went on to conclude that there is a qualitative difference between what constitutes effective involvement across school levels. Therefore, the way in which schools involve parents of middle school students needs to be considered.

Fostering Home-Based Parental Involvement

With various barriers to traditional parent-teacher communication, home-based parental involvement deserves further consideration. Home-based involvement includes a combination of homework help, discussing learning goals, and parents simply talking with their children about continued education. Time is valuable, and when parents are not able to volunteer or attend school functions, home-based parental involvement can help them have more worthwhile conversations with their children. Ho Sui-Chu and Willms (1996) believe that providing parents with information on teaching methods and curriculum would increase overall achievement. Izzo, Weissberg, Kasprow, & Fendrich (1999) agree that only providing opportunities for parents to be involved at school is not enough, especially as students get older. A proactive outreach that leads to engaging learning activities and discussions at home was a strong

predictor of improvements in student achievement. Trusty (1999) found that parents' home-based

involvement was also a strong indicator of high educational expectations. This research study will attempt

to expand home-based communication through use of digital portfolios.

Social Media and Emergent Digital Technologies as a Means of Communication

With evidence of out-of-date communication coupled with barriers of time, money, and

middle-school students' need for autonomy, it is not surprising that some districts have explored

alternative ways to involve parents, such as emerging digital technologies. Technology has quietly

evolved from fax machines, to email, websites, and phone bursts in order for schools to get their message

across. Technology has allowed for more rapid exchange of information and ideas than ever before. For

this reason, it is surprising that more districts have not embraced technology as a means of

communication. In fact, although corporations and businesses have embraced social media, such

strategies have been implemented much slower, if at all, in the P-12 setting (Cox & McLeod, 2014).

Although technological communication has become the norm in various aspects of life including

connecting with friends, online shopping, finding medical help, and current events (Porterfield & Carnes,

2012), schools are often hesitant to embrace these forms of social media. School districts state concerns of

student safety, school policy, and computer access as reasons not to embrace social media and other

digital technology (Dixon, 2012). Although important, these factors should not hinder the use of

technology to improve communication (Dixon, 2012; Trevino, 2012). Technology provides educators

with ways of communicating with parents despite traditional barriers of time and distance. "In today's

connected world, members of a school community expect more than just open houses and photocopied

newsletters. They want frequent updates. They want to give their feedback. They expect to collaborate"

(Dixon, 2012, p. 1).

Other researchers echoed Dixon in his call for two-way communication between school districts

and their stakeholders. For years, school leaders have simply pushed information at parents and closed the

door to discussion and collaboration. Phone bursts and newsletters are no longer enough. Communities and parents expect and deserve more two-way dialogue (Beghetto, 2001; Olmstead, 2013; Porterfield & Carnes, 2012; Smith, 2002). A collaborative environment would lead to parent ownership, and technology can be the vehicle used to make parent-teacher communication more effective.

Previous Research on School Use of Digital Communication

There are multiple emergent technologies that have been explored in previous studies, although not specifically around the relationship between parent-teacher communications at the middle school level. Wall, Higgins, Miller, and Packard (2006) conducted a study of digital student portfolios and found they were a facilitation tool for student discussion about learning with peers and family members. Siko (2014) used Web 2.0 tools such as Moodle and Edmodo to provide blended instruction to multiple classes. Blended courses provide flexibility with when to complete work and allow students to self-regulate the pace. Hesterman (2012) found that students who used technology to communicate with their teachers and study for tests did better than their non technology-using peers.

Since technology is continuously evolving, previous studies provide the framework and foundation for future exploration. Research conducted up to this point has focused on gaining perceptions of school stakeholders involved in digital communication. Olmstead (2013) found that both teachers and parents saw value in using Web 2.0 tools for increasing involvement, but admitted that more research is needed on the effectiveness of such technology. Cox and McLeod (2014) interviewed multiple tech-savvy principals and found that they used social media tools for greater interactions between their stakeholders. Social media use significantly impacted their personal and professional growth and these principals realized that social media use should not be viewed as optional. Grant (2011) found that students' greatest concerns in increasing digital technology communication is that they want to be involved in the conversation about their learning. Middle school students want independence, but also need to participate in the communication that pertains to their education. Technology can facilitate this.

Further research has attempted to find out specific types of technology that parents and teachers are comfortable using to communicate. Interestingly, multiple studies found that parents preferred texting, agreeing it was the best form of communication, followed by email (Hesterman, 2012; Olmstead, 2013). Although both parents and teachers were open to exploring use of texting, teachers were hesitant to give out personal phone numbers and worried about increasing expectations to respond regardless of time of day. A growing number of students and young adults have access to cell phones, (Lenhart, Purcell, Smith, & Zickuhr, 2010), yet school communication through technologies such as Remind and Google Voice has not been explored.

Previous studies on blended instruction, social media, and e-portfolios give evidence of positive attitudes toward digital communication. At the same time, more research is needed to expand these studies to other demographics. Lenhart et al. (2010) found that age, gender, race, financial status, and education level could all impact technology use. It will be important to compare digital communication success across these characteristics. Although Bennett-Conroy (2012) noted significant improvements in bi-directional communication engagement from increased technology use, the study was in an urban setting. Siko (2014) did not find a change in student performance through blended instruction, but some factors beyond the researcher's control may have interfered with results. Future research is needed to replicate these studies in alternative settings.

With previous research in mind, this study attempts to determine the impact of emerging technology use on parent-teacher communication at a rural middle school. The study seeks to answer the following research questions: Do digital portfolios increase home-based communications? What are the results of various interventions on the implementation of digital portfolios? How do students feel about sharing their learning with other students, teachers, and their parents? What are parent and student perceptions of school-to-home communication both before and after digital portfolios are implemented?

Summary and Conclusions

When students reach middle school and find increasing independence, parent teacher communication often decreases (Beghetto, 2001). Despite this independence, collaboration between students, teachers, and parents is essential to a positive and meaningful school experience at the middle school level. Technology and social media provides a platform to expand this parent teacher communication and allows for meaningful participation in student learning (Cox & McLeod, 2014; Dixon, 2012; Hesterman, 2012; Olmstead, 2013; Porterfield & Carnes, 2012; Siko, 2014; Smith, 2002). Instead of complacently accepting the idiom 'no news is good news' parents and teachers should embrace the positive opportunities that technology presents. Many digital tools allow for engagement, connectivity, and ownership that was previously nonexistent or difficult because of barriers of time and distance (Bennet-Contoy, 2012). With an abundance of digital learning options, it can be challenging to choose one that both improves communication and satisfies all stakeholders. In this study, perceptions of the use of digital technologies along with their effect on parent-teacher communication in middle school will be explored.

<center>**Research Design**</center>

Purpose of the Research

The purpose of this research is to investigate how digital tools, specifically Seesaw, can be used to bolster home-based communication at the middle school level. Digital tools have been shown to decrease barriers to communication such as time and distance, which often prevent meaningful parent-teacher communication from happening. Parent-teacher communication is not a new research topic, but digital technology is constantly evolving, and research on rural demographics is lacking. This research study will add to the current body of research by attempting to increase home-based communication through e-portfolios, specifically Seesaw. This research will benefit teachers, parents, and students. Teachers will gain knowledge of parent and student perceptions about communication, as well

as data from various e-portfolio interventions. Parents and students will be able to share their perceptions of communication, and gain an opportunity to have meaningful conversations about the learning at school via the Seesaw portfolio account.

Research Question

This action research study will be designed to examine current student and parent perceptions of parent-teacher communication. The study will describe communication procedures currently in place and explain how these methods are perceived. After implementing a digital portfolio using the website Seesaw, parent and student perceptions will be re-assessed to gather information on the effect of digital portfolios on home-based communication. The following research questions will be addressed:

1. Do digital portfolios increase home-based communications?

2. What are the results of various interventions on the implementation of digital portfolios?

3. How do students feel about sharing their learning with other students, teachers, and their parents?

4. What are parent and student perceptions of school-to-home communication both before and after digital portfolios are implemented?

By answering these questions through action research, there will be new insight as to what constitutes successful and meaningful parent-teacher communication as perceived by students, and parents in a rural middle school. I will be able to add to the existing body of research on parent-teacher communication as it relates to technology and digital portfolios.

Central Concepts Related to the Investigation

The body of research on parent-teacher communication spans over decades. The results of these studies work to define parent-teacher communication, identify the benefits and barriers, and explore digital technologies as a means of communication.

Parent involvement in school encompasses a wide range of participation. This research study will focus on Trusty's (1999) definition that splits parental involvement between school-based and home-based. Several barriers to communication mentioned in previous studies, such as money (Bennet-Conroy, 2012) parent education, language barriers, and busy work schedules (Olmstead, 2013) make home-based communication, which involves parental discussion of school curricula with their child versus volunteering and attending school functions, an important focus of this study. Providing parents with home-based communication opportunities is increasingly important as students get older, and is also believed to increase overall achievement(Ho Sui-Chu Willms, 1996; Izzo, Weissberg, Kasprow, & Fendrich, 1999). Expanding parents ability to communicate with their child about their learning by using digital technologies may help nullify some of the barriers mentioned in previous studies.

Multiple studies lean towards technology as an emergent, efficient way to improve and strengthen parent-teacher communication, and because so many facets of our lives are informed by technology, parents expect the same. Despite these findings, many schools, including Spruce Mountain Middle School, where this study takes place, use outdated and ineffective forms of communication.

There is a more limited body of research directly related to digital portfolios and their relationship with parent-teacher communication. Studies show that perceptions of parents, teachers, and administration tend to be positive (Olmstead 2013; Cox and McLeod, 2014), but more research is needed specifically in rural demographics and at the middle school level. The central concepts related to this research investigation are improving home-based communication with digital portfolio use in a rural middle school classroom.

General Approach of the Investigation

Investigation of the research topic will be carried out in stages. First, student and parent perceptions of current school-to-home communication will be gathered through a brief survey. Analysis of these perceptions will act as a starting point and help guide interventions during phase two of the study.

The second phase of the investigation will utilize Seesaw, a web-based digital portfolio. Seesaw allows students to upload schoolwork and learning in a variety of ways including but not limited to typed responses and video explanations. The digital portfolio allows students to share their work with other teachers, peers, and family members who can 'like' and provide feedback through a commenting feature. Upon implementation of the digital portfolio, a series of interventions will be conducted as the teacher, students, and parents become more comfortable with the program.

The final phase of this investigation will consist of a brief post-survey designed to gather the perceptions of parent and student participants on the digital portfolio as a means of home-based communication. The researcher will focus on whether or not perceptions have changed, improved, or declined since the survey prior to use of the digital portfolio.

This research study is different than previous studies because it combines survey data with action research interventions. The study adds to previous research since it examines a rural middle school. This study relies on the basic premise that students and parents will participate, so transparency between the researcher, participants, and their families is essential.

Methods of Inquiry

This study will explore the use of digital portfolio communication with parents of middle aged students through practical action research. Digital portfolios will be implemented through a series of interventions. An open-ended qualitative survey will be given to collect student and parent perceptions after the digital portfolio interventions take place. These interventions may include but are not limited to:

- Individual Student Access - Students are the sole 'viewer' of their portfolio

- Inviting Other 'Viewers' - Invite parents, other teachers, and students to view students' portfolios

- Uploading Decisions - At first, the teacher will decide what is uploaded, eventually students will make this decision

- Final Draft Portfolio vs. Learning Journal - Portfolios are traditionally a place to show off finished work, but the teacher would like students to incorporate writing drafts, personal reflections, and revisions to create an overall summary of learning

This action research approach allows the researcher, in this case the teacher, to examine "problems in their own classrooms so that they can improve their students' learning and their own professional performance" (Creswell,2015, p.581). Action research is cyclical in nature, which allows the teacher to collect data, implement interventions, conduct analysis, and repeat the process as needed. Because of this, the focus of the research may change as data is continuously collected and analyzed. The open-ended nature of this type of research may be a weakness, so transparency between the researcher and the participants is critical.

Research Methods

Setting

Research will be conducted at Spruce Mountain Middle School, located in Jay, Maine. SMMS is part of RSU 73, which consists of three small, rural mill towns that were consolidated in 2012. This site is appropriate since the researcher is employed as an 8th grade ELA teacher, and has been granted permission by both the building administrator and the district superintendent.

Sampling/Participants

The participants consist of eighth grade ELA students at SMMS and their parents who are willing to participate. All students and parents will be offered the chance to participate in the study. Students will be approached during class, and participation will have no bearing on their grades or performance in class. Parents of this same group of students will be sent a phone burst request through a text messaging App called Remind. Parent participation is encouraged but not required.

The researcher will send a pre and post survey questionnaire to all participants using Google Forms. This will potentially provide 45 student responses and 25-45 parent responses. Responses will be

kept on the researcher's personal password protected Google account. Responses of parents who choose to complete a paper version of the survey will be kept in a locked filing cabinet. The pre-survey will give an overview of perceptions on current school-to-home communication strengths and weaknesses. The post-survey will provide feedback on the effectiveness of the digital portfolio in increasing home-based communication compared to perceptions prior to implementation.

Methodology

The method of this proposed study is an action research model, specifically practical action research. This approach is appropriate because it allows the teacher to become the researcher in their own classroom, and therefore address current, important problems in a systematic fashion. This action research will be conducted to gather information on perceptions of parent-teacher communication, and after implementing digital portfolios and cycling through various interventions, whether home-based communication is improved in the eyes of the participants. Action research works well in a classroom-based setting because it is more flexible than other potential approaches.

Potential drawbacks to this method stem from the fact that action research is open-ended, and not all phases and interventions of the study are initially known. With this in mind, the researcher needs to respect the participants, involve them collaboratively throughout the study, and allow the option to withdraw (Cresswell, 2015, p.594).

Operational Measures

This research study will begin and end with a questionnaire created on Google Forms. A separate yet similar questionnaire will be given to student and parent participants. The pre-assessment will be designed to assess participants' current perceptions of school-to-home communication at the middle school level. The data analysis from these questions will help guide the second phase of the study, which consists of implementation of a digital portfolio. The post-assessment will be designed to gather participants' perceptions of home-based communication after the interventions have been completed.

Questions on the instruments are all originally created by the Primary Investigator with the specific school setting in mind. Most of the questions are quantitative in nature, but the last two on each questionnaire are open-ended, qualitative questions.

Data Collection

Data will be drawn from the pre and post-questionnaire results from student and parent participants. Additional tracking data from the Seesaw portfolio website, such as number of parent participants, how often students post to the site, and numbers of 'likes' and comments will be collected.

Both students and parents are an important part of the research process for this study. They will be invited and encouraged to participate, but no extra credit or penalty will be given if they refuse or decide to withdraw at any time.

The timeline of the study is as follows:

1. Gain parental consent for themselves and/or their child

2. Gain student assent to participate.

3. Give pre-survey to all willing parent and student participants. Collect and analyze responses. Researcher may need to code the open-ended qualitative questions.

4. Have student participants set up an online digital portfolio account using the website Seesaw.com. SMMS already has 1-to-1 laptop access, internet connection, and personalized student Google accounts.

5. Researcher will direct students to use Seesaw to upload ELA final drafts, classwork, reflections, revisions, and other learning. As part of the action research, interventions include allowing participants to eventually decide what to post, asking parents to 'follow' the student Seesaw accounts, etc.

6. After multiple weeks of Seesaw use and a series of interventions as needed, student and parent participants will be asked to fill out the post-questionnaire. Researcher will collect and analyze responses, and may need to code the open-ended qualitative questions.

Data Analysis

From the pre and post questionnaire for students and parents, I will collect both quantitative and qualitative data. Most questions on the surveys are quantitative in nature, using a Likert Scale. Trends in the data will be analyzed using descriptive statistics (Creswell, 2015). The qualitative data from open-ended opinion questions will be organized and coded. These codes will be narrowed down into several types of themes including ordinary, unexpected, hard-to-classify, and major and minor themes (Creswell, 2015 p. 249). The qualitative data will also be categorized as positive or negative. Parent experiences will be compared and contrasted, with similarities and differences noted.

Questionnaire data will be analyzed to identify general trends in attitudes towards parent-teacher communication in middle school. The data from the pre-questionnaire will help guide the intervention aspect of the practical action research. Action research does not have a well-defined endpoint. Instead, analysis will happen on a continues cycle throughout the interventions and data collection in the classroom while using the digital portfolio Seesaw.

Expected Findings

Prior studies indicate that parent-teacher communication declines at the middle school level. Despite technology infusing communication in all aspects of everyday human interaction, schools have been slower on the uptake. I expect to find varied student and parent experiences with current school-to-home communication. I expect to hear from parents that communication varies depending on the teacher, and that traditional forms of communication such as paper flyers are ineffective. I expect parents will experience the majority of their communication with the school in relation to negative student behavior or academic performance. I expect a positive perception of digital portfolios from parents who

participate in the study, since they will be more aware of their child's everyday learning and school experiences. My findings may encourage other teachers to implement digital portfolios as a way to improve home-based communication at the middle school level.

Potential Issues and Weaknesses

One of the biggest potential barriers of this research is participation among both students and parents. Those students and parents who agree to participate will need access to technology, internet connection, and a willingness to actively use the Seesaw digital portfolio. The nature of technology may impose another potential barrier if laptops are taken away for school policy violations or require IT support.

This research takes place over the course of two years with the same group of students and parents. This may be a potential problem when it comes time to analyze the data. The limited time available to complete the data analysis may result in the researcher focusing on only specific questions and data, which may skew overall results. This, combined with the fact that action research interventions will be designed around a specific set of students in a rural middle school, might skew results and limit generalization to other populations.

<div align="center">

Research Narrative

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When it came time to choose my research topic, I was transitioning from my job as a third grade teacher in RSU 73 to a seventh grade English Language Arts position at the middle school. I had never taught at the middle school level before, and therefore was unsure of what I would face for problems or areas of interest that I could explore through research. I realized that one of the biggest changes I would face during my transition to the middle school was no longer having a set group of self-contained students. This realization was important because one of my ongoing professional goals as an elementary teacher was to create a welcoming classroom community that seamlessly bridged the gap between home and school. Knowing I would have about triple the number of students at the middle school level left me

unsure of how to maintain that same sense of community. I also had a preconceived notion that parent

communication decreases at the middle school level. This bias came from personal beliefs that over time,

parents and teachers most likely adopt the mantra 'no news is good news'. I also thought dealing with

older students might make it more difficult to respect their need for autonomy while simultaneously

maintaining an open line of communication with parents. Despite not knowing exactly how my

experience as a middle school teacher would pan out, I knew that I did not want to become isolated from

the families of students I work with. In addition, I learned that I would loop with the same group of

students from 7th to 8th grade and wanted to take advantage of this unique opportunity to build even

stronger home-to-school connections. With that, I decided to focus my research on exploring

parent-teacher communication at the middle school level.

Ultimately, I was not sure how I wanted to facilitate parent-teacher communication at the middle

school level. I realized that paper notifications and even email were too unreliable and inconsistent to be

effective. While teaching third grade, I had significant success using a digital program called ClassDojo to

reach out to parents. ClassDojo is a behavior management system that focuses on positive reinforcement.

Parents would receive phone or email notifications that informed them of their child's daily behavior. I

could also send out a phone burst message to inform all parents of important dates or upcoming school

events. Unfortunately, ClassDojo was too juvenile to use with middle school students. I also wanted

something that was less behavior based.

When I began teaching seventh grade in the fall of 2015, I used a text messaging system known

as Remind to stay in touch with parents. This system provided instant communication with a majority of

my students' parents, but I didn't feel as though I was having enough meaningful conversations. Often, I

simply sent out phone bursts with various informational messages or quickly answered random parent

questions. Although helpful to parents, I wanted to expand this communication to reflect more of the

content I was teaching and the students were learning. I began contemplating student digital portfolios, and this is where Phase I of my research begins.

Before implementing any new forms of parent-teacher communication, I decided to reach out to parents and students to gather their current perceptions of communication at the middle school level. Although I had been approved by the IRB to begin this questionnaire process in the spring of 2016, while my students were seventh graders, the everyday realities of teaching caused me to postpone until the fall. Because I knew ahead of time that I was looping with my students to eighth grade, I had originally hoped to jumpstart the research process by gathering responses and entering Phase II of my research earlier. This did not happen and later affected how much of the action research interventions I was able to complete.

Once I finally gave the questionnaire in the fall of 2016, the student and parent responses I gathered allowed me to compare findings of research articles I had read about parent-teacher communication to the reality of my rural middle school. Several parents felt current levels of communication were adequate, but voiced that they were open and willing to embrace more. Multiple open-ended responses mentioned that if they could change one thing about communication, it would be to see more of their child's progress in academic, social, and behavioral areas instead of just a number grade in Powerschool.

Analyzing the results of the initial perception questionnaire set in motion Phase II of my research. As I mentioned before, I had been contemplating using online student portfolios as a means of sharing their school work with a wider audience. This, in combination with parent responses to the questionnaire, helped me decide to use Seesaw.com. Seesaw is a digital platform that allows students to upload images, notes, video, and voice recordings. When students join, their classmates can see, like, and comment on their posts depending on how the teacher decides to set it up. Parents who join can view messages from the teacher and "like" or "comment" on their own child's work. Up until this point, all student drafting in my classroom was kept in spiral notebooks, and all final draft versions were kept in individual filing

cabinet portfolios. Parents did not have access to the notebooks or portfolios unless they came in during conference time, which was only held in the fall.

I was excited to try the Seesaw digital portfolio with my students, but was thrown off by the word 'portfolio'. To me, portfolio traditionally meant polished pieces of work that showed summative versus formative learning. I realized that if I only allowed students to post final draft worthy material, parents would only see one or two pieces a month. So much more goes into writing than just the final piece, and in the interest of gathering research in a short amount of time, I realized I would need to adjust my definition of 'portfolio'. I decided to try to have students use Seesaw as more of a learning journal than a portfolio. This required me to step outside of my comfort zone and willingly acknowledge that students might post things riddled with editing errors. Realizing the power of progress versus perfection, I accepted that showing parents the entire learning process would be more eye opening than a final, polished piece.

I chose action research because of the nature of implementing Seesaw. Action research most closely matches the daily realities of teaching. I knew that I would have to do a gradual release of responsibility to the students while introducing Seesaw, and recognized that my plan may change to reflect unexpected barriers. In my original research proposal I had planned to have several phases of interventions including but not limited to:

- Individual student access (Students are the sole 'viewer' of their portfolio)

- Inviting other 'viewers' (Invite parents, other teachers, and students to view students' portfolios)

- Uploading Decisions (At first, the teacher will decide what is uploaded, eventually students will make this decision)

- Varied types of uploads (PDFs of final draft papers, pictures of notebook drafts with captions, video explanations of learning)

I honestly, albeit naively, thought I would be able to accomplish most of, or at least a combination of, these interventions with my students. I was wrong. Ultimately, I did not have enough time to make this happen. Ideally it would have required 2-3 more months of use to even scratch the surface. Barriers that I encountered centered around time and technology. Multiple snow days, testing, and February vacation slowed the implementation process considerably. The less posts students made to Seesaw, the less their parents were notified to check in on and interact with their portfolios. In addition to this, student computer limitations got in the way. Student MacBook cameras were blocked by the technology department, so they were unable to upload pictures or take video of themselves explaining their learning. I tried to have students work around this by allowing use of personal cell phones, but without access to the school's wifi, success was limited.

Interestingly enough, time and technology barriers were not the only factors that changed the direction of my research. Students had begun to post things on Seesaw, per my direction, for a few weeks. Although initially excited about the social media aspect of seesaw, they eventually became indifferent about its use. I invited parents to 'follow' students portfolios once they had a few posts accumulated. I sent out a Remind text message with a link that parents could use to sign up. I followed this initial phone burst message up with a personal text message asking each parent to view their child's portfolio. I decided to invite parents in this manner instead of sending out the adult informed consent form I created for the IRB because they were used to hearing from me through text message. I then adjusted my consent form and sent it only to the twenty-one parents who signed up for Seesaw to see if they wanted to participate in the final phase of my research study. Fourteen parents agreed to participate.

It wasn't until I invited parents to view their child's digital portfolio that the direction of my research changed. I became intrigued by the responses of students to sharing their portfolio with their parents. I overheard interesting conversations such as "Oh my WORD you guys, my mom commented on my *Where I'm From* poem. Ugh. I stole her phone and deleted the comment!" and instantly knew I had

uncovered something worth looking deeper into. I discarded the remaining planned interventions and began to record any student discussion of their parents on Seesaw. Their comments were a mixture of angst, excitement, and annoyance about their parents involvement on their portfolios, which differed from the majority of student responses to my initial perception questionnaire. In the questionnaire given in the fall, the majority of students acknowledged the importance of their parents involvement in their learning through communication with the school. I became curious and motivated to explore this contradiction in the last phase of my research.

The last phase of my research included a post-perception survey given to parents who interacted with their child's digital portfolio. Students who had parents connected to their portfolio were also given a version of the post-perception survey. I was interested in whether student responses matched what I overheard and witnessed unfold as parents became more and more involved with their digital portfolios. I was also curious about whether or not students who complained at school in front of their peers had the same attitude when discussing their work with their parents at home.

Over the course of this research study, various factors guided the research in new directions. The study became less about improving parent-teacher communication and more about exploring powerful student-parent interactions and home-based conversations about their learning. Multiple phases of research led to a dynamic look at current parent-teacher communication practices at a rural middle school, the effect of digital portfolios on home-based communication, and the attitudes of students towards parents access to their Seesaw digital portfolio and involvement in their learning.

Data Analysis and Interpretation of Findings

The four research questions for this study are:

1. What are parent and student perceptions of current school-to-home communication practices in middle school?

2. Do digital portfolios increase home-based communications?

3. How do students feel about sharing their learning with other students, teachers, and their parents?

4. What are parent and student perceptions of school-to-home communication both before and after digital portfolios are implemented?

Multiple trends emerged in the data that may help answer the research questions for the study. Out of these trends, five strong themes should be specifically noted:

1. Prior to Seesaw implementation, parents felt that current home-to-school communication was adequate, but they would embrace additional information on their child's progress and learning.

2. Prior to Seesaw implementation, students recognized home-to-school communication as a key to their success, despite some feeling that it can cause stress and punishment.

3. Students voiced discomfort to their peers about parent access to Seesaw.

4. Students felt parents should have access to their Seesaw Digital Portfolios, but were uncomfortable with parents' ability to comment.

5. Parents felt Seesaw made them more aware of what their child is studying and helped facilitate conversations about school learning with their child at home.

Parent Perceptions of School-to-Home Communication (Before Seesaw Implementation)

Twenty-three parents responded to my Phase I parent perception survey which was given prior to implementing the Seesaw digital portfolio. The survey was given in order to gain a sense of how current communication practices were received and what changes parents would suggest. I had used Remind, a text-messaging communication system, for a year, but did not feel that it provided enough information to parents about their child's learning. In order to see if parents felt the same way, I asked a combination of quantitative and qualitative questions. Parent answers to my open-ended qualitative questions helped guide the remainder of my research. The major theme that emerged from asking parents their perceptions

of current communication was that they felt home-to-school communication was adequate, but they would embrace more, specifically communication that revolved around their child's progress and learning versus a number grade in Powerschool.

Parents were asked two qualitative open-ended questions as part of the perception survey prior to implementation of the Seesaw digital portfolios. The first was, "What is your overall opinion of current home-to-school communication?" After coding the responses, three common trends emerged: Communication was adequate but parents would embrace more, Parents were in favor of the text messaging system currently being used, and paper notices were ineffective. Parent responses to the most relevant trend are listed below, while the remaining trends are discussed in the conclusions and implications section.

Q1: What is your overall opinion of current home-to-school communication?
Trend 1: Communication adequate, but would embrace more: - "<u>Adequate</u>." - "We don't receive a lot of communication, however, we do <u>receive adequate</u> <u>communication</u>. We would definitely embrace more." - "Think it's <u>just right</u> for middle school age. Allows student to be independent and responsible for their own work." - "I do think teachers <u>should reach out to parents more</u>. It would be great for all parents like myself who truly care to hear more!'

The second open-ended qualitative question in the survey given prior to Seesaw digital portfolio implementation was, "If I could change one thing about communication with my child's teacher or school it would be.." After coding the parent responses, two trends emerged: Parents noticed inconsistency in communication between teachers, and Parents requested communication that did not solely revolve around number grades. Again, parent responses to the more relevant trend to this study are listed below.

| **Q2: If I could change one thing about communication with my child's teacher it would be...** |
|---|
| **Trend: Parents Want Communication Based on Progress and Learning vs. Grades**
- "I can log in and see my child's grades, but I'd also <u>like to know how they are doing</u>. Are they participating? Half asleep? Trying? Being lazy? Etc."
- Powerschool is very helpful...but it would be nice if there was a way to use it to have conversations about a child's progress. <u>Are there behavior issues, is your child making more progress or less</u>"
- "I would like to be more aware of the <u>topics covered</u> in her classes"
- "I would very much like to know more about each teacher's syllabus/agenda for each quarter/semester. I would like to <u>be able to talk to my child about what they're learning</u> and what's coming down the road, but that's hard if I don't know what that is."
- "I would like to see more positive feedback for students that are exceeding expectations either <u>academically or (perhaps more importantly) socially and behaviorally</u>." |

Student Perceptions of School-to-Home Communication (Before Seesaw Implementation)

Forty-two students responded to my Phase I student perception survey which was given prior to implementing the Seesaw digital portfolio. The survey was given in order to gain a sense of how current communication practices were viewed from the students perspective in comparison to the parent survey. I also wanted to gauge how students felt home-to-school communication affected their learning and progress in school. I asked students a combination of quantitative and qualitative questions on home-to-school communication.

For the quantitative questions, I asked students to rate on a likert scale from strongly disagree to strongly agree whether they felt communication between their parents and teachers was a good thing. A combined 62% of students either strongly agreed or agreed that communication was a good thing, while a combined 38% either strongly disagreed or disagreed.

Communication between parents and teachers is a good thing.

Strongly Agree; 12%
Strongly Disagree; 9%
Disagree; 29%
Agree; 50%

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree
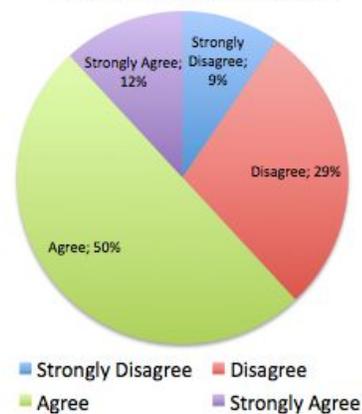
I then asked if students felt they performed better when their parents and teachers stay in touch. Despite the majority of students agreeing that communication between teachers and parents was a good thing, a combined 64% either strongly disagreed or disagreed with that statement and only 36% strongly agreed or agreed. Although they saw the benefit of parent-teacher communication, a majority did not agree that it improved their performance in school.
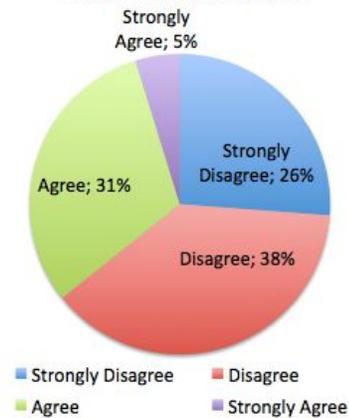
The major theme that came through based on their qualitative responses was that students recognized home-to-school communication plays a role in their success, despite some feeling it can cause stress and punishment. The open-ended qualitative question I asked students was, "What is your overall opinion of school-to-home communication?" After coding the responses, three trends emerged: Communication causes some students' stress, nagging, and punishment, Communication could be improved or increased, and Keeping parents in the loop was a key to student success.

Q1: What is your overall opinion of current home-to-school communication?
Trend 1: Communication causes stress, nagging, and punishment - "I think it should be limited or unallowed. Whenever my parents hear from teacher what i got on my work they punish me and stress me out which makes me do worse on future work." - "Personally I would prefer if there was less communication because then I feel more pressured" - "I don't really enjoy having my parents constantly nagging me about my grades so I would say I don't really like this communication" - "I don't like it at all, my parents annoy me about my homework. They don't know what I have or haven't done for homework and they don't listen anyways" - "I don't like it because I know what to do I don't need my mom knowing or get in my business." - "I dislike it. Having strict parents can put pressure on you. If I have my space to work freely without pressure i believe that I do better with my curricular work. - "It's a bad thing because I don't like it when my teachers and parents communicate because some teacher talk about my work and my mother gets mad about missing assignments or something"

I perform better when my parents and teachers stay in touch.

- Strongly Agree; 5%
- Strongly Disagree; 26%
- Disagree; 38%
- Agree; 31%

Legend:
- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

Trend 2: Communication could be improved or increased
- "I would like to <u>talk more </u>about grades to my parents."
- "The <u>more my parents stay</u> in touch with my teachers and the more my parents inform me of my struggles I will likely improve knowing what I am doing wrong and my parents are supporting me to make it better."
- "<u>Not enough</u> communication from school to home."
- "It's <u>not as good as it could be</u> because my parents don't talk to my teachers a hole lot which is ok but maybe <u>them talking just a little more would be better</u> and just checking in."
- "I don't really know but I think it <u>should be used more</u>."
- "The communication from school to home is not very well. <u>We should try better</u> on that."
- "Good, <u>could be better</u>"

Trend 3: Keeping parents in the loop is a key to student success
- "School to home communication is a good thing. In my situation there is enough of it, but I feel that other kids don't have enough. I may not like that my parents know how my grades are, especially when they are not so good. But i feel that keeping parents involved in their child's education is <u>key to success</u>."
- "I like having school-to-home communication, it provides a way for my parents to know what is happening during the school day. I don't always remember to tell my parents important information, so by having this communication it allows my <u>parents to know if i'm succeeding in school or not</u>.
- "I feel like it is okay because my mother is always on track about my grades and really <u>care about my success</u>. Teachers always get in touch with notifications for school and updates and I like that.
- "I think we should stay in touch because if I am not doing well in a class and then my teachers tell my parents so that <u>makes me want to get all my work done</u>."
- "If you do poorly it is a good thing because your parents should know. It can be a good thing if you do well in school as well because then your parents know you do well."
- "It is important because parents should know how your doing"
- "Good because my parents can know what is going on in class"
- "I think it is a good thing for parents and teachers to stay in communication because then you <u>parents know how you are doing</u> and how you act in school."
- "My overall opinion is <u>it's kind of important</u>. Mainly because when they stay in contact it helps me remember what assignments are due and what I have for grades in my classes without checking powerschool."
- "Good my parents stay in contact and get messages about new projects going on."

Parent Access to Seesaw and Initial Student Reactions to Parent Access

After gathering parent and student perceptions of current communication practices, students

signed up for the Seesaw digital portfolio. They were given a class code and could easily join using their

Google education accounts. Once logged in, students can see anything in the 'Class Feed' which is set up similar to the social media websites they are accustomed to using. I had previously posted a few items to the stream so that they would have something to look at, read, and 'like' once they signed in. Students seemed interested and excited to have this platform available to them and many asked when they would begin posting on their own. I explained that I would initially tell them what to post but would slowly lift any restrictions and hand the reigns over to them as part of the intervention process of my research study. As noted in the research narrative, barriers of time and technology made these interventions difficult to attempt. Instead, we focused on adding examples of our learning and writing periodically for our peers and parents to enjoy.

Students first posted to Seesaw on January 18th. During this month, students averaged about one post per week. The posts were a combination of final draft poetry, double entry journal responses to the class read aloud, a picture of their notes taken during lecture, and a drawing to illustrate their understanding of a newly learned grammar concept. The majority of students seemed to enjoy posting their work and were quick to 'like' their peers' posts. I turned off the commenting feature because I was hoping to include this as a separate intervention as part of the action research process. I also felt it was necessary to conduct some mini-lessons on constructive criticism and worthwhile comments before opening up this feature, which we did not have time to do. I ended up leaving student commenting off throughout the portfolio process.

Once students had the four portfolio posts mentioned above added to their stream, I invited parents to view their child's Seesaw account. I sent out a Remind text message on February 7th with a link to sign up. I also posted a welcome message to the Seesaw stream which briefly explained the portfolio and mentioned my research project. Once signed up, parents could view only their own child's work, but I reminded them in the welcome message that anything they commented could be viewed by other students.

Almost immediately after sending the text message, I had parents signed up on Seesaw. By the end of that first week, 23 parents had signed up to view their child's portfolio. I sent out one more personalized request through Remind using the parent and child's name the following week and two additional parents signed up. In the table below, you can see the weekly breakdown of connected parents, active parents, and number of parent visits. As you can see, not all connected parents are active on Seesaw. Parents are automatically sent either email or phone notifications to view their child's portfolio as soon as something new is added. On weeks where students added multiple posts, parent visits went up.

Week of:	# Connected Parents	# Active Parents	# Parent Visits	# Student Posts
February 5 - February 12	23	8	7	1 post this week (5 total)
February 12 - February 19	25	7	11	1 post (6 total)
February 26 - March 5	25	12	25	2 posts (8 total)
March 12 - March 19	25	10	15	2 posts (10 total)
March 19 - March 26	25	10	14	1 post (11 total)

*February 19 - February 26 = February Vacation Week.   *March 5 - March 12 = State Testing.

Although I had mentioned to students that their parents might eventually have access to their Seesaw portfolios, I had not warned them ahead of time prior to sending out the Remind text message burst to parents. I previously considered sending home a paper notice, but after seeing the eye rolls and hearing scoffs at the thought of their parents seeing their work, I realized I would probably have more luck inviting parents on my own. It took about a week for me to know for sure that parents were seeing their child's work on Seesaw. I knew that they had signed up, but I wasn't sure if they would actually discuss what they saw with their child, or if their child even knew that they now had access. I slowly began to overhear student conversations with each other that gave me insight into how Seesaw was

affecting home-based communication about their learning in ELA. A theme quickly emerged from the

conversations I overheard: Students voiced discomfort toward parent access to Seesaw.

Student Conversations with Peers About Parent Access to Seesaw
- "Oh my WORD you guys, my mom commented on my *Where I'm From* poem. Ugh. I stole her phone and deleted the comment!"
- "I know that my mom signed up but she hasn't said anything to me about it yet. I feel like she's stalking me!"
- "Your gram commented on your poem." "Yeah I know." "Did you tell her to stop?" "Yeah, but she's 60 years old, she does what she wants."
- "Hey look, your dad already liked your post. That's cool" "No it's not cool...it goes right to his phone"
- "I can't believe my mom hasn't signed up yet, she loves this kind of stuff. I hope she forgets"
- "I told my mom she's not allowed to comment on anything, it's so embarrassing"
- "My mom and Nana both said something to me, they were together and really liked my poem" "Well, my mom wanted me to read mine out loud to her!"
- "My mom told me she liked my essay but I didn't know what to say...I just said 'thanks'" "My mom came into my room with a huge smile on her face and said, 'I read your essay'."

I had known that students were not exactly enthused that their parents may have access to their

portfolios, but I did not expect to overhear as many negative or embarrassing reactions as I did. I

wondered if students were actually as uncomfortable as they were acting, or if it was a facade they were

putting on to save face in front of their peers. Their reactions were especially interesting to me since their

responses on the pre-survey had been mostly positive in regards to home-to-school communication and

overall parent involvement in their learning. In fact, one of the trends that emerged from their qualitative

responses had been that parent involvement in their education was a key to student success. This apparent

discrepancy helped focus and guide the remainder of my research.

Student Perceptions of Seesaw Digital Portfolios (Pre and Post Survey Results)

I had hoped to compare some of pre-survey student perception questions with my post-survey results, but many of the original questions I had asked students were no longer relevant at this point of my research. That is because the original survey centered on student perception of communication between between their parents and their teachers. Implementation of Seesaw ultimately put the focus more on their perception of their parent's increased involvement in their day-to-day learning and education due to Seesaw portfolio access. For this reason, I only gave the post survey to students whose parents were connected to Seesaw. Fifteen students agreed to participate in the post-survey compared to 42 in the pre-survey.

One quantitative question that remained relevant to my overall research, in both the pre and post survey, asked students to rate the statement, "I want my parents involved in my education" on a likert scale from strongly disagree to strongly agree. In the pre-survey, a combined 45% of students either strongly agreed or agreed with the statement. In the post-survey, 67% of students either strongly agreed or agreed with the same statement.
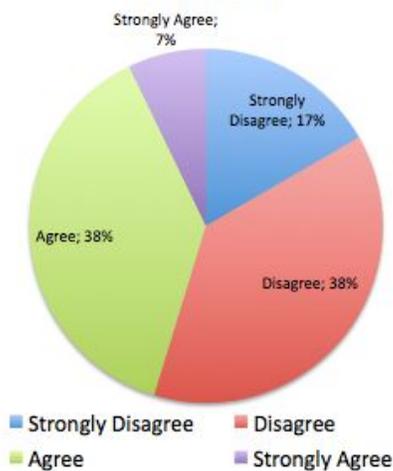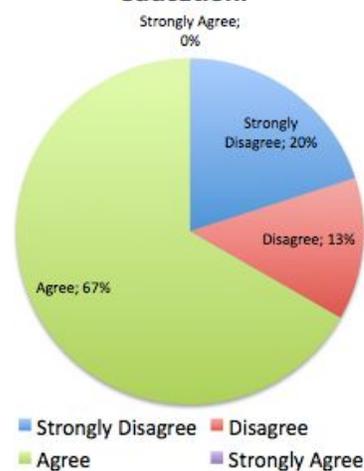
The increase in percentage of students who want their parents involved in their education could be due to a variety of factors. The students taking the post-survey may be inclined to answer favorably because their parents are currently involved in their education and signed up for Seesaw. Regardless, there is a discrepancy between the 67% of students who want their parents involved in their education and what they outwardly say to their peers as recorded above.

Because my research using Seesaw digital portfolios ultimately focused more on home-based communication than parent-teacher communication, I adapted my qualitative post-survey questions for students to reflect this change. I wanted to gain insight into their true perceptions of their parents' access to Seesaw, and compare their answers to what I had overheard through peer conversation. I was interested to see if their answers matched their attitudes.

The first question I asked students was, "What is your overall opinion of the Seesaw Digital Portfolio? Positives? Negatives?" Despite expecting negative responses toward Seesaw because of the student conversations I had previously overheard, neither trend that emerged from this question centered on dislike of actual parent access to the portfolios. The first trend that became immediately clear was that students enjoyed sharing their work with their classmates, something I had not previously overheard students mention. A second trend was specific dislike of parents' ability to comment on portfolio posts, not necessarily dislike towards parent access to the portfolio itself.

What is your overall opinion of the Seesaw Digital Portfolio? Positives? Negatives?
Trend 1: Students enjoyed sharing their work with their classmates - "I like it because you can get to know people better." - "I like Seesaw because I get to show off my work to my fellow students." - "I think is is a good way to write our responses and have our piers see what we have done." - "I think that in ways it is a good thing because it allows other students to see what you wrote." - "The good thing about it is you can get advice from your classmates." - "The good thing about Seesaw is that you can show your class your work."
Trend 2: Students disliked the parent commenting feature - "There are some people who would rather not have their parents reading and commenting on what they write. It may cause them to feel embarrassed or less open in their writing."

> - "I think in ways Seesaw is a good thing but the <u>disadvantage is that parents are able to comment</u> and see all of the things you post.
> - "I like that I can post things that I created but <u>I don't like that people can comment </u>and possibly criticize what I created."
> - "I don't mind Seesaw but it is kind of <u>embarrassing when my mom comments</u>/likes it"
> - "I feel like it's weird because they can read and comment and say things on it. <u>Parents could say weird comments on it</u>."
> - "Parents should be able to have access to our digital portfolio <u>as long as they don't comment</u> and make a big deal about it."

The trend of dislike towards the parent commenting feature on Seesaw also emerged under, "How do you feel about your parents having access to your Seesaw Digital Portfolio?" Two additional trends also became apparent: The majority of students said they 'don't mind' parent access and several mentioned that their feelings towards access improved over time. However, students who disliked parent access to Seesaw voiced privacy concerns.

| How do you feel about your parent having access to your Seesaw Digital Portfolio? Why? |
| --- |
| **Trend 1: Students 'don't mind' parent access**
  - "At first I thought it was weird, but now <u>it doesn't really matter</u> to me if she sees it."
  - "It <u>doesn't really matter to me</u> if she has access. I like to think she saw my work because I'm really proud of it most of the time and would like to share it with my mom."
  - "<u>I feel okay</u> about her on Seesaw because I like when my mom knows what's going on at school."
  - "At first I didn't want my parents to see what I wrote, because I don't like it when people acknowledge what I write, but <u>now I don't mind as much</u>, because I realized that I am not ashamed of my work." |
| **Trend 2: Privacy Concerns**
  - "I dislike it strongly. <u>Sometimes I post about depression</u> and I don't want them knowing about it or that I may have it."
  - "I don't mind but I would prefer to have school work stay at school. I feel as though if I want to tell my mom something about school, I will tell her."
  - "Letting them see it is a good thing, but <u>some of the work you do should be private</u>."
  - "I think that it should be up to the child whether or not their parent has access to their digital portfolio. Some <u>students might not be comfortable with their parents reading what they write</u>." |

Next, using a likert scale from strongly disagree to strongly agree, I asked students to rate the statement, "My parent should have access to my Seesaw Digital Portfolio." A combined 80% of students chose either strongly agree or agree, while a combined 20% of students choose either strongly disagree or disagree.
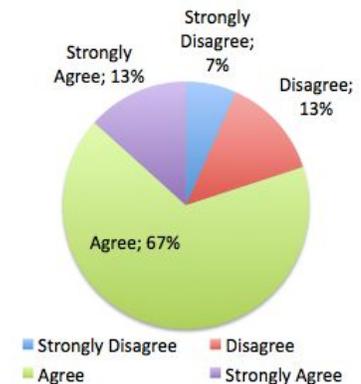
I asked a similar open-ended question as well to see if the quantitative data matched the qualitative answers. The question was, "Do you think other parents should have access to their child's Seesaw digital portfolios? Why or why not?" Overwhelmingly, students answered yes, parents should be able to have access to Seesaw, while two students felt that it should be up to each individual learner whether their parent had access or not.

| Do you think other parents should have access to their child's Seesaw digital portfolios? |
|---|
| **Trend: Majority of students agree parents should have access to Seesaw**
- "Yes because it <u>keeps them connected</u> with what their children are working on."
- "Yes I think that <u>parents should know what is going on</u> in their child's life and at school. Especially if that certain person has a tendency to pass in late work or not do it at all."
- "I think everyone who knows the child <u>should be able to see what they like to write about</u> and stuff like that."
- "I think that <u>all parents should sign up to get access to their child's portfolios</u>. Their children might not like the fact that their parents see what they are doing, but the work quality may improve. Nobody wants their parents at them for bad school work."
- "Yes because it <u>allows them to see how hard your kid is working</u>." |

Parent Perceptions of Seesaw Digital Portfolios (Pre and Post Survey Results)

For my post-survey on parent perceptions, I only reached out to parents who were signed up and connected to their child's Seesaw Digital Portfolio. My post-survey questions were focused specifically on parent interaction with the portfolio, so my cohort was smaller. Fourteen parents responded to the post-survey out of 25 who were connected to the portfolio.

In order to compare results after the Seesaw portfolio was implemented, three of the questions I asked in the post-survey were identical to questions on the original questionnaire.The first question asked parents to rate how many times in the past year they felt informed about what their child was studying in school. Of the 23 parents who participated in the pre-survey, 26% felt informed weekly, while 56% felt informed monthly. For the post-survey, I changed the wording of the question to reflect the past few months instead of the full year to reflect the time they were connected to Seesaw. Of the 14 parents who participated in the post-survey, 57% felt informed weekly, while 43% felt informed monthly. As you can see, the percentage of parents who felt informed weekly increased significantly, which is in line with what they should have experienced when students added one or two Seesaw posts per week.
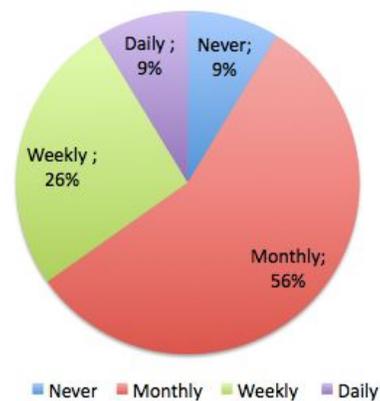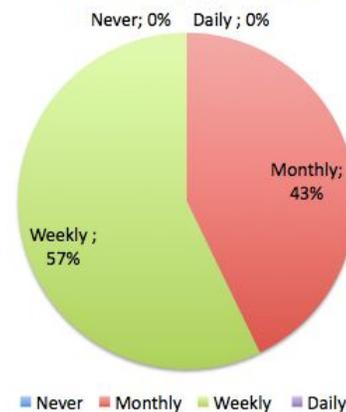
I also asked parents to rate on a likert scale from strongly disagree to strongly agree whether they felt like they consistently knew what their child was learning about at school. Of the 23 parents who took the pre-survey, 57% either agreed or strongly agreed that they consistently knew what their child was learning about. Of the 14 parents who took the post-survey, 79% of parents either agreed or strongly agreed that they consistently knew what their child was learning about. From pre to post survey, the number of parents who disagreed with the statement that they consistently knew what their child was learning at school went from 43% down to 14%. It should be noted that one parent chose 'strongly

disagree' in the post survey. After taking a closer look at the data, the parent may have misinterpreted the

values of the likert scale because they chose strongly disagree or disagree to all of the likert scale

questions, but answered favorably towards all of the open-ended questions about their experience with the

Seesaw Digital Portfolio access. This discrepancy will be further discussed in the conclusions and

implications section.
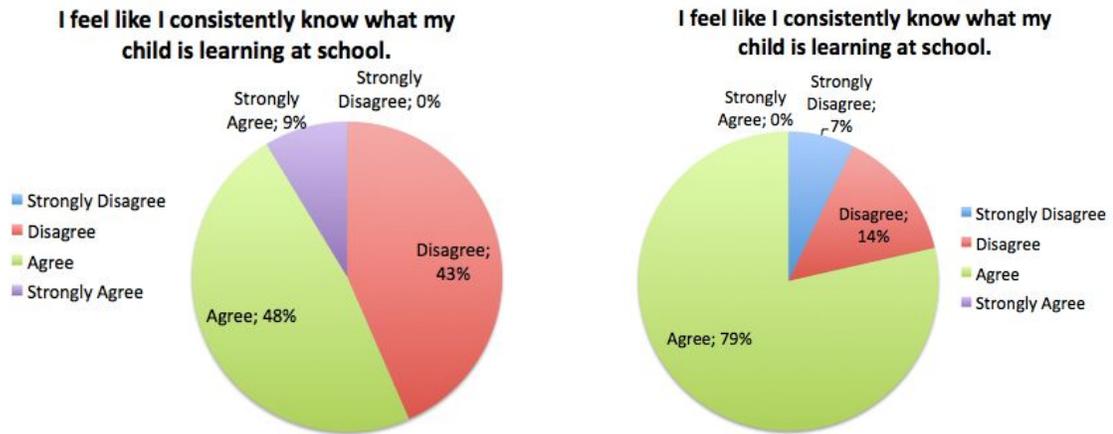
In the pre-survey, although 57% of parents felt like they consistently knew what their child was

learning, only 26% answered either agree or strongly agree when asked if they saw examples of their

child's schoolwork on a regular basis. In the pre-survey, there is a discrepancy between having an idea of

what their child is learning and actually seeing examples of their child's schoolwork. Post survey

percentages were much closer, where 79% felt they consistently knew what their child was learning and

69% saw examples of their child's schoolwork on a regular basis.
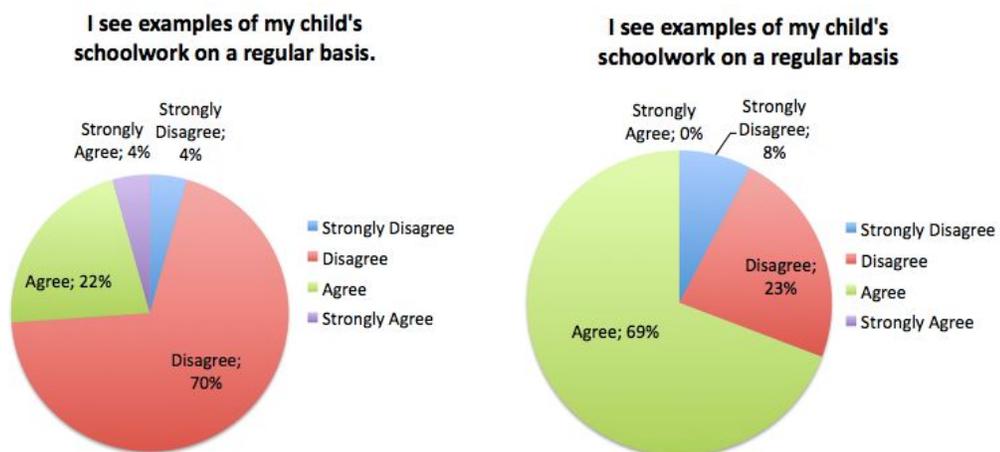
My next questions centered specifically on Seesaw and were not compared to any pre-survey data. I wanted to know if parents thought that the Seesaw Portfolio made them more aware of what their child was learning at school. Overwhelmingly, 92% of parents chose either strongly agree or agree. It should be noted again that the one person who chose strongly disagree may have misinterpreted the values of the likert scale.

The Seesaw Digital Portfolio made me more aware of what my child is learning at school

Strongly Disagree; 8%
Disagree; 0%
Strongly Agree; 38%
Agree; 54%

■ Strongly Disagree ■ Disagree
■ Agree ■ Strongly Agree

The results for this likert scale question closely match the open-ended survey question asking parents to identify positives and negatives of their access to the Seesaw Digital Portfolios. One trend that emerged was that parents felt they would never see examples of their child's work if not for Seesaw.
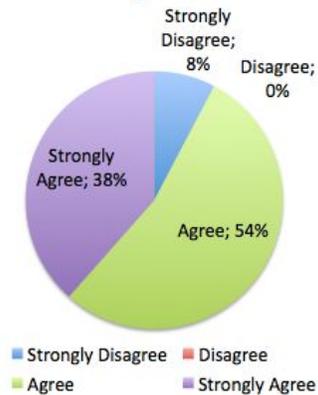
What was having parent access to your child's Seesaw Digital Portfolio like for you?
Trend: Parents would not see examples of student work if not for Seesaw. - "I like being able to see some of his work online. Otherwise I might not see it at all!" - "I love being able to see her writing. I would never see it if it wasn't for Seesaw. Teenagers aren't very good about sharing their writing!" - "Access provided me with the opportunity to see work my son is doing, that otherwise he would likely never bring home to show us." - "Really got to see her work not just hear what doing." - "It was nice to see examples of my child's work since he doesn't always bring things home in a timely manner." - "It was so nice and easy to look and see what my daughter did for writing pieces. Also it kept out of state family in the loop. We simply love it."

One theme identified earlier in the parent pre-survey was that parents were open to additional home-to-school communication that centered on their child's progress and learning instead of a number grade. Because of this, I asked parents to rate on a likert scale from strongly agree to strongly disagree whether they felt

Seesaw is more informative than Powerschool

Strongly Disagree; 7%
Disagree; 22%
Strongly Agree; 21%
Agree; 50%

■ Strongly Disagree ■ Disagree
■ Agree ■ Strongly Agree
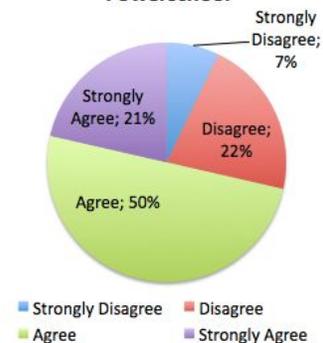
Seesaw was more informative than Powerschool, the number grading system used at RSU 73.

Seventy-one percent of parents either strongly agreed or agreed with the statement. Multiple parents also

commented on how informative Seesaw was to them in the open-ended questions:

What was having parent access to your child's Seesaw Digital Portfolio like for you?
Trend: Seesaw gives parents more in-depth information about student work - "I like having this option. It provides more in-depth information about my child's work. Instead of just a grade and a complete or incomplete I could actually see his skill set." - "I like Seesaw because it shows his actual work, not just a numerical grade." - "I enjoyed seeing her work and felt so much better informed"

In addition to feeling more informed, parents recognized that Seesaw helped facilitate

conversations about school or learning with their child at home. Twelve out of 14 parents responded to

this question, and all but one agreed that Seesaw helped them have specific conversations about their

child's writing. Please note the one parent who said no is noted with an asterix.

Did Seesaw facilitate conversations about school or learning with your child at home?
Trend: Seesaw helped facilitate conversations about learning with their child at home - "Seesaw helps me to ask about or comment on specific work he has done." - "Yes, we were able to have conversations about what she knows and what she's learning next." - "Access to his writing give us a better sense how he is processing things and what sort of things he is thinking about. - "Yes. I would ask questions at the supper table in regards to work I had seen." - *"I tried - and would have loved to. My child was not open to conversation about her work."

Overall, parent perceptions of their access to the Seesaw Digital Portfolios were positive. When

asked, "What would you change about the portfolio use for you or your child, if anything?" several

parents requested that Seesaw be used in other classes in addition to ELA. The major themes that came

through in the parent data is that Seesaw made them more aware of what their child was studying and

helped facilitate conversations about school learning with their child at home.

Although previous sections noted student discomfort with parent access to Seesaw, the majority of parents did not perceive this same apprehension when asked, "How did your child feel about your access to their digital portfolio?"

How did your child feel about your access to their digital portfolio? How do you know?
Negative: - "He was a little worried" - "She was a little embarrassed that I would see everything" - "She did not enjoy it and told me to stop looking - but I didn't"
Neutral: - "He seemed pretty neutral about the whole thing, but does enjoy sharing what he's learning." - "I don't think he minds. He never says anything about it!" - "He hasn't indicated either way, but I do not get the sense that it bothers him at all."
Positive: - "She seemed happy I could look without constantly bothering her." - "It seemed like he liked it as we had conversations about how often I was reviewing the material and what my thoughts were about the material." - "My son thought it was great that I got to see his work and discuss it." - "He's fine with it. We talked about his thoughts on the topic." - "She likes that I can get on and see her work." - "She was a little nervous at first, but like anything new she got over it and now loves it."

Conclusions and Implications

The original purpose of this research study was to examine student and parent perceptions of parent-teacher communication. This research study was unique in that it was completed in two phases over the course of two years. With the natural process of action research came an evolving purpose for the study. Over time, my research became less about parent-teacher communication and more about how I could facilitate home-based communication between the parent and the student using digital portfolios. Shortly after implementing the digital portfolios, it became clear that they would not necessarily increase my communication directly with parents, but instead would help me keep parents more informed and better able to discuss their child's learning and progress than any previous forms of parent-teacher communication I had used.

Because of this change in direction of the study, much of the research discussed in the literature review coincides more with the data I gathered from the pre-surveys than the data gathered through the action research process of implementing the Seesaw Digital portfolios. Themes that emerged from the pre-survey data such as the students' perception of the importance of parental involvement helped confirm previous research. Previous studies have found that parent involvement makes a difference in student attitudes towards post-secondary education and helps create smooth transitions between grade levels (Gutman & Midgley, 2000; Trusty, 1999). Sixty-two percent of students in my study agreed that communication between parents and teachers is a good thing, but contradicted previous research that has found a correlation between parent-teacher communication and student achievement. Only 34% of students felt that home-to-school communication improved their performance in school. This discrepancy could be due to the fact that these same students felt that parent-teacher communication caused them stress, nagging, and punishment. Further research is needed to look into this noticeable difference.

Parent perceptions from pre-survey data also helped confirm previous research on parent-teacher communication. Two smaller trends that emerged that are worth noting are that parents felt paper notices were ineffective, but the text messaging system was helpful. Dixon (2012) agrees that parents want and expect more than photocopied newsletters. Previous research has also found that digital communication such as texting can be a way to increase parent involvement (Olmstead, 2013). The major theme that emerged from the pre-survey data, however, was that parents were open to additional communication on their child's learning and progress. This is where the Seesaw digital portfolio comes into play. Multiple studies have found that parents expect and deserve more two-way dialogue with schools (Beghetto, 2001; Olmstead, 2013; Porterfield & Carnes, 2012; Smith, 2002) and other studies show that technology can be an instrument to increase involvement (Olmstead, 2013). The research is still evolving, however, and up until this point has only focused on gaining perceptions of teachers and parents about digital

communication. Student perceptions and the actual effectiveness of technology on increasing parent involvement has not yet been explored. This study might help close some of those gaps.

As previously noted in the data analysis section, once parents had access to the Seesaw digital portfolios, a major theme that emerged was that students expressed discomfort toward parent this access. This apprehension and discomfort evolved into one of the biggest discrepancies in the research study because the qualitative and quantitative survey results in both the pre and post data did not necessarily match students' attitudes that I perceived from overhearing their conversations. Data gathered from both the pre and post surveys on student perceptions showed that students felt communication was a key to their success in school, the majority of students wanted parents involved in their education, and students agreed that their parents should have access to their Seesaw accounts. In addition, parents did not perceive student discomfort when asked about it in the post-survey.

These discrepancies leave me, the researcher, with several questions that remain unanswered at this point. If students agree that parent-teacher communication is a key to their success, do they not consider parent access to Seesaw parent-teacher communication? The digital portfolios are different from traditional communication between home and school because they provide parents with increased access to their schoolwork, so are students not truly seeing the connection between the two? If 80% of students agree that their parents should be connected to their Seesaw account, what is the real reason behind the outward discomfort they display in front of their peers? Could parents' ability to comment on student portfolio posts, which was perceived negatively by several students, have more to do with their discomfort than overall parent access? Is the discomfort that I perceived actually connected to parent access to Seesaw, or is it more to do with student need for autonomy in middle school as mentioned in previous studies (Beghetto, 2001; Smith, 2002)? If the study had been extended over a longer time period, would student discomfort eventually dissipate as they became accustomed to the parent access?

These questions open up avenues of new and continued research on middle school student perceptions of parent involvement in their education, specifically the effect of digital portfolios on home-based communication. Further investigation into middle school students' perceptions and attitudes toward parent involvement in their learning may shed light on some of the discrepancies that still remain. In addition, further research on parents' ability to comment on specific Seesaw posts might clarify some of the student discomfort to parent portfolio access. If specific lessons on commenting are taught, or if Seesaw was implemented at a younger age, would student attitudes be different? Although 25 out of 45 students had parents connected to Seesaw, only 12 were consistently active. If a larger majority of students had active parents, would this lesson student embarrassment? Interestingly, a trend that emerged in the student post-surveys was that they enjoyed sharing their work with their peers. Would this change if peers were able to comment on their posts in the same way parents had? Would they still be as open to sharing their posts with peers if they had not looped the previous year? These questions remain unanswered and although this study moved previous research forward, more gaps have been uncovered and should be explored in future research.

The last major theme that can be concluded from the data was that Seesaw made parents more informed about their child's learning and progress. The weekly percentage of parents who felt informed because of Seesaw went up from 26% in the pre-survey to 57% in the post-survey. No parents connected to Seesaw answered that they were 'never' informed, compared to 9% in the pre-survey. Seesaw also helped parents more consistently know what their child was learning and see examples of school work on a regular basis. Percentages of parents who agreed or strongly agreed increased significantly, especially when compared to pre-Seesaw survey results. It is important to note that the post-survey results may be skewed. When looking closely at the data, one parent answered 'strongly disagree' or 'disagree' on all likert scale questions, but answered open-ended questions in a positive manner, directly contradicting their previous responses. It seems that this parent may have misinterpreted the values of the likert scale. If

this is in fact the case, the survey results would have been even more strongly in favor of Seesaw's ability to keep parents informed about their child's learning.

I truly believe that my analysis has moved current understanding of home-based communication forward because it looked beyond the initial perceptions of parent-teacher communication and explored home-based communication through digital portfolios in a rural setting. The process of action research took this study in a direction that could not have been planned for ahead of time, but in turn creates additional research possibilities. Further research is needed to investigate various discrepancies, student attitudes toward parent access, the parent commenting feature, and building a culture of shared learning between home and school. This study took place in a rural middle school and may not be applicable to alternative settings. Further research is needed in order to expand the implications and compare the findings to other demographics.

Personal Learning Reflection

This research process has been a blurred combination of rewarding, overwhelming, refreshing, and time consuming. Prior to beginning this process, I never would have thought that teachers could be researchers. I have since realized that research itself is almost identical to the teaching process: try, adapt, try again, repeat. Because of this, I feel like I have grown as both a person and a professional. When originally choosing a research topic, I simply wanted something I knew I could study when transitioning between jobs. I did not realize at the time that I would become so passionate and encouraged by the data I found and the research process itself.

I am undoubtedly proud of my completed research project, but realize that nothing is ever truly complete, especially in teaching. Since uncovering multiple questions and gaps while analyzing the data, I am motivated to look into these further. I am interested in finding out more about student attitudes toward their parents' access, looking into their perceptions of the parent commenting feature, and trying some of the interventions that I originally planned on but barriers of time interfered with. I am curious about

finding the perfect balance between the middle schoolers intrinsic need for autonomy, and the importance of home-based communication.

Using Seesaw digital portfolios has allowed me to feel more connected to parents despite the fact that my conversations and interactions with parents have not increased. I have enjoyed seeing their 'likes', comments, and views of their child's learning. Their positive post-survey perceptions validated all of the hard work involved in the research and have encouraged me to continue using and adapting Seesaw in the future. I would like to reach out to more parents of students who are not yet connected to their child's Seesaw accounts to continue building a sense of community around their ELA learning.

So far, the impact from this study has mainly stayed within the walls of my own classroom, but parents voiced openness to the use of Seesaw in other subject areas. In order for this to go smoothly, I think other teachers would need to overcome the stigma associated with the word 'portfolio'. Throughout the course of this study I adapted my personal outlook on the meaning, and let go of the stress that comes with feeling students can only post perfect final draft work. I now believe that some of the best ways to gauge understanding and keep parents informed of where their child is actually performing is through rough draft posts and student reflections on Seesaw. If other teachers, administrators, and the community can embrace this same line of thinking, we can continue to tap into the power of digital portfolios as a means of improving home-based communication. I think long-term use of Seesaw could improve the culture of a school and bring the community 'in' without ever needing to step foot into the school. This is in essence the beauty of technology in our fast paced world where time is valuable and no one ever has enough.

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Appendix A - Administrator Consent - IRB Phase I

Dear Ken Healey/Scott Albert,

My name is Rachel Toner and as you know, I am currently a graduate student at the University of Maine Farmington. I am interested in conducting a research study in the Spring of 2016 that will continue into the 2016-2017 school year. I will be collecting data beginning in April 2016 and presenting my research to my peers in an open symposium in May 2017. I am interested in exploring school-to-home communication at the middle school level. I will explore the relationship between digital technology use and parent-teacher communication.

I would like to send out an electronic survey to all 7th and 8th grade parents and students on their perceptions of current home-to-school communication. Before completing the survey, parents will sign a consent form for themselves, and give separate consent for their child to participate. Written assent from students will also be collected. Participation is voluntary and participants can stop taking the survey at any time.

I will not share identifiable data about specific students or parents involved in the study. If you have any questions about the research, I am the principal investigator to contact at rtoner@rsu73.com. You may also reach the faculty advisor on this study at (207) 778-7180 or meredith.swallow@maine.edu.

Thank you for considering my request to conduct research,

Rachel Toner

I have reviewed Rachel Toner's research plan for "Digital technology Use and Parent-Teacher Communication in Middle School". I give my consent to conduct this research in the spring of 2016. I am aware that I may also ask to view the report at the end of the study"

_____   _____   _____
Date   Name   Position in District/Site

Appendix B - Adult Informed Consent Form - IRB Phase I

Dear Parent,
I am conducting a research study as part of my graduate degree at the University of Maine Farmington. This research is part of my capstone course. The purpose of the research is to investigate the effect of digital portfolios on parent-teacher communication at the middle school level. This consent form requests participation on a questionnaire about your personal perceptions of current parent-teacher communication. There are two parts to the study: your perceptions of current communication techniques, and the opinions of your child.

If you have any concerns or inquiries about your rights as a subject or the manner in which this research is conducted, you can contact Rachel Toner, the principal investigator, at Spruce Mountain Middle School, 897-4319 or by email rtoner@rsu73.com or Karol Maybury, chair of the IRB, at (207) 778-7067 or karol.maybury@maine.edu. If you would like a summary of the results, please make the request of the researcher at the contact given above.

What will you be asked to do? - If you decide to participate, you will be asked to complete a short survey. The survey has about twenty questions and should only take 10-15 minutes.
Risks - The time and inconvenience of the survey may be risks of participating in the study.
Benefits - There are no direct benefits to you from participating in the study. However, as a participant, you may enjoy providing your perceptions of parent-teacher communication at the middle school.
Confidentiality - Your responses on the survey will remain confidential. The documents and files from this study will be kept in a locked drawer in my office. Survey data will be gathered on a password protected Google account. Some data may be shared with Meredith Swallow, faculty member for the course. All data from the study, will be kept for 5 years and then destroyed. Results of this research will be shared confidentially with a larger audience in the form of one or more publications and verbal presentations.
Voluntary - Participation is voluntary. Lack of participation by you or your child will not impact grades. If you choose to take part in this study, you may stop at any time. You may skip any questions you do not wish to answer.

Part I: Your Perceptions
____Yes I _____ have carefully read and fully understand the purpose of this research and the procedures to be followed. I understand that my records will be kept confidential, my participation is voluntary, and that I may withdraw at any time without penalty. I also recognize that I may skip questions I do not wish to respond to.

        ____ Digitally to _____
                                (Email address)
        ____ Paper copy

____ No I decline

Part II Student Opinions

All students in my classes will also be asked about their perceptions of current parent-teacher communication. If you consent, I will include this data as part of my analysis.

_____ Yes I consent for you to confidentially include my child's _____ responses

in your summary   (Child's Name)

_____ No I decline

_____   _____

(Parent Signature)   (Date)

Appendix C - Student Written Assent - IRB Phase I

Dear Student,

I am enrolled in graduate courses at the University of Maine in Farmington. For my capstone project, I chose to study parent-teacher communication. I want to learn more about communication in middle school. I also want to learn about the effect of digital portfolios on parent-teacher communication.

In order to complete my coursework, I would like to have you answer a short survey. If you agree to be in the study, you will answer questions about communication between your parents and your teachers, as well as your familiarity with digital portfolios. Agreeing to be in the study will not count as extra credit.

You can ask questions about this study at any time. If you decide at any time not to finish, you can ask me to stop. Choosing not to participate will not hurt your grade in any way.

The questions I ask are only about what you think. There are no right or wrong answers because this is not a test.

If you sign this paper, it means that you have read this and that you want to be in the study. If you don't want to be in the study, don't sign this paper. Being in the study is up to you, and no one will be upset if you don't sign this paper or if you change your mind later.

Your signature:_____   Date: _____

Your printed name:_____   Date: _____

Appendix D - Parent Questionnaire - IRB Phase I

Parent Perceptions of Current School-to-Home Communication

The purpose of this survey is to collect your perception of current school-to-home communication practices. This communication includes discussions on student learning, progress, and behavior. I am currently taking graduate courses at the University of Maine at Farmington and plan to study the effect of student digital portfolios on school-to-home communication. Your participation is greatly appreciated.

1. How do you stay in contact with your child's school and/or teachers? Check all that apply:

- phone   - text message
- email   - District phone burst
- paper handouts   - newsletters
- meetings   - Remind App

How many times in the past year have you: Never, Monthly, Weekly, Daily

2. Accessed powerschool?
3. Contacted your child's teacher?
4. Been contacted by your child's teacher?
5. Felt informed about what your child is studying in school?

Answer the following using the scale: Strongly Disagree/ Disagree /Agree /Strongly Agree

6. I find out about school events in a timely fashion.
7. I receive communication about positive things from my child's teacher (phone, text, notes, etc.)
8. I receive information and/or materials that help me to support my child's learning at home.
9. I talk with my child's teacher(s) about my child's schoolwork, challenges, and academic progress.
10. I am aware/informed of my child's progress or problems before progress reports are sent home
11. I am contacted in a timely manner if my child does not progress academically or when performance is slipping.
12. I am satisfied with the response I get when I contact the school/and or teachers with questions or concerns.
13. I feel like I consistently know what my child is learning at school.
14. I am aware of my child's educational goals.
15. I would like to be more informed about my child's learning at school.
16. I see examples of my child's schoolwork on a regular basis.
17. My child informs me about what they are learning when I ask.
18. I would read and discuss my child's learning if I had access to their school work.
19. My child has created a digital portfolio in school.
20. I would download an application or regularly visit a website to view my child's e-portfolio.
21. I am satisfied with the current communication from my child's teachers.

Open-Ended Response Questions:

22. My overall opinion of current home-to-school communication is:
23. If I could change one thing about communication with my child's teacher/school it would be:

Appendix E - Student Questionnaire - IRB Phase I

Student Perceptions of Current School-to-Home Communication

The purpose of this survey is to learn what you think of current school-to-home communication. This communication includes when your teachers and parents discuss your learning, progress, and behavior. I am currently taking graduate courses at the University of Maine at Farmington and plan to study the effect of student digital portfolios on school-to-home communication. Your participation is greatly appreciated.

How many times in the past year have: Never, Monthly, Weekly, Daily
1. You accessed powerschool?
2. You discussed your school work with your parents?
3. You written reflections based on your school work?
4. You videotaped yourself explaining your learning?
5. Your teachers contacted your parents?
6. Your parents contacted your teacher?

Answer the following using the scale: Strongly Disagree/ Disagree /Agree /Strongly Agree

7. My parents regularly check powerschool.
8. My parents care about my success in school.
9. My teachers know my parents.
10. My parents know my teachers.
11. My teachers tell my parents when I do well or improve.
12. My teachers tell my parents when I've having problems.
13. I perform better in school when my parents and teacher stay in touch.
14. Communication between my teachers and my parents is a good thing.
15. My parents are aware of my academic goals.
16. My parents are aware of my academic progress.
17. I bring home papers, notes, and announcements from school to give to my parents.
18. I DO NOT have enough time to talk with my parent about school or homework.
19. I want my parent to be more involved in my education.
20. I have opportunities to share my learning, school work, and progress with my parents.
21. I have opportunities to share my learning, school work, and progress with my peers.
22. I have created a digital portfolio in school.

Open-Ended Response Questions:
23. My overall opinion of home-to-school communication is:

24. If I could change one thing about communication between my teachers and my parents, it would be:

Appendix F - Administrator Consent - IRB Phase II

Dear Ken Healey/Scott Albert,

You previously gave me consent to conduct a research study that is still in progress and will continue until April 2017. I am writing to request your consent for additional research that will take place over the course of the 2016-2017 school year. The combination of both research phases will be presented to my peers in an open symposium in May 2017. I am still exploring school-to-home communication at the middle school level, and would like to collect additional data on the effect of digital portfolios on parent-teacher communication.

I would like to have students upload ELA assignments to an online digital portfolio website called Seesaw. Using action research design, I will implement the digital portfolios with a series of interventions. Parents will be asked to join and follow their child's portfolio in an attempt to be more transparent with their child's educational goals. Towards the end of the research period, I will send out an electronic survey to all 8th grade parents and students on their perceptions of the digital portfolios effect on communication. Before signing up for the portfolios or completing the survey, parents will sign a consent form for themselves, and give separate consent for their child to participate. Written assent from students will also be collected. Parent participation for the digital portfolios is voluntary and all participants can stop taking the survey at any time.

I will not share identifiable data about specific students or parents involved in the study. If you have any questions about the research, I am the principal investigator to contact at rtoner@rsu73.com. You may also reach the faculty advisor on this study, Dr. Christopher Strople, at (207) 778-7180 or christopher.strople@maine.edu. Thank you for considering my request to conduct research,

Rachel Toner

I have reviewed Rachel Toner's research plan for "Digital technology Use and Parent-Teacher Communication in Middle School". I give my consent to conduct this research in the spring of 2016. I am aware that I may also ask to view the report at the end of the study"

_____   _____   _____
Date   Name   Position in District/Site

Appendix G - Adult Informed Consent - IRB Phase II

Dear Parent,

Thank you for signing up to view your child's portfolio on Seesaw.com! Seesaw is a great way for you to see what your child is learning in ELA on a more frequent basis. I would like parents using Seesaw to answer a short survey at the end of March about your experience with the digital portfolio. The survey is part of the research study I am conducting as a graduate student at the University of Maine in Farmington. The questionnaire is optional. You can still view Seesaw at your convenience and not complete the survey, but your participation will really help me complete my research. Your anonymous answers will allow me to gain a better understanding of parent-teacher communication at the middle school level.

You may remember completing a survey about parent-teacher communication earlier this year. This consent form requests to gather additional information on student use of digital portfolios, and parent perceptions of the portfolios effect on home-to-school communication.

If you have any concerns or inquiries about your rights as a subject or the manner in which this research is conducted, you can contact Mrs. Rachel Toner, the principal investigator, at Spruce Mountain Middle School, 897-4319 or by email rtoner@rsu73.com or Dr. Christopher Strople, at (207) 778-7180 or by email at christopher.strople@maine.edu. If you would like a summary of the results, please make the request of the researcher at the contact given above.

What will you be asked to do? - If you decide to participate, you will be asked to periodically view your child's online portfolio and eventually complete a short survey. The survey is open-ended and should only take 5-10 minutes.

Risks - The time and inconvenience of the survey may be risks of participating in the study.

Benefits - There are no direct benefits to you from participating in the study. However, as a participant, you may enjoy viewing your child's class work and providing your perceptions of parent-teacher communication at the middle school.

Confidentiality - Your responses on the survey will remain confidential. The documents and files from this study will be kept in a locked drawer in my office. Survey data will be gathered on a password protected Google account. Some data may be shared with Christopher Strople, faculty member for the course. All data from the study will be kept for 5 years and then destroyed. Results of this research will be shared confidentially with a larger audience in the form of publications and/or verbal presentations.

Voluntary - Participation is voluntary. Lack of participation by you or your child will not impact grades. If you choose to take part in this study, you may stop at any time. You may skip any questions you do not wish to answer.

Part I: Your Participation and Perceptions

____Yes I _____ have carefully read and fully

understand the purpose of this research and the procedures to be followed. I understand that my records will be kept confidential, my participation is voluntary, and that I may withdraw at any time without penalty. I also recognize that I may skip questions I do not wish to respond to.

____ Digitally to _____
                                                            (Email address)
____ Paper copy

____ No I decline

Part II Student Opinions

All students in my classes will create a digital portfolio and be asked about their perceptions of parent-teacher communication. If you consent, I will include this data as part of my analysis.

____ Yes I consent for you to confidentially include my child's

_____ responses in your summary
            (Child's Name)

_____ No I decline

_____   _____
    (Parent Signature)   (Date)

Appendix H - Student Written Assent - IRB Phase II

Dear Student,

I am enrolled in graduate courses at the University of Maine in Farmington. For my capstone project, I chose to study parent-teacher communication. I want to learn more about communication in middle school. I also want to learn about the effect of digital portfolios on parent-teacher communication.

In order to complete my coursework, I would like to have you upload writing assignments to a digital portfolio. Near the end of the study, I will ask you to answer a short survey. If you agree to be in the study, you will answer questions about communication between your parents and your teachers, as well as your opinion on digital portfolios. Agreeing to be in the study will not count as extra credit.

You can ask questions about this study at any time. If you decide at any time not to finish, you can ask me to stop. Choosing not to participate in the survey will not hurt your grade in any way.

The questions I ask are only about what you think. There are no right or wrong answers because this is not a test.

If you sign this paper, it means that you have read this and that you want to be in the study. If you don't want to be in the study, don't sign this paper. Being in the study is up to you, and no one will be upset if you don't sign this paper or if you change your mind later.

Your signature:_____   Date: _____

Your printed name:_____   Date: _____

Appendix I - Parent Questionnaire - IRB Phase II

Parent Perceptions of Current School-to-Home Communication
The purpose of this survey is to collect your perception of school-to-home communication practices. This communication includes discussions on student learning, progress, and behavior. I am currently taking graduate courses at the University of Maine at Farmington and plan to study the effect of student digital portfolios on school-to-home communication. Your participation is greatly appreciated.

How many times in the past few months have you: Never, Monthly, Weekly, Daily
1. Felt informed about what your child was studying in school
2. Discussed learning and/or assignments with your child?
3. Accessed Seesaw?

4. What prompts you to check your child's Seesaw portfolio? Check all that apply
Seesaw Parent App on cell phone
Email Notifications from Seesaw
I remember on my own
Nothing, I haven't been checking the portfolio consistently.
Other: ____

Answer the following using the scale: Strongly Disagree/ Disagree /Agree /Strongly Agree

5. I feel like I consistently know what my child is learning about at school.

6. The Seesaw portfolio made me more aware of what my child is learning at school (ELA).

7. I see examples of my child's schoolwork on a regular basis.

8. The Seesaw portfolio improved my ability to see examples of my child's schoolwork.

9. I would like to see Seesaw used for other subject areas in addition to ELA.

10. Seesaw is more informative than Powerschool.

Open-Ended Opinions
11. What was having parent access to your child's Seesaw digital portfolio like for you? Positives? Negatives?
12. Did Seesaw facilitate conversations about school or learning with your child at home? If so, how? Can you elaborate?
13. How did your child feel about your access to their digital portfolio? How do you know?
14. What is your overall opinion of the Seesaw Digital Portfolio?
15. What would you change about the portfolio use for you or your child, if anything?

Appendix J - Student Questionnaire - IRB Phase II

Student Perceptions of Current School-to-Home Communication

The purpose of this survey is to learn what you think of current school-to-home communication. This communication includes when your teachers and parents discuss your learning, progress, and behavior. I am currently taking graduate courses at the University of Maine at Farmington and plan to study the effect of student digital portfolios on school-to-home communication. Your participation is greatly appreciated.

Answer the following using the scale: Strongly Disagree/ Disagree /Agree /Strongly Agree

1. I perform better when my parents and teacher stay in touch.

2. I perform better when my parents care about my learning.

3. Communication between parents and teachers is a good thing.

4. I want my parents involved in my education.

5. I care about the work I post to Seesaw because I know my parents will see it.

6. My parents should have access to my digital portfolio.

7. Parent access to Seesaw digital portfolios is a good thing.

Open-Ended Opinions:

8. What is your overall opinion of the Seesaw Digital Portfolio? Positives? Negatives?

9. Did you talk about your Seesaw posts and/or ELA learning with your parents? Can you elaborate or give examples?

10. How do you feel about your parent having access to your Seesaw Digital Portfolio? Why?

11. Did your feelings about parent access to your Seesaw Digital Portfolio change over time? Why or why not?

12. How do you think your parents feel about having access to your Seesaw Digital Portfolio? How do you know?

13. Do you think other parents should have access to their child's Seesaw Digital Portfolios? Why or Why not?