The Effects of Technology on Engagement and Retention Among Upper Elementary Montessori Students.

An Action Research Report

by Justin Tosco

The Effects of Technology on Student Engagement and Retention Among Upper Elementary Montessori Students.

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Abstract

The purpose of this paper is to describe the findings of a study on the effects of integrating technology into lessons in a Montessori upper elementary classroom in Raleigh, North Carolina. The research looked at both the student engagement and the retention of information when technology was included in Montessori lessons. This study spanned a six-week period and was conducted with 25 fourth through sixth grade students. Data collection included a pre-lesson questionnaire, a teacher engagement report form, a teacher observation form, a post-lesson feedback form, and a short answer lesson response form. The results of this data analysis showed an overall preference by students for lessons that included technology, an increase in engagement relative to lesson that used only traditional Montessori materials, and a 16% increase in accuracy based on short answer responses when technology was included in one of the seven lessons that were tracked. The results of this action research indicate that utilizing technology in the Montessori classroom may increase student engagement and retention of information.

The philosopher Socrates once said, “Education is the kindling of a flame, not the filling of a vessel.” In order to kindle that flame educators must meet students where they are. If an excitement for learning is the best recipe for deep and lasting understanding, it’s important that students be fully engaged when encountering new material. A lasting knowledge of class content may be at risk without captivating the imagination of students. For so many students today, technology is an ever-present part of their lives outside of the classroom, whether it is via the computer, TV, smart phone, or tablet. The current classroom model rarely incorporates technology in any consistent way,—particularly in the Montessori environment. Too often, upper elementary students seem disengaged from Montessori lessons that use traditional materials such as three-part card sets or impressionistic charts. These tools, created a century ago, can seem dull and dated to children that experience media and technology in the form of digital imagery that is flashy, fast-paced, interactive, and fun when they are not at school. Additionally, many Montessori elementary students were first exposed to the conventional Montessori materials when they were very young, and have been using them for many years. I suspect these materials have lost their luster, particularly for 6th year students.

Because I have seen many signs of disengagement such as long stares, rolling eyes, and fidgety bodies in many of my lessons that included standard Montessori materials, I decided it would be beneficial to test the use of technology as a teaching tool in those same lessons. My goal was not only for students to visibly show signs of engagement and excitement around concepts presented with digital media, but also to prove an increased retention of knowledge around new information.

This research took place in the Montessori upper elementary classroom in which I teach. The school is located in Raleigh, North Carolina and my class consists of 25 students ages 9-12. The students were split into two groups – A and B – so that each lesson would have one group that received the lesson with technology and one group that received the same lesson content using traditional Montessori materials and no technology. I made sure that both groups received technological interventions outside of the lessons for this study so that all students might benefit from its inclusion.

A teacher's best tool is often the engagement of their students. In Montessori classrooms, because the philosophy rests on the principle that the deepest learning results from self-motivated activities, teachers are often looking for ways to guide students towards classroom work that excites them (Montessori, 1995). Until the 1950's, the conventional wisdom in education was that best practices included a teacher-imposed reward/consequence structure in the classroom (Boggiano & Pittman, 1993). Recently though, there's been a shift towards allowing children to follow their own passions in school, thereby freeing them up to be intrinsically motivated so they might become autonomous, self-directed learners (Boggiano & Pittman, 1993).

In order to make an impression on students so that they might find inspiration to explore further, Maria Montessori created materials that would capture the imagination of the children that were introduced to them. In the Montessori classroom, this might include the Impressionistic Charts, Three Part Card materials, or Parts of Speech Symbols, just to name a few. Impressionistic charts are hand-colored charts illustrating elements of nature in an imaginative way. This might include the cooling of the earth or the process of photosynthesis. Three part card materials are a material developed by Dr.

Montessori that helps students learn nomenclature based on three cards – a card for the name of something, a card with a picture of that thing, and a description of that thing. Parts of Speech Symbols are Montessori symbols that are color coded and assigned to particular parts of speech to help students learn grammar (eg. a black triangle for a noun, a red circle for a verb). Maria Montessori designed many of these materials in the early 1900's. In a world where students have increasing access to exciting, fast-paced technology (Ahuja, 2013; Bledsoe, Pilgrim, & Reily, 2012), it may be time to incorporate more technology into lessons in order to keep the attention of students. Half of students that drop out of high school do so because they're bored (Martinez & Schilling, 2010); perhaps if technology were more frequently used in the learning environment, this would not be the case. Multiple studies including quantitative and qualitative research are necessary in order to compare student engagement between integrated technology and original Montessori Materials (Powell, 2009).

Prensky (2001) coined the term Digital Native to describe children who were born during or after the rise of the digital age and therefore are more comfortable using technology. Increasingly each year, these digital natives are becoming inundated with all kinds of technology (Bledsoe et al., 2012). It's also becoming more and more common that students are accessing media at home. Teenagers average 7 ½ hours consuming media each day (Ahuja, 2013). This includes time on the Internet, listening to music, playing video games, and watching TV. There is a discrepancy at play if students are spending this much time with media outside the classroom, but are not given access to technology at school. Bledsoe et al. (2012) suggested that teachers do a better job of incorporating the technology already used by students into the classroom.

Gathering enough research on technology in schools is difficult because technology is changing so rapidly that it often moves too fast for long-term studies to keep up (Editorial Projects in Education Research Center, 2011). Although there is still a need for more rigorous long-term research around the integration of technology in the classroom (Editorial Projects in Education Research Center, 2011), there are a number of peer-reviewed studies and meta-analyses that give a good idea of ways in which technology has worked to engage students and improve academic outcomes. Most scientists and pediatricians agree that screen time should be developmentally appropriate and that young children should have limited access to technology (Rosin, 2013). Still, inclusion of technology initiatives in K-12 schools is on the rise (Banitt, Theis, & Van Leeuwe, 2013) so it is important to analyze the results before considering including them in the Montessori classroom.

Oftentimes, jobs today require employees to be well versed in technological tools such as blogs, digital research and communication, and web tools (Bledsoe et al., 2012). Introducing students in K-12 classrooms to these tools allows them to be better prepared for the demands of the workforce (U.S. Department of Education, 2010). For this reason, more research around online literacy is essential for our future workers, even though so far, the use of video and computer content has proven to have positive results (Bebell & O'Dwyer, 2010; Cheung, 2012; U.S. Department of Education, 2012).

Improved access to the Internet in schools has opened the door to new types of communication. Students can now collaborate with each other on group projects in exciting and creative ways (Editorial Projects in Education Research Center, 2011). Instead of traditional lectures, many teachers are opting for Project Based Learning

(PBL) (Martinez & Schilling, 2011). PBL emphasizes team exploration and, oftentimes, online collaboration where students have easy access to peer support and assistance. Across the world, collaboration has shown to improve innovation (Kozma, 2003) and Internet access allows for communication between schools, states, and even countries (Powell, 2009).

Engaging student interest has been a focus for a number of studies around technology. An action research conducted with 200 students grades 8-12 by Banitt et al. (2013) found that students were more actively engaged when the lessons involved technology such as YouTube and PowerPoint and that most of those lessons increased on-task behavior by 5-10% in addition to increased student enjoyment relative to lessons that did not use technology. Likewise, a review of four empirical studies done by Bebell & O'Dwyer (2010) showed that participation by students grades 4-12 in 1:1 computer programs was associated with increased student engagement and interest level. Martinez & Schilling (2011) argue that using technologies in the classroom will create meaningful and engaging opportunities for students.

Incorporating the use of technology into the Montessori classroom presents unique challenges. As a method of education that is focused on concrete, hands-on learning through materials, emphasizes the natural world, and is more than a hundred years old, the philosophy could be seen as being at odds with the inclusion of technology. However, a number of researchers and writers have been highlighting the successful incorporation of technology in the Montessori classroom. According to Cifuentes and Prozesky (2014), "Montessori's philosophy aligns precisely with theories of instructional design and educational technology" (p. 29). Technology is uniquely appropriate for

Montessori teachers because Montessori classrooms allow students to construct their own learning. Technology can be one of the many educational resources Montessori teachers utilize to encourage lifelong learning (Hubbell, 2006). Montessori teachers have put some of those technology resources into practice already. Hubbell (2006) has suggested things such as using the internet for research, word processing, typing practice, creative writing, online educational activities, software tools such as PowerPoint and Excel, and online extensions to Montessori materials (para. 9). As Hubbell (2003) points out, the inclusion of these digital tools should not be at the expense of the traditional Montessori materials, they should be used in conjunction with the materials.

There are limited peer reviewed studies or researches on the effects of integrating technology into elementary Montessori classrooms. While there are a number of opinion pieces written on the topic (Carol, 2006; Hubbell, 2003; Hubbell 2006), Montessori teachers would be well served if there were more peer-reviewed studies done using empirical data, surveys, and teacher observations (Powell, 2009). As technology continues to expand the limits of what can be accomplished in the classroom, it is a tool that could potentially help bring Montessori education to the forefront of progress in education.

With this information as backdrop, I wanted to enlist the help of my students in answering a critical question: What are the effects of technology integration on student engagement and retention of information on students in the Montessori upper elementary environment?

Methodology

The collection of data spanned six weeks. Each student in the class received lessons that included technology and it is estimated that each student participated in 60-80 minutes worth of lessons using technology over the course of four weeks. There were a number of sources used to gather this data that both teachers and students were asked to complete.

Students were divided into two groups – Group A and Group B. The two groups were made to reflect a balance in age, previous exposure to the concept presented in the lesson, and cognitive ability as judged by the teacher. Each group received a series of lessons that they would have been presented even if there were no action research involved. In other words, these lessons were all a part of the standard upper elementary Montessori curriculum. Group A received the lesson as outlined by the Montessori curriculum, using only standard Montessori materials. Group B then received the same lesson shortly thereafter but this time, the lesson included a piece of technology. In most cases this meant showing a YouTube video that was preselected by the teacher that conveyed the same concept or information intended by the Montessori material.

One time, before each student came to their first lesson with technology, they were asked to fill out a Pre-Lesson Feedback Form. This form asked a number of questions regarding the student's attitude toward small group lessons and lessons that included technology. All students were made aware that this was a part of an action research and that all the information they shared would remain confidential and anonymous. Each student only needed to fill out this form once because the students generalized their answers based on lessons they'd had in the past.

After students filled out the Pre-Lesson Feedback Form, the teacher began the lesson. One specific example of the contrast between lessons with technology and without technology was a lesson on the lever as a simple machine. The group of students who received the traditional Montessori approach learned about the lever using printed diagrams of the three types of levers. The second group received the same lesson with the same concepts, but this time, the students saw the three types of levers by watching a YouTube video that gave specific examples of these levers. Another example was a lesson on comma placement with subordinates and conjunctions. The first group saw this lesson as the teacher would normally give it—by using material cards to give examples of when to use commas. The second group received a lesson in the same day, by the same teacher, that conveyed the same comma usage but used a YouTube video instead of the material cards.

The teacher alternated the technology intervention between Group A and Group B so that if Group A received the technology piece in the first lesson, Group B would see the technology piece in the second lesson. This was intended to give all students equal time with the technology intervention. This also gave each student the opportunity to fairly compare what it is like between those lessons that have technology involved and those that don't. The intention was for these students to give more complete, honest answers when filling out their feedback forms.

Before, during, and after each lesson, the teacher made close observations of the behavior and actions of each student in the lesson. Using these observations, the teacher would then fill out the Teacher Engagement Report Form. This form gave the teacher the

opportunity to rank things like student interest, ability to pay attention, motivation to come up with their own follow-up practice, etc.

When lessons were completed, the teacher asked all students in the lesson to immediately fill out the Post-Lesson Feedback Form. This form gave students the opportunity to anonymously answer questions about their interest in the lesson that had just occurred. This form includes similar information to the Pre-Lesson Feedback Form but was specific to the lesson they had just received. Each student was asked to fill out this form after every lesson they received regardless of whether or not they were in the group that received the technology intervention.

In order to assess each student's retention of the new information they received in their lesson, they were given a Short Answer Lesson Response Form. This form was usually given no sooner than two days and no later than a week after the student received the lesson. This time frame was in order ensure that the response was completed soon enough that students had some time for the information to sink in, but not so long that they had moved on to other works all together.

With detailed and specific data collection forms in place, it was time to begin the research. Students were told that they would be asked to fill out questionnaires in order to help with a research aimed at assessing student engagement and ability to remember information. The students were asked to take their time with each form and to fill them out as honestly as possible.

Analysis of Data

This action research consisted of five data sources that were gathered over the span of two months in order to understand how technology might be affecting student engagement and understanding of lessons presented during that time. The five data sources were pre-lesson feedback forms, teacher response forms on student engagement, post lesson feedback forms, post lesson response forms, and observation tally sheets. Each lesson was presented to two groups. One of the groups received the lesson without technology being incorporated and the other group received the lesson with technology included.

The first piece of data collected was the Teacher Engagement Report Form (Appendix A). This form was filled out by the teacher based on observations as a way to understand the amount of engagement seen throughout the classroom. In order to better understand student motivation, this observation looked at eight different actions that demonstrate student engagement (see Figure 1). This data collection provided a snapshot of what teachers were seeing in the classroom before integrating the technology component into lessons. The results indicate that there were a number of students who exhibited very little motivation or engagement based on the criteria listed. This data would suggest the need for the research that followed in order to boost student excitement around classroom lessons. In addition, by taking note of these observations, teachers could better assess what effect technology would have on engaging the students.

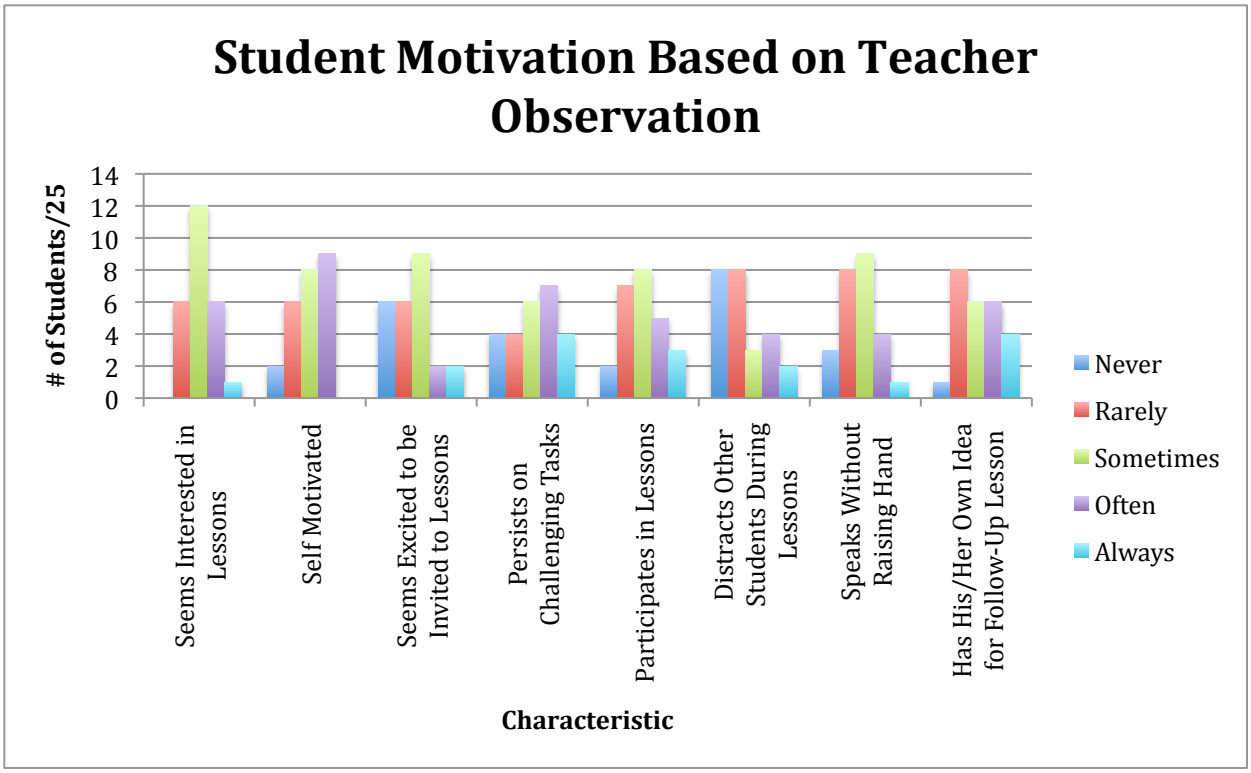

Figure 1. Student motivation based on teacher observation.

The second set of data received in the research was the Pre-Lesson Feedback Form (see Appendix B). This form listed a series of seven questions for students to answer. There were 25 students in the class and each student filled out the form only once. Questions on the form related to students' interest and ability to learn as it relates to technology. Questions numbered 5 and 6 on the Pre-Lesson Feedback form give insight into students' feelings about lessons that include technology or Montessori materials (see Figure 2). The responses for these questions in particular show that 64% of students enjoy lessons that include technology compared to 28% who enjoy lessons that include Montessori materials. Likewise, 24% of students in this class dislike lessons with Montessori Materials, whereas only 20% dislike lessons that include technology. This

data demonstrates that students are more likely to enjoy lessons where technology is involved and more likely to dislike lessons in which Montessori materials are the focus.

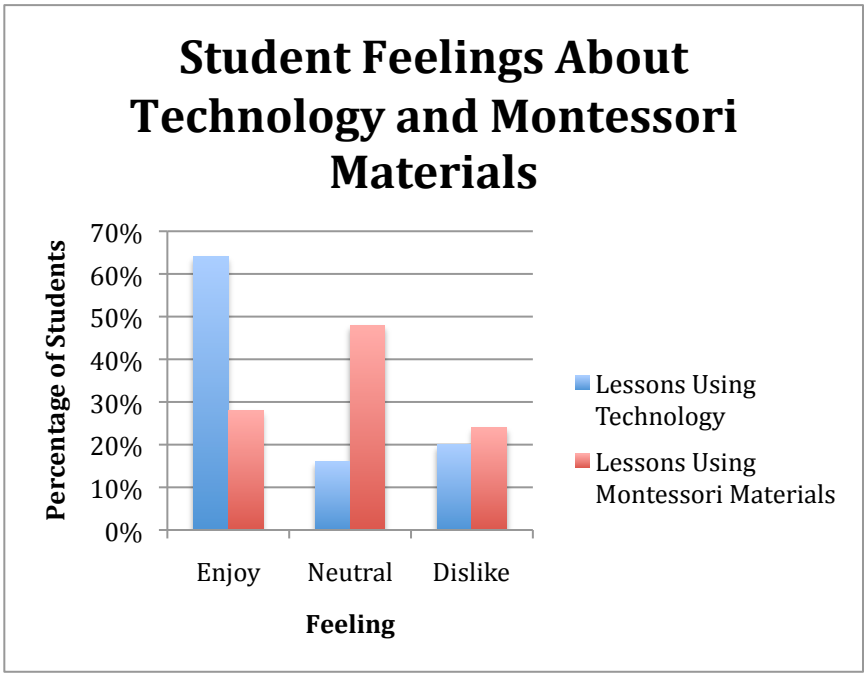

Figure 2. Student feelings about technology and Montessori materials.

This third data set illustrates another interesting finding. Figure 3 shows that 44% of the class is likely to be interested in a lesson if it includes a technology component, 28% if the lesson uses a Montessori material, 16% if it uses a textbook, and 12% if a worksheet is used. In addition, the numbers are similar when students were asked about what helps them to learn the material covered in lessons. Students feel they will better learn the information in a lesson if technology is used (see Figure 4). Based on the student responses, one can conclude that students feel that lessons that incorporate technology will keep their interest and help them to better remember the material.

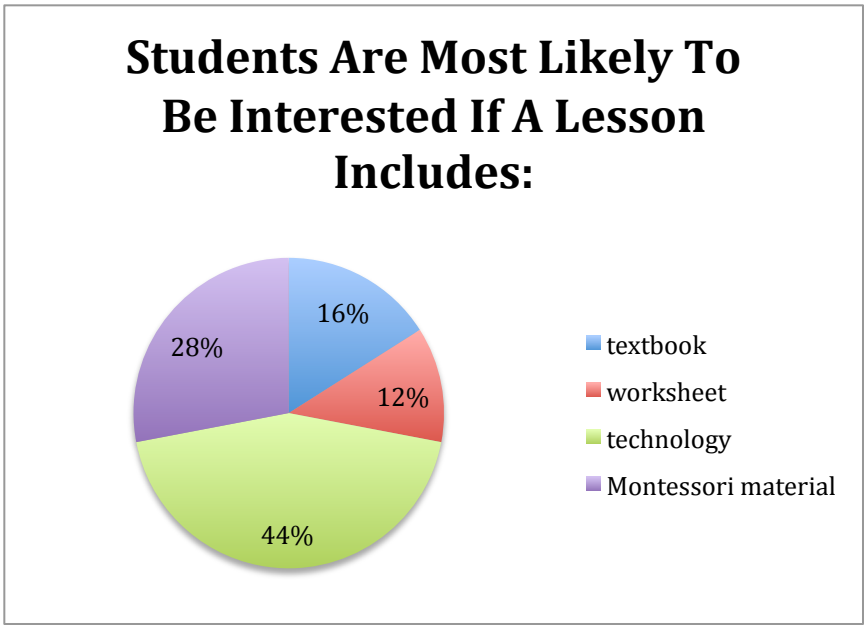

Figure 3. Student interest in lessons.

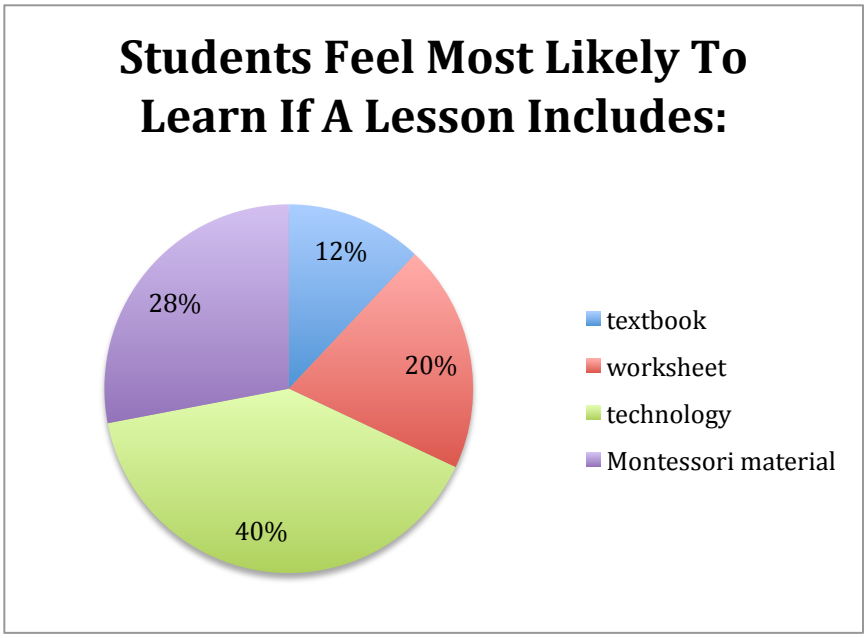

Figure 4. Student ability to learn.

The Observation Tally Sheet (Appendix C) is the third data collection set in this research. This form gave the teacher an opportunity to make tally marks in two columns. If the lesson was given to 6 students and four of them seemed to be engaged and on-task the teacher would put 4 tally marks in the "Engaged" column and 2 in the "Disengaged" column. Tally marks were made in 5-minute intervals for 20 minutes. This form was completed for fourteen lessons (seven topics given twice—once with technology, once without technology). The seven topics covered in these lessons were levers, slavery, diagramming, cubing, comma use, congruence and similarity, and paragraph writing. Student engagement appeared to be consistent regardless of whether technology was used during the slavery, diagramming, congruence/similarity, and paragraph writing lessons (see Figure 5). For the levers, cubing, and comma use lessons, the inclusion of technology helped to keep the attention of students. Four out of seven lessons had similar engagement no matter whether technology was used, and three out of seven showed an increase in engagement with the use of technology.. This data shows that the use of technology does not undermine student engagement and can bolster it.

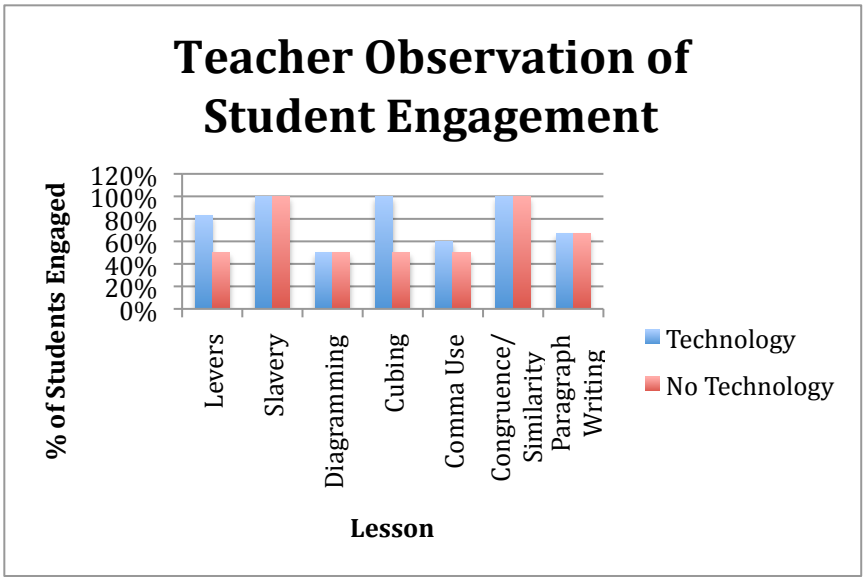

Figure 5. Teacher observation of student engagement.

Table 1 shows a complete tracking of all student responses to the Post-Lesson Feedback Form (Appendix D). Students immediately following their lesson completed this form. Students filled out this form for both the technology and non-technology lessons so there are two statements that did not pertain to the non-technology group: 1. The technology in this lesson made the information interesting to me, and 2. I look forward to the next time I'm asked to be a part of a lesson with technology. A close examination of the number of agree, neutral, and disagree responses made it difficult to extract clear analysis of student engagement after lessons with and without technology. There were 26 responses received from lessons using technology and 27 responses received from lessons not using technology. Most of the responses turned in by students contained a neutral response indicating neither a presence of nor a lack of engagement with these lessons. The students expressed interest in technology and responded favorably, showing a positive generally positive outlook on participating in lessons that

include technology. The implications of this feedback are that, at the very least, technology is a tool that students enjoy experiencing in class.

Table 1
Number of Student Responses on Post-Lesson Feedback Form

Question on Feedback Form	Technology Lesson			Non Technology Lesson		
	Agree	Neutral	Disagree	Agree	Neutral	Disagree
I was excited when I was asked to join this lesson.	6	12	8	9	8	10
I enjoyed this lesson.	14	11	1	14	9	4
The technology in this lesson made the information interesting to me.	11	10	5	-	-	-
I felt engaged and focused during the lesson.	10	11	5	11	12	4
I'm glad I was a part of this lesson.	8	11	7	7	14	6
I look forward to the next time I'm asked to be a part of a lesson with technology.	10	16	0	-	-	-
I will tell a friend about what I learned in this lesson.	2	15	9	3	16	8
I am interested enough in this lesson to do my own follow-up research.	3	9	13	4	13	10

The last collection of data was a Short Answer Lesson Response Form (Appendix E). This form was given to students two days after they received the initial lesson and contained four areas for students to fill in responses based on what they could remember. In order to track retention of information, the number of correct fill-in-the-blank terms/vocabulary from the first box on this form was put into Figure 6. The number of possible correct answers was divided by the number of correct terms/vocabulary filled in. This number resulted in the percentage of correct answers shown in the figure. Based on this calculation, forms filled out by students who received a lesson including technology had 72% of the answers correctly filled in. On the other hand, forms filled out by students who did not have technology used in their lesson only filled out 56% of their answers correctly. This resulted in a 16% increase of accuracy when technology was included in

one of the seven lessons that were tracked. This leads the researcher to believe that students in this class remember the information covered in lessons better if it incorporates an element of technology.

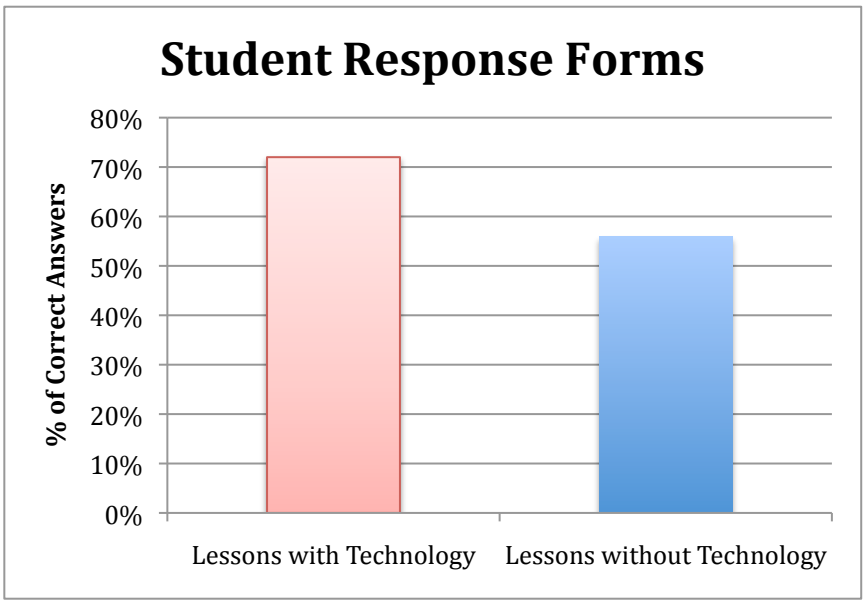

Figure 6. Student response forms.

After analyzing the data gathered through all five collections, it is possible to conclude that the integration of technology into Montessori upper elementary lessons results in an increase in student engagement and interest, and an improvement in their ability to retain knowledge gained through these lessons. The combination of student self-assessments, teacher observation, and teacher-made, short answer lesson response forms gives enough data with which to analyze both student engagement with classroom lessons as well as their ability to remember what they've learned. The results of this data collection and analysis will be useful for all Montessori elementary teachers who wish to continually update their practice and didactic approach. This kind of forward thinking is

especially important for those passionate about a pedagogy that was crafted over a hundred years ago. Current technology did not exist when Dr. Montessori was designing the Montessori Method and the elementary curriculum. It is essential that teachers update their practices with the times in order to best serve their students.

Action Plan

Classroom teachers are constantly looking for new tools that are proven to work and might enhance their teaching practice. This action research project was a great opportunity to test the value of technology in the upper elementary classroom. The aim was to determine what effect the use of technology would have on both the student interest in lessons and their ability to remember what was taught.

In order to make this action research a more extensive and comprehensive study, a few changes could be made. First, it would be beneficial to have students fill out feedback and response forms online. This would have allowed the students to complete them more quickly, thus avoiding the frustration of filling out multiple forms. Using online forms would have also made data collection more efficient for the teachers. Additionally, it might be helpful for the forms to be abbreviated so that there are fewer questions and less for the students to read through. At times, students showed frustration with having to read so many questions and fill out so many forms.

Extending the length of the project would also be beneficial. This would allow for more lessons, more data collection, and more time for students in between lessons that included technology. Finally, the last modification that could be valuable is taking more time to test various forms of technology. Doing so would allow the practitioner the

opportunity to find what specific digital tools work best for 9-12 year olds. This might be the kind of study that would benefit from multiple school years of data in order to get a cross section of numerous tech devices and a diverse set of participants.

Montessorians often recite two mantras as guiding principles for the classroom—"follow the child" and "preparation for life." It is clear from the Pre-Lesson Feedback Forms that most students are excited about and interested in technology. If teachers want to follow the child, using technology is certainly a great way to do so. Meeting students where they are means taking into account their personal interests, motivations, and inspirations. For many students, that includes using and learning via technology. In addition, preparing students for life in today's increasingly digital world means introducing them to technology at a developmentally appropriate age and employing it as a tool. It is a tool that is only becoming more and more prevalent in the work force and one that students will certainly use as they move on to middle school and high school. In order to truly prepare them for life, it is crucial that teachers foster learning through those same technological tools.

For each lesson that included technology in this action research, I was careful to select a technological component that would be beneficial to the students by engaging them and teaching them something new. In most of the lessons, that meant using a pre-selected YouTube video. Short videos kept nearly every student's attention and became a useful teaching tool throughout my action research.

After carefully examining the data gathered throughout this project, it is safe to say that technology is can be a beneficial tool for teachers to utilize with upper elementary students. If the Pre-Lesson Feedback Forms were analyzed in isolation, one

might conclude that most students would show significant gains in retention and engagement. The data shows, however, that while there is an observable increase in student engagement and ability to remember information given in lessons, the difference is not as large as might be expected. These results indicate that technology can be a valuable addition to the upper elementary Montessori classroom but should not completely replace more traditional methods of educating students.

As a result of this action research project, I plan to incorporate more technology into my teaching. I believe the data supports the inclusion of technology in a balanced way. Just as I would refrain from having the students always practicing math or always reading, always having technology in lessons would be detrimental. Instead, I'd like to take a flexible approach if and when I might utilize technology to assist in lesson presentations. I think it is important to adapt to one's students so I plan to modify my use of digital tools as I receive feedback from my students.

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Appendix A

Teacher Engagement Report Form- New (TERF-N)

Teacher:_____

Class/Setting:_____

Student:_____

Circle one number for each item that most accurately reflects your observations of the student during lessons over the past few weeks.

The student…	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
seems interested in lessons	1	2	3	4	5
is self-motivated	1	2	3	4	5
seemed excited to be invited to lessons	1	2	3	4	5
persists on challenging tasks	1	2	3	4	5
participates in lessons	1	2	3	4	5
distracts other students during lessons	1	2	3	4	5
speaks out without raising hand in lesson	1	2	3	4	5
has his/her own idea for a follow-up	1	2	3	4	5

NOTES:

Modified using:

Hart, S. R., Stewart, K., & Jimerson, S. R. (2011). The student engagement in schools questionnaire (SESQ) and the teacher engagement report form-new (TERF-N): Examining the preliminary evidence. *Contemporary School Psychology: Formerly" The California School Psychologist," 15*(1), 67–79.

Appendix B

Pre-Lesson Feedback Form

1. Please check which activity keeps your INTEREST the most in class.

- ☐ Morning meetings
- ☐ Whole class lessons
- ☐ Small group lessons
- ☐ Individual work with a teacher
- ☐ Working by myself
- ☐ Working on a computer
- ☐ Working with a Montessori material

2. Please check which activity helps you LEARN the most in class.

- ☐ Morning meetings
- ☐ Whole class lessons
- ☐ Small group lessons
- ☐ Individual work with a teacher
- ☐ Working by myself
- ☐ Working on a computer
- ☐ Working with a Montessori material

3. I am most likely to be INTERESTED in a lesson if it involves (check one):

- ☐ A textbook
- ☐ A worksheet
- ☐ Technology
- ☐ A Montessori material or chart/picture

4. I am most likely to LEARN FROM a lesson if it involves (check one):

- ☐ A textbook
- ☐ A worksheet
- ☐ Technology
- ☐ A Montessori material or chart/picture

5. I generally _____ when TECHNOLOGY is used in a lesson.

- ☐ Enjoy
- ☐ Feel neutral
- ☐ Dislike

6. I generally _____ when MONTESSORI MATERIALS are used in a lesson.

- ☐ Enjoy
- ☐ Feel neutral
- ☐ Dislike

Pre-Lesson Feedback Form (continued)

7. If you were given the choice to complete a follow-up with or without using technology, which would you choose?

- ☐ With technology
- ☐ Without technology

Appendix C

Observational Tally Sheet
Teacher:_____
Date:_____
Time(s):_____ _____ _____

Student	Engaged in the lesson (eyes on material, actively engaged, answering questions)	Disengaged in the lesson (looking away/yawning/lying down)	Other (Describe)	On-task Total
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

Modified using:
Bradley, Celia, "Decreasing Off-Task Behaviors in an Elementary Classroom" (2014). *Masters of Arts in Education Action Research Papers*. Paper 47.
http://sophia.stkate.edu/maed/47

Appendix D

Post-Lesson Feedback Form

Students, please complete this feedback form assessing your engagement in the previous lesson. Please make sure to answer each question by circling your choice from the scale, and then write short answers to the questions below. Please be sure to be as honest as possible and remember that I will be the only person that sees your responses. You do not need to put your name on this paper. Simply return this to me when you are finished. Thank you for participating! – Mr. Tosco

A=Agree N=Neutral D=Disagree

I was excited when I was asked to join this lesson.	**A**	**N**	**D**
I enjoyed this lesson.	**A**	**N**	**D**
The technology in this lesson made the information interesting to me.	**A**	**N**	**D**
I felt engaged and focused during the lesson.	**A**	**N**	**D**
I'm glad I was a part of this lesson.	**A**	**N**	**D**
I look forward to the next time I'm asked to be a part of a lesson with technology.	**A**	**N**	**D**
I will tell a friend about what I learned in this lesson.	**A**	**N**	**D**
I am interested enough in this lesson to do my own follow-up research.	**A**	**N**	**D**

Post-Lesson Feedback Form (continued)

What did you like about this lesson?	
What did you dislike about this lessons?	

Appendix E

Short Answer Lesson Response Form

LESSON: _____ DATE: _____

Please list 3 key terms/vocabulary you learned in this lesson: 1. 2. 3.

Please list some of the things you learned in the lesson:

What are some things you are wondering that you didn't learn in the lesson?

What are some things you were confused by in the lesson?