Get Connected:
Motivate Students Through Technology

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ABSTRACT

Technology is all around us, and now it's entering the classroom! From computer software to the Internet, teachers and students are exploring everything that technology has to offer. Throughout my student teaching experience thus far, I have found the Internet to be an extremely beneficial resource not only in planning lessons, but also in teaching them to my students. When planning for lessons, I frequently use the Internet to search for new ideas, resources, and activities to incorporate into the classroom. I have also used self-created web pages with both web-links and relative educational information as a tool during my teaching to help guide student research. After seeing how much technology has benefited me as a teacher, I began to wonder how technology affects student learning. With this inquiry, I further explore how technology affects the motivation and engagement level of my fifth grade students.

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Background Information

My Teaching Context

For the past 9 months, I have been working in a self-contained fifth grade classroom. The energy and enthusiasm of the 22 students (11 boys and 11 girls) creates a dynamic classroom filled with individual personalities and creativity. Among these students are two children who receive learning support, one of whom also receives emotional support from a counselor 1-2 times a week. While one student recently exited the program, there are still two children who receive Title I reading services. On the whole, the class contains a variety of ethnic and family backgrounds, as well as socioeconomic status. One student came to America from Russia only five years ago; while another student was born in America but has strong family ties in Thailand. Also, within the classroom there is one bi-racial student (Caucasian and Korean) and a student who was adopted into a family with a variety of ethnicities among its members. Out of the 22 students in the classroom, 21 students have access to a computer at home and the same 21 students also have easy access to the Internet. At school, the students have access to a computer lab as well as two computers within the classroom. While there is no designated computer lab teacher, each classroom has a designated computer lab period in which the classroom teacher instructs the students using district wide units and the Type To Learn program.

Reasoning and Importance

We live in a fast-paced society, which is constantly focused on changing and improving life as we know it. Each and every day our society is becoming more and

more technologically advanced. Currently, I believe technology is an extremely important concept to incorporate into the classroom in order to prepare students for the future. The children of today are the adults of tomorrow, the next generation, and I think it is imperative that we equip them with the knowledge and skills needed to help our society successfully progress.

For as long as I can remember, I have had an interest in technology. I have always enjoyed using the computer and all it has to offer as an outlet for my creativity. With this high interest level, it is only natural for me to want to share this passion for technology with others. Throughout my student teaching experience, I have found the Internet to be an extremely beneficial resource not only in planning lessons, but also in teaching them to my students. When planning for lessons, I frequently use the Internet to search for new ideas, resources, and activities to incorporate into the classroom. I have also used self-created web pages as a tool during my teaching as well as pre-made web pages that enhance the material being taught. After seeing how much technology has benefited me as a teacher, I began to wonder how technology affects student learning and even more so, how it effects student motivation when used as an instructional tool.

As a future teacher, I feel this is a pivotal topic to explore. I believe understanding more about technology and the differences it can make within the classroom can help improve the environment for both the teacher and the students. For example, with this resource, teachers may be able to enhance instruction. In turn, it is likely that students will become more engaged and more involved in the lesson. The

more motivated and engaged the students are in the lesson, the more likely it is that the students will understand and remember the material being taught.

Research

Within our society, technology has become a common convenience, an everyday resource. The National Education Association recognizes this dependence on technology and states:

> For students to thrive in a world enabled by information technology, we must give them the skills to make sense of and use the information that engulfs them. They need to know how to learn new skills as quickly as technology creates new challenges (Technology).

Technology then, has the potential to not only enhance and individualize instruction, but also to create a student-centered environment that fosters independence and self-driven learning (Cook and Finlayson, 1999).

"Schools equipped with telecommunications networks become schools without walls, where learning can continue after the bell and in spite of the buses" (Simonson and Thompson, 1997, p. 11). With new technologies, the possibilities for education are endless. Students are learning in a variety of ways that appeal to their interests and intelligences. Howard Gardner is well known for his theory on multiple intelligences. With this theory, Gardner stated that all people have different learning styles or intelligences, which reflect upon their personalities, behaviors, and attitudes toward specific activities or tasks. When used in a multiple of ways, technology can focus on and enhance Gardner's eight multiple intelligences. Word processing software allows

the student to closely interact with their work while addressing the needs of verbal/linguistic intelligence. Likewise, graphs and charts used to organize and analyze data enhance the logical/mathematical intelligence. For visual/spatial learners, the Internet creates opportunities for students to search through online museums and take virtual tours of a variety of places. To fulfill the kinesthetic intelligence, students can work with educational games that require fine motor coordination and logical thinking skills as well as online fieldtrips that allow the students to interact with the trip. For musically inclined students, the teacher can allow opportunities for students to use online keyboards to record songs and sounds related to unit themes. For example, the students could replicate folksongs of the Civil War Era and present them to the class. With this wide variety of activities, students can work collaboratively in small groups to enhance the interpersonal intelligence. However, technology can also be used to compliment the intrapersonal intelligence as students use electronic records, videotaped interviews, and multimedia portfolios of student work to collectively express inner thoughts, emotions, and progress. Technology provides an array of opportunities for all types of students and learning styles, enhancing education across the board (Technology's Impact).

When technology is integrated into the classroom, it not only attends to the individual educational needs of the student, but it also attracts the student's interest and engages them in the lesson. The students interact with technology and become an active participant in the activity or task at hand. Understanding the large role that technology plays in our society, students feel connected with the current times of the world. (Cook and Finlayson, 1999) "The use of graphics and sound, the motivation of

immediate feedback, and the novelty of working on the computer are all factors that may increase time on task for students" (Simonson and Thompson, 1997, p. 96). Overall, it is important to capitalize on this interest to enhance student motivation and learning to create a nurturing environment for all students.

Wonderings

As I began to organize my thoughts and ideas on technology, I found that I had one prominent wondering that I wanted to explore further: How does technology affect the motivation and engagement levels of students when incorporated into the classroom as an instructional tool?

Looking past the initial question of how the use of technology within the classroom and curriculum affect student learning, I further developed my thinking and found I had many more wonderings as to how technology affects students.

- How do the students' motivation and engagement levels change when presented with a wide variety of technology and assignments? What aspects of technology do the students enjoy more? What aspects are not as effective in engaging the students?
- How do the students' motivation and engagement levels vary when the students are using technology versus when the teacher is using technology, both for instructional purposes?
- How does technology support cooperative learning and increase a sense of community within the classroom, if at all?
- How can technology help students attain standards?

Once developed, these wonderings led my inquiry as I explored the role of technology within the classroom. Throughout the process, I revisited these initial wonderings and reflected upon them. Likewise, I began to expand on these thoughts and ideas as I continued with my professional development.

Inquiry Plan

Start to Finish

To begin the inquiry process, I asked my fifth grade students to complete a survey about technology because I wanted to develop a general understanding about how familiar the students were with technology. Although it was my hope that most students would share my interest in technology, I knew this might not be the case. Within the survey, the students were asked to explain which type of computer software/activities they found most enjoyable as well as those from which they learned the most. Students were also asked to rank a variety of computer activities and lessons on a scale from one to ten. These programs ranged from Type To Learn, Microsoft Word, and KidPix. Each and every student had the opportunity to answer these questions independently and honestly, as to ensure the validity of the survey.

After collecting this data, I began incorporating technology into the classroom in a variety of ways to further expose the students to the resources available. Up until this point, the students had little to no experience using PowerPoint. However, the students did have a wide variety of experiences in note-taking techniques. As an additional way to vary the note-taking system, I divided the students up into eight groups of two to three students each. Then, I assigned each group a specific invertebrate phylum to research in the library. Once the students had collected all the relevant information, they worked together in the computer lab to create a PowerPoint presentation on the phylum.

Once the students finished this initial assignment, I introduced a second PowerPoint assignment to complement a social studies project on the Civil War. Once

again, I divided the students into smaller groups and assigned each a population group involved in the Civil War (women, children, African Americans, Abraham Lincoln, and soldiers). Each group was to research their specific population group and create a monument to represent the honorable population. As with the previous assignment, I asked the students to use the aid of PowerPoint to organize and present the information. While this project was similar in nature to that of the invertebrates, this presentation required the students to think critically about why in fact their represented group deserved a monument. In addition, the students had to create a persuasive presentation rather than an informative lecture. As the students became more familiar with PowerPoint, I continued making observations on their engagement level. In particular, I was looking to see how the motivation level would shift as PowerPoint became more familiar to the students and its novelty wore off.

As I collected data on how the students interacted with technology while working in small groups, I also studied the effects technology had in the classroom when used as an instructional tool. In order to successfully do this, I taught numerous lessons in a variety of subject areas using technology as a supportive instructional tool. For example, I used the Trips software in math class as a way to enhance conceptual understanding of graphs and patterns of change. With this software, the students created trips of a boy and a girl that involved various starting positions, beginning step sizes, and changes of speed at a particular point. Unfortunately due to unexpected difficulties, the students were not able to use the software individually. Rather, I used the program in the classroom and we discussed the events and activities together as a

class. With this, the students had the opportunity to work together as a whole to input data, predict what would happen, and then explain, in detail, the result of each trip.

Likewise, in social studies, I used the resources of the Internet to provide the students with examples of official immigration documents and records. Using information from the official Ellis Island webpage, I brought up old records of my ancestors and their arrival into the United States. Then, as a class, we researched the family members of some of the students in the class. By using technology in this way, I attempted to create a lesson that was more interactive than using a simple overhead transparency.

Throughout this inquiry process, I made observations and documentations of the students' attitudes and engagement levels while interacting with technology. I took notes on the comments and questions students made regarding technology. In addition to these records, I also interviewed the students individually and used video documentation to record their statements. This method allowed students to verbally express their thoughts on technology in the classroom. The students did not have to worry about spelling errors or sentence structure, but rather could converse freely about their likes and dislikes of computers and technology. In order to stay consistent with my original records, I redistributed another survey to the students. Although this survey was similar to the one presented earlier, this survey included specific questions that asked the students to rank past assignments in the order of preference. In addition, I asked the students to compare activities that incorporated technology with those that did not. With these surveys, I was able to gain a better understand of the areas in which the students enjoyed the inclusion of technology. Once all data was collected, I

continued my inquiry by analyzing the data and making claims and new wonderings based on this data.

Data Collection

1. *Research:* To support my inquiry, I turned to the experts and their research on technology within the classroom. I not only looked for ways in which technology could be incorporated into the classroom, but I also looked for information on the effects technology has on student motivation and learning. This research aided in the planning of my inquiry and the way I incorporated technology into the classroom. With these findings, I was able to use the quotes and data of the experts to support my initial wonderings and findings. Likewise, I used this research as well as my own findings to expand on my initial wonderings and create claims and new wonderings on technology.

2. *Student Surveys:* In order to gain a more accurate understanding of the comfort and interest levels of my students, I decided to survey the students at the beginning and end of my inquiry. With the first survey, I wanted to learn more about the experiences the students had in the past with technology. I also wanted to find out more about the technological interests of my students (i.e. word documents, educational software, Internet, etc.). As I continued to progress with my inquiry, I realized that I needed more specific information about the students' feelings on technology. The students were now exposed to a variety of technology in the classroom and I wanted to further explore what activities made the most impact on the students. Therefore, I distributed another survey to the students to collect their thoughts and feelings. With this survey, I asked the

students to rank the activities we had done in class that incorporated technology. In addition, the survey asked the students to choose which activities they preferred. For each of these questions, there were two options for the students to choose from, one that activity which included technology and its equivalent activity, which did not. With these questions, I was looking at the students' responses to see the areas in which the students enjoyed the use of technology. This included activities when the students had the opportunity to use the computer independently as well as lessons in which the teacher used the computer to support learning. Overall, these surveys provided me with a basic understanding of the students' comfort and interest levels with technology. Likewise, they proved to be very telling in the ways that students are motivated by technology. (See Appendix A for sample surveys.)

3. *Observations:* Throughout the inquiry process, I had my PDA conduct observations during lessons that involved technology. In reference to my wondering, I asked her to focus primarily on the engagement level of the students throughout the lessons. In addition to these anecdotal records, I continually made my own observations, documenting the participation and engagement level of the students. I also made note of specific comments and questions the students made during lessons. With these observations, I was primarily looking at the motivation and engagement level of students. I was looking to see how involved the students were in the lesson/activity when technology was involved compared to when it was not. Likewise, I took careful documentation of the students' reactions to technology and its use within the classroom. (See Appendix B for observation notes.)

4. *Student Interviews:* After providing the students with a variety of opportunities to use technology within the classroom, I decided to interview students individually to gain a better understanding of how they felt when working with technology. Knowing that the majority of my students would be more likely to provide detailed responses orally rather than through writing, I chose to do this part of the data collection through video documentation. Throughout the day, I pulled individual students out into the hallway and asked them to answer a few questions honestly. I felt the responses from the students would be most honest and heartfelt if the students were interviewed individually. With this interview, I asked the students what they thought about technology and whether or not they enjoyed using technology. In addition, I asked the students to expand on what they liked or disliked about technology. With these questions, I wanted to get a general idea about the students' stance on using technology. As the interview progressed, I asked the students what they thought about Type To Learn (an instructional typing program). After hearing the responses of the students, I continued by asking the students to compare their interest level when working with Type To Learn versus PowerPoint and other computer programs. Here, I was hoping to find a possible correlation between the interest levels of the students when technology is used to enhance instruction compared to when technology is the focus of the instruction (as with Type To Learn).

Data Analysis

1. *Research:* As I conducted my research, I looked for information from experts that supported my inquiry. More specifically, I read the articles and analyzed the

documented effects of technology within the classroom. I looked for information on ways to incorporate technology into the classroom as well as how the inclusion of technology affected the motivation of the students as well as their education and understanding of concepts. I used this research to not only help me develop my inquiry, but also as evidence to support my claims. In doing this research, I found that the experts strongly believe technology is a wonderful asset to the classroom. Not only does technology provide students with the basic life skills needed for our fast-paced society, it also increases student motivation and in turn, enhances student learning.

2. *Student Surveys:* After collecting the two sets of surveys from the students, I began to analyze the data in numerous ways. Since the first survey was created to give me basic information about the students' experiences with technology, there was not as much "numerical data" to interpret. However, in this survey, I asked the students to rank various computer programs from one to ten (one being the least enjoyable and ten being the most enjoyable). For example, the students ranked Type To Learn, KidPix, Microsoft Word/Appleworks, and Geo-Logo (a math program which focuses on angles and polygons). To organize the results, I gathered the students' results and documented their responses. Then, working with one program at a time, I found the average "ranking" for that particular program by adding up all of the responses and dividing by the number of responses that were given for that particular question. There is a slight discrepancy between the numbers of responses among the questions because fifth grade students switch classes for math. Since eleven of my homeroom students did not have me for math, the resources used varied slightly from teacher to teacher. Once I found the average rank for each program, I further analyzed the data,

looking for patterns in interest. While the students commented that they learned the most from Type To Learn, the interest level of the program was somewhat neutral (ranked a 5 out of 10). Not surprisingly, the students enjoyed KidPix the most (ranked a 9 out of 10). Falling in the middle of the scale were Geo-Logo (ranked a 6) and Word/Appleworks (ranked a 7). In looking at these results, it made sense to me that the students would prefer KidPix the most, due to its laid-back, independent, and creative nature. (See Appendix C for charted data.)

On the second survey, I asked the students more specific questions as to which types of activities they preferred. For example, some of the questions asked the students to choose between the following activities: doing research on the computer or doing research in the library, using manipulatives for math or using computer software to build conceptual understanding, typing a final copy or writing a final copy, and using a computer to teach or using the overhead. In looking at the students' responses, I noticed that more students preferred an activity that incorporated technology except in making presentations. Of all the students, 56% of the students preferred to present information using posters, skits, and/or models to the 44% of the students that preferred to use PowerPoint. Exactly 50% of the students enjoyed typing their final essays, while the other half of the class preferred to write the final copy. An overwhelming 89% of the students preferred when the teacher used the computer to teach a lesson rather than the overhead projector (11%). (See Appendix D for charted data.)

As with the first survey, the second survey asked the students to again rank various programs from one to ten (one being the least enjoyable and ten being the most enjoyable). After collecting the data, I found the average "ranking" of each program and

then compared these results to the data I collected earlier. In doing this, I found that the average "ranking" of each program differed slightly if at all. However, KidPix, which was originally ranked at a 9 out of 10, was now placed at an 8 out of 10. PowerPoint, which was not an option on the first survey, was ranked the highest at a 9 out of 10. (See Appendix C for charted data.) When comparing similar lessons that did and did not include technology, I found slight variation in interest, as each lesson averaged a 6 out of 10 on the scale. I found it most interesting that regardless of the students' high interest in technology, it did not appear to make a difference in the enjoyment of individual lessons. As I analyzed this data, I continued to reflect on my initial wonderings and created claims based on my findings.

3. *Observations:* Throughout numerous lessons, I documented observations, quotes, and data to help establish my findings. As I made these observations, I was looking for any and *all* responses and reactions from the students as a variety of technology was incorporated. I was not concerned with whether or not the students made positive comments about technology, but rather made sure I was accurately recording the comments the students made, even if they were negative towards technology. I documented instances in which students were both on-task as well as off-task. Likewise, I recorded quotes and statements from the students when they expressed an interest in something, as well as a disinterest in an activity. Interestingly enough, I found that students were interested in technology and computers. However, the level to which they were interested varied depending on the type of activity that was being introduced. For example, I taught a lesson in which the students worked independently on a specific web page on tangrams. Throughout the lesson, the

students were quiet and remained on-task for the majority of the time. However, later that day, I took the students back to the computer lab to work on Type To Learn. Unfortunately, the interest the students had earlier in the day did not carry over to this activity. Students were frequently pausing the program, complaining their hands hurt and they needed a break. A few students even moaned, “I hate this!”. As I circulated around the room, I saw one student pounding on the keyboard carelessly. When asked what he was doing, the student responded, “I already made too many mistakes. It doesn’t matter. I just want to get to a new sentence.” Intrigued at the change in attitude from the morning math lesson to this grueling Type To Learn lesson, I continued to make observations as a way to further analyze student motivation. For science, the students worked on PowerPoint presentations in small groups. During work time, the students were on-task the majority of the time. (See Appendix B for specific field notes.) The students worked together to shared ideas and knowledge and create these presentations. Often, I heard students exclaiming their accomplishments proudly to their peers. Sounds of, “I did it!” and “look at this transition”, echoed through the lab. It was evident that the students were excited to work with PowerPoint and relay their knowledge in a new way. One day, I even heard a student tell his peers, “if we take a longer time on the PowerPoints, we won’t have to do Type To Learn”. Through these observations, I noticed a pattern beginning to form. There was a distinct relationship between the motivation level of the students and the activity they were taking part in. For example, the students were not motivated while they were working with Type To Learn. However, they were extremely enthusiastic when it came to PowerPoint and math Investigations software. It became clear to me that while *some* types of

technology engage and motivate students, other activities, such as Type To Learn, do not receive the same reactions from students.

4. *Student Interviews:* I had the opportunity to interview 12 students from my fifth grade class. As an open-ended response, only one student responded that computers motivated him to learn in school. However, all 12 students did state that they enjoyed working with computers both in and out of school. Eleven of the students responded that PowerPoint was their favorite technology activity because it provided opportunities for creativity and individuality. The students also commented that they found PowerPoint to be a fun way to learn and express their knowledge. After noticing a distinct difference in the attitudes of the students when working with Type To Learn versus PowerPoint, I wanted to further investigate this issue with the video interviews. When asked to compare PowerPoint to Type To Learn, eleven of the students stated that they did not enjoy Type To Learn. One student elaborated on this, explaining that with Type To Learn he would often have to repeat lessons because the program told him he was not typing fast enough or he made too many mistakes. The student continued to comment that PowerPoint allowed the student to work at his own pace and he enjoyed this freedom when working in small groups. As I listened to the students, I found similar patterns within their responses. The students expressed that while technology was exciting, they were even more excited when they had the opportunity to be creative, whether or not technology was involved. Furthermore, the students did not enjoy more structured programs such as Type To Learn, which frequently graded and monitored the students. Rather, the students preferred to self-direct their own project and use their skills to relay their intelligence. While I was not surprised with the

responses I received during the interviews, I found the process useful in further developing and understanding the various attributes that make an activity engaging to a student.

Overall, as I analyzed the numerous types of data, I was looking for any response and/or change that occurred within the classroom. In order to ensure the validity of the inquiry, I documented *all* behaviors and comments that I observed throughout the lessons, regardless of whether or not they were positive about technology. For the most part, my data was consistent. However, I did find contradictions in the student surveys. A few students commented to me in class how much they dislike it when a teacher uses the overhead. One student in particular stated, "Miss Lamade, to be honest, when you bring out that overhead projector I just shut you off and don't listen." An overwhelming 89% of the students in my classroom stated in the survey that they preferred when a teacher used a computer with a projector over the use of an overhead. However, once the students were given specific examples of lessons that were similar in nature but different in regards to the type of technology they used (computer vs. overhead), the average ranking of both lessons were about equal (ranked about a 6 out of 10). Likewise, two math activities (that varied only in the type of technology that was used) were compared and ranked. Again, the average ranking of both lessons ranked about a 6 out of 10. This discrepancy leaves me wondering whether or not students really do enjoy the use of a computer over an overhead projector. Is it possible that the students really do enjoy either type of activity? Or perhaps there is a stigma that comes with the idea of the overhead that

causes students to claim they enjoy the computer more? In analyzing the data, I was fortunate to find both supportive data as well as discrepancies. The supportive data allowed me to make claims based on the patterns and evidence I observed. Likewise, the discrepancies I found in the data provided me with the opportunity to reevaluate my initial wondering and further investigate technology's affects within the classroom.

Findings

Claim 1: *Students enjoy activities that not only incorporate technology, but also allow for creativity and independence.*

Evidence: "Barely a peep that isn't related to the lesson emerges from the students, fidgeting is at a minimum, and nobody requests a bathroom break" (Kopkowski, 2006). In reading the article, "Ready to Upgrade?", this quote caught my attention because I had similar experiences in my classroom. Whether the students were working on PowerPoint presentations or exploring with math software, they students were engaged in the activity and excited to have the opportunity to work on the computer. I was excited to see this high level of interest in the computers and the tasks assigned. However, as I continued to interview, survey, and observe the students, I found this interest was not solely based on the fact that the students were using a computer. Rather, the students enjoyed having the freedom to create their own projects and explore with various software. With these tasks, the students could use their knowledge on a topic and relay it to the rest of the class in a fun and creative way. Numerous students noted in both their surveys and interviews that while they did enjoy using the computers, they also enjoyed creating presentations that required the use of skits, models, and posters. One student commented on these hands-on activities in saying, "I like hands-on activities because it's fun and you have more control". Students added that they liked to "be doing something" and they wanted to "be active rather than just sitting there listening". These findings lead me to believe, that students enjoy activities that foster independence and student-driven learning. While students do enjoy using computers, their main requirement for a "fun" lesson or activity is one that promotes creativity and hands-on learning.

Claim 2: *Students prefer when technology is used as an instructional tool for a lesson rather than as the concept of the lesson.*

Evidence: As I continued through my inquiry, I began to see a pattern in the general interest level of the students when technology was involved. The students were extremely excited to create PowerPoint presentations and work with the math software (Geo-Logo and Trips). However, this interest was not shared with the Type To Learn program. Throughout the day, a few students would ask me if we would have time to work on the PowerPoint presentations. When I informed the students that we would have time to work on the presentations, immediate cheers of "Yes!" echoed through the classroom. However, when it was mentioned that we would be working on Type To Learn, the students responded with sighs and moans. Furthermore, as I collected data from the student surveys, two children wrote, "I HATE this!" next to the words "Type To Learn". Curious as to why there was such a difference in the reactions, I began to ask the students to explain their thoughts on Type To Learn versus PowerPoint or another computer program. The students commented that with Type To Learn, you could be wrong or inadequate. The program frequently makes the students repeat lessons because they are not typing well enough or fast enough. The students went on to say they get frustrated with the program and soon give up. However, with PowerPoint and other explorative programs, the students are in control. The students can create activities and presentations based on their interests and creative talents. Essentially, there is no distinct right or wrong to the task, but rather an effort required to enhance learning and understanding. One particular student phrased it well in saying, "With PowerPoint you have the freedom to do what you want and the teachers give you that freedom which is really cool". With these findings, I believe that students are motivated

to use technology when it is used as a tool to enhance learning. However, students are not as engaged and motivated when technology is the topic of the lesson. Rather, students are excited to learn using technology and through this immersion, they learn *about* technology and how to use it properly.

Claim 3: *When technology is first introduced, it is important to provide students with the opportunity to explore freely.*

Evidence: Through experience, I have found that something new often equates to something exciting. As I began my inquiry, I found this generalization to be true with technology. While the students are familiar with computers and a variety of computer-based tasks, there is still a tremendous amount of information that the students have yet to learn. When introducing a new computer program to the students, I found the students to be extremely excited about the idea of doing something new on the computer. However, this excitement often turned into distractions and off-task behaviors as students would play around with the program rather than complete the assigned task. I was excited to see the high interest level of the students, but this "play time" was taking away from instructional time. As I experimented with possible solutions to the issue, I found that if I provided the students with some time to explore on their own before presenting them with the task, they were much more receptive to completing the assigned task and staying on-task throughout the lesson. Depending on the material and time constraints, I varied the amount of time the students had to explore. For example, as I presented PowerPoint to the students, I knew it was a program with a lot to offer. Therefore, I gave the students one full class period to explore on their own. With this time, the students proudly shared their findings and

knowledge on how to make an effect or create a new slide. This day's lesson ended with me probing the children to log off the computer so we could continue on with the rest of the day. During the next trip to the computer lab, I presented the students with their task of completing a slide show on an invertebrate phylum. Almost immediately, the students found a computer to work on with their group and began to work on the task presented. Out of the eight small groups in the class, seven were instantly working with the program open and their eyes on the screen. Throughout the remainder of the lesson, the majority of the groups and students stayed on task, with only a few students needing to be reminded to stay on-task (See Appendix B). While the students were still excited about working with PowerPoint and creating their own slide show, they were now able to focus on the task and use the knowledge they learned during the previous exploration lesson. Even though I used instructional time to allow the students to explore freely, in the end, the students were more focused on the task throughout the project and in turn, created quality PowerPoint Presentations.

Conclusions

Future Implications

In doing this inquiry, I now I have a better understanding of how technology can affect the motivation and engagement levels of students. I feel I have the knowledge and confidence necessary to incorporate technology into the classroom in a variety of ways to enhance student learning. While, I understand that not all students enjoy each and every activity involving technology, I realize that, when used appropriately, technology can be a welcomed change of a pace for the students. Even more so, technology can be used in a variety of ways, including whole group instruction and independent and small group work. As I continue in my career, I have no doubt that I will incorporate technology into the classroom as instructional and assessment tools. Likewise, I look forward to passing on my knowledge on technology to other teachers in the hopes that they find similar successes for their students. With the progresses of technology, I am confident that this inquiry will serve me well in creating lessons that reach the needs and interests of all students.

New Wonderings

Through this inquiry, I learned a great deal about my initial wondering and how technology can motivate students. However, as I began to collect and analyze data, I developed new wonderings about technology's affects within the classroom.

- How can technology support cooperative learning and increase a sense of community within the classroom?
- As a teacher, how can I enhance student motivation when working with instructional technology such as Type To Learn?

- How does the motivation level of students vary across grade levels in regards to Type To Learn, PowerPoint, and computer software?

Inquiry vs. Improvement

This inquiry began only a few months ago and is centered around my interest in technology and my wonderings on its effects within the classroom. As I organized my thoughts, I found one main question that I wanted to further explore: How does technology affects the motivation and engagement levels of students when incorporated in the classroom as an instructional tool? In order to explore this question fully, I incorporated technology into the classroom across the curriculum. This included PowerPoint presentations in science and social studies, math software such as Geo-Logo and Trips to enhance conceptual understanding, and the use of the Internet to support learning and research. While I have found that some forms of technology motivate some students, I cannot confidently say that *all* types of technology motivate *all* students. Through the inquiry process, I have adapted my initial wonderings and procedures to construct a more focused inquiry. However, I have yet to find definite answers to my wonderings and hope to further research the topic of technology incorporated into the classroom. Unlike an improvement project, I began this inquiry with no specific expectations in mind. I was not focused on searching for a particular result or change, but rather found *any* change to be a sign of success and created new wonderings based on these observations. As I continue to progress in my career, I look forward to expanding upon this initial inquiry, adjusting my wonderings, and re-evaluating my claims as needed.

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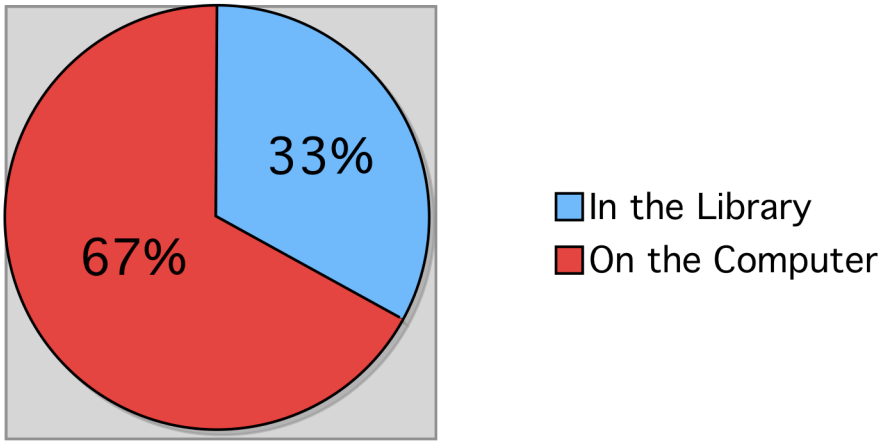
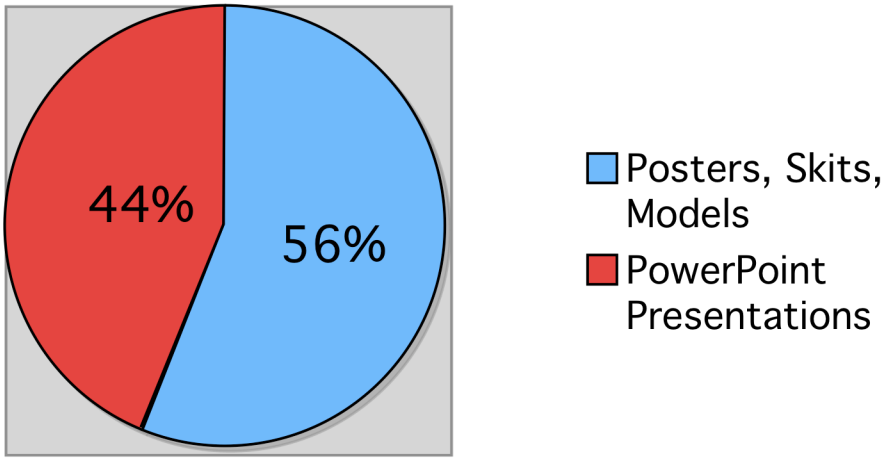
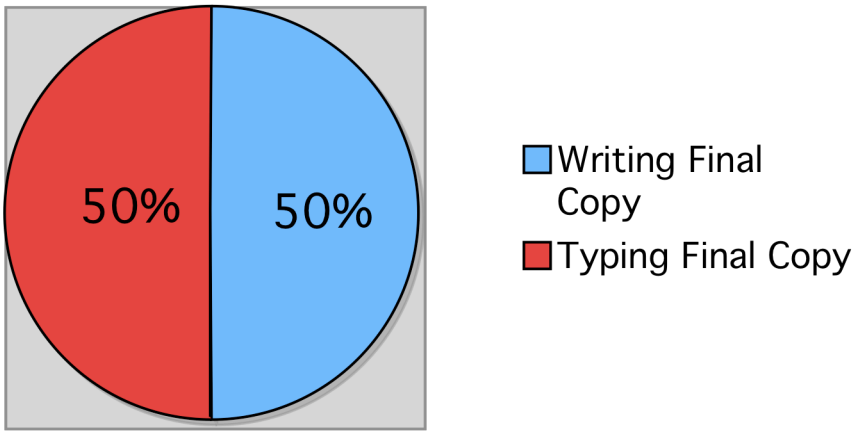
Student Preference when Researching Information



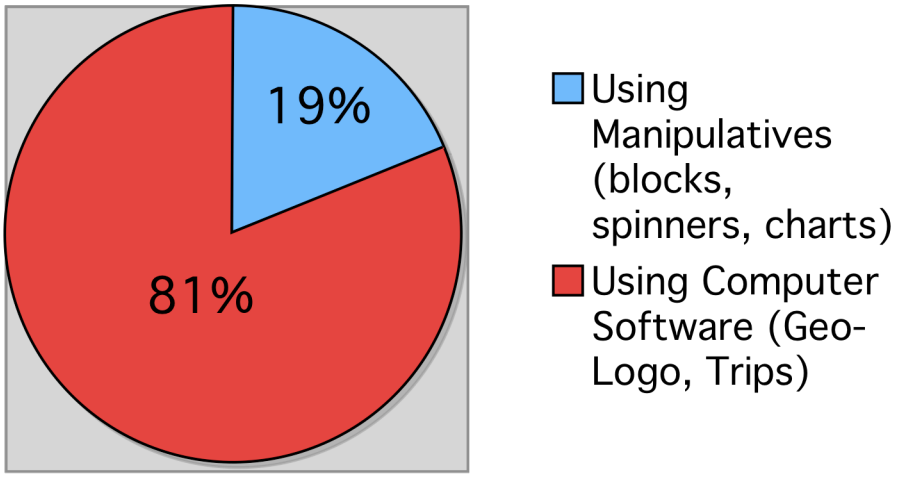
Student Preference when Making Presentations



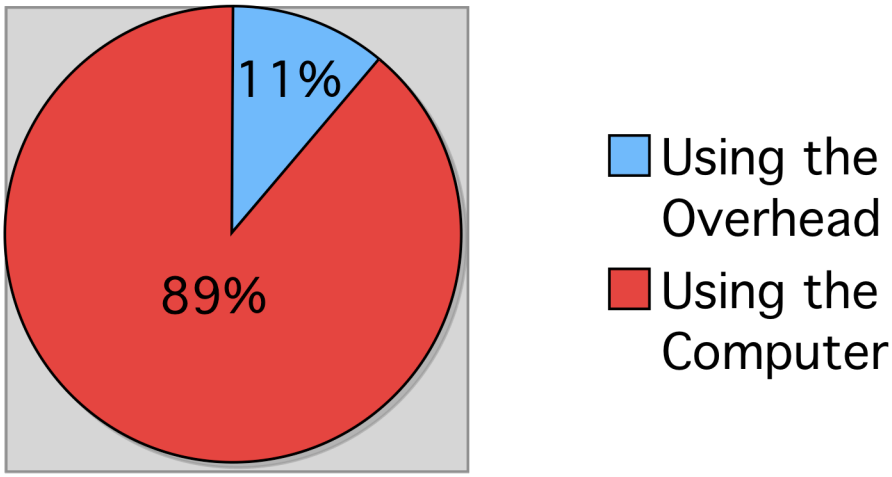
Student Preference when Creating Final Drafts



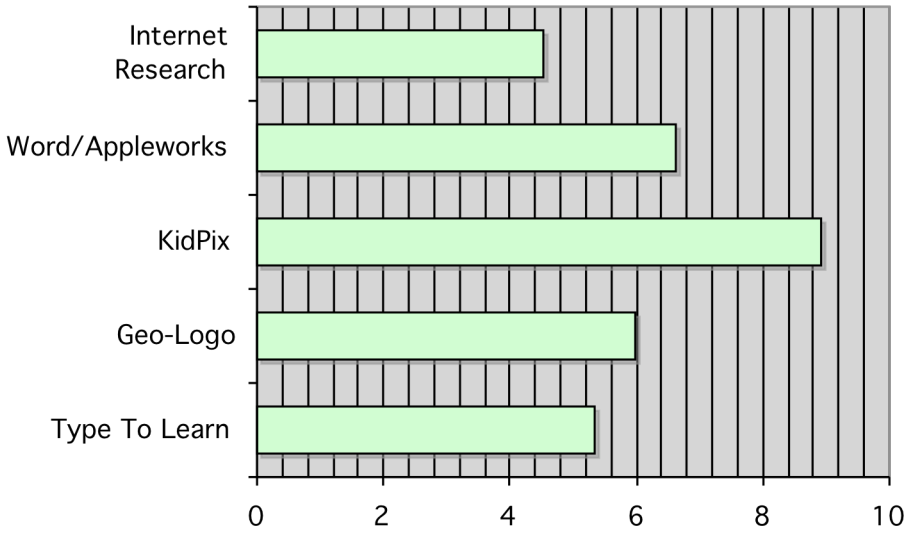
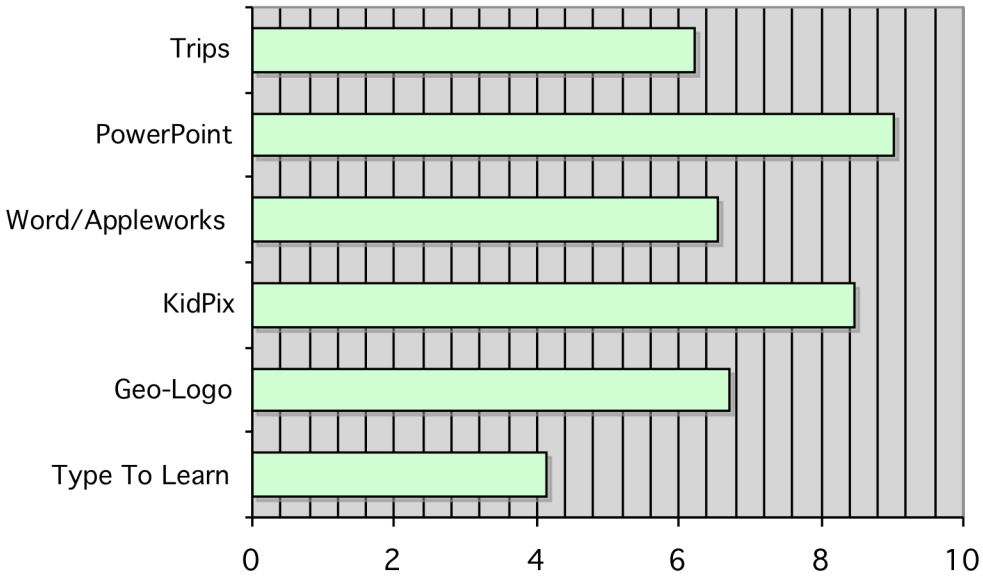
Student Preference in Math



Student Preference in how Teacher's Present Information



Students Rank Interest in Computer Activities (Survey 1)



Students Rank Interest in Computer Activities (Survey 2)