Mobile Learning Labs for Adairsville Elementary School

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Emerging Technology

Let us begin with the technology vision of Bartow County Schools

- "Bartow County Schools are committed to the integration of technology throughout the curriculum."
- "Technology is a major need for our system and our use of technology is not reflective of 21st century classroom needs."
- "Presently, limited integration and access to current technological devices is hampering the potential success of learners in Bartow County. Research indicates that failure to educate students in appropriate use of technology will inhibit their future success. Students need to understand how to use the tools to communicate effectively, to research, and to collaborate, in addition to simply typing a report."

https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Curriculum-and-Instruction/Documents/Bartow%20County/Cass%20Middle%20School.pdf

As a part of the technology vision teachers need to be aware of the technology standards

- Did you know that technology standards exist?
- When implemented these standards will help our students become the 21st century learners that our county envisions.
- The 6 technology standards are:
  1. **Creativity and Innovation**- Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

Standards (cont'd)

2. **Communication and collaboration**- Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
3. **Research and information fluency**- Students apply digital tools to gather, evaluate, and use information.
4. **Critical thinking, problem solving, and decision making**- Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

Standards (Cont'd)

- 5. **Digital citizenship**-Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
- 6. **Technology operations and concepts**-Students demonstrate a sound understanding of technology concepts, systems, and operations

- The standards sound familiar, right? They are closely related to the higher order thinking skills that are standards for our students.

What can we do at Adairsville Elementary School to increase availability of technology?

- We can add a Mobile Learning Lab for each grade level K-3 to increase the availability of technology.
- Why not grades 4 and 5?
- We have received the striving reader grant and students beginning in fourth grade have technology at a 1:1 ratio.
- Why did we not get more technology in lower grades?
- Due to funding each classroom in grades K-3 received one I-Mac rather than individual computers.

What are Mobile Learning Labs?

- Mobile Learning Labs are mobile carts that hold computers.
- Mobile Learning Labs can hold from 10 to 32 computers for classroom use.
- Mobile Learning Labs allow teachers to charge up to 32 computers at any given time.
- Mobile Learning Labs can be moved from classroom to classroom easily.
- Mobile Learning Labs only take up as much space as a small teacher desk.
- Mobile Learning Labs are lockable.

Why do we need Mobile Learning Labs?

For our students to be successful 21st century learners and to help our school meet our county's technology vision

- All students beginning in fourth grade have MacBook computers at a 1:1 ratio. Students in K-3 have very limited use of technology.
- Many of our students do not have computer access at home.
- Students need access to become 21st century learners.
- Students need exposure to become proficient.
- Students are learning with outdated technology.
- There are three windows based and one I-Mac computer in K-3 classrooms.
- Limited access in lower grades equates to limited students having direct access to learn the technology.

Why do we need Mobile Learning Labs? (cont'd)

- The lack of technology is detrimental to our technology learning vision.
- Teachers can't integrate technology throughout the curriculum without student access.
- Our windows based computer lab is currently used daily for instruction and outdated.
- Students need to learn the basics of technology.

Mobile Learning Labs support our technology vision

- Mobile Learning Labs support Bartow County's technology vision by giving more students access to the growing demands in technology.
- Students who have access to technology have the opportunity to actively learn in a more engaged 21st century setting.
- Mobile Learning Labs are a way to increase the integration of and access to technology.
- Mobile Learning Labs help students meet technology standards.

Student Testimonial

- The following link is a student testimonal about the benefits of a Mobile Learning Lab.
- http://bit.ly/pdbHsG

Demographically who would benefit from Mobile Learning Labs?

- The total population of the district was 80,257 as of 2013.
- The population distribution by age shows 0-4 years 5,406, 5-9 years 6,095, 10-14 years 6,193, and 15-17 years 3,695.
- Among the population 3 years and over, school enrollment demographics show a total enrollment of 20,125 that included 995 in preschool, 15,958 in primary and secondary and 3,172 in college.
- The race/origin population distribution shows White alone 67,957, Black/African American alone 6,891, American Indian/ Alaska Native alone 460, Asian alone 477, Native Hawaiian/OPI alone 63, Other race alone 3,386, Two or more races 1,023, Hispanic/Latino Origin 5,160.
- The median household income was $51,019 compared to $49,604 in Georgia. The percent of families in poverty was 12.9; the percent of all people in poverty was 16.2; the percent of people under 18 years in poverty was 21.4.

Targeted Population for Mobile Learning Labs

- The targeted population is students in K-3.
- This technology would currently benefit 115 students in Kindergarten, 118 in first grade, 119 in second grade, and 100 in third grade.
- Our students in grade K-3 currently have access to one I-mac computer and up to three windows based computers in the classroom.
- A Mobile Learning Lab would allow an entire K-3 class the use of technology during a designated time.

What do we need?

- We need one Mobile Learning Lab per grade level in grades K-3.
- We need trained teachers willing to share use of the technology.
- Teachers using technology during instructional time.
- We need written permission from parents for use. The permission form is sent home at beginning of year in the student handbook.

How will we introduce this technology?

- All administration, teachers, and staff, will attend a presentation during pre-planning about the importance of using Mobile Learning Labs and MacBooks.
- PTO officers will attend the presentation to share that they will purchase one Mobile Learning Lab for the school.
- A fifth grade Mobile Learning cart will be brought to the media center to show what the Mobile Learning Labs would look like. Remember, the lab is a cart and MacBooks.

How will this technology be implemented?

- Implementation of the Mobile Learning Labs will not be as difficult as initial training of MacBooks.
- All teachers have a MacBook and are familiar with its capabilities.
- The instructional technology coach has informed teachers of available programs offered for use through the county.
- Implementation will be easy because teachers have been eagerly awaiting a class set of computers for students to use.
- Prior to teachers and students using the Mobile Learning Labs the technology specialist will preload software and add an inventory label to each MacBook and Mobile Learning Cart.

Implementation (Cont'd)

- The Media specialist will add inventory id numbers of each MacBook and Mobile Learning Cart to the inventory system and assign barcode numbers of MacBooks to each Mobile Learning Cart.
- The Media specialist and technology committee will create training materials for use of the Mobile Learning Labs and MacBooks.
- All teachers and staff in grades K-3 will attend a one hour training session to learn procedures, care, use, and trouble shooting of the Mobile Learning Labs.
- Teachers will be given training materials to use during training and quick reference after the session.

Implementation (Cont'd)

- Teachers will be sent a Google form survey to assess their knowledge of procedures, for submissions of questions, and to request training of technology related to implementation of programs.
- Teachers will be able to request additional training for the Mobile Learning Lab by submitting an e-mail to the media specialist.
- Questions can be e-mailed to the media specialist or instructional technology coach.
- Fourth and Fifth grade teachers who are familiar with MacBooks and charging carts will also be available to answer questions.

Usage

- Mobile Learning Carts will be housed in the Media Center for checkout and charging.
- Teachers will have on-line access to a checkout calendar for signing up and checking availability.
- Computers will be Wi-Fi ready. The school has Wi-Fi installed an working throughout the building.

Support

- As part of Bartow County Schools technology mission each school is provided with a technology specialist.
- The county has provided one instructional technology coach for elementary schools.
- Teachers can submit itemized tickets to the technologist specialist requesting assistance.
- Media Specialists are trained to be technology trainers.
- Our school also has grade level representatives who provide intermittent support and training.

Professional Learning Development

- Teachers will attend a one hour training session at post-planning to assess procedures, determine if changes need to be made, and discuss successes.
- Teachers will attend an annual technology training conference for additional training in technology related to the MacBooks from the Mobile Learning Labs.
- The county has instructional technology coaches who train at each school and the Bartow County College and Career Academy. The instructional technology coach will provide additional training as updates are made.
- Each school has a media specialist who delivers training in key concepts each week during one planning period. The media specialist will offer training on as needed basis.
- The media specialist will be training teachers on the use of MacBooks during preplanning, post planning, and as needed through out the year.

Limitations

- Teachers may need to use at same time.
- The amount of consecutive time teacher may need for use to complete a class project.
- Teachers may need additional training.
- The cost of the Mobile Learning Labs.
- May need additional Mobil Learning Labs.

Cost of Mobile Learning Lab

- 10 Apple MacBook Learning Lab (with 2GB Ram, each) with Auto care Protection Plan for each computer $12,799.00
- 20 Apple Macbook Learning Lab (with 2GB Ram, each) with Auto care Protection Plan for each computer $24,099.00

Potential Funding

- One 20 Apple MacBook computer Learning Lab will be purchased by PTO.
- The media specialist and technology team will research available grants and other funding sources for additional Mobile Learning Labs.
- Another possible funding source could be the use of SPLOST monies that are allocated for technology upgrades.
- Title 1 funds are available and could be used to buy one Mobile Learning Lab.

How will technology be used by teachers?

- Teachers will use Mobile Learning Labs to bring technology into the classroom.
- Teachers will integrate technology into lessons and teach students how to use technology to produce creative products.
- Teachers will model proper use and care of technology.
- Teachers will expose students to various technologies with the use of the Mobile Learning labs.

How will technology be used by teachers (Cont'd)

- Teachers will use technology to differentiate lessons by providing access to online resources, allowing students to produce various products, and providing research capabilities
- Teachers will use technology to provide higher order thinking skills by having students evaluate resources, produce authentic products, and communicate outside of the classroom.
- Teachers will use technology to teach students how to research.
- Teachers will use technology to teach students how to collaborate and communicate outside of the classroom.

Student use of technology

- Students will learn proper use and care of MacBooks and Mobile Learning carts.
- Students will learn how to operate and manipulate technology correctly and safely.
- Students will learn how to produce creative projects.
- Students will use technology to be actively engaged 21st century learners.

Student use of technology (Cont'd)

- Students will collaborate and communicate outside of the classroom.
- Students will use technology for research
- Students will use technology to access various resources

Effectiveness of Technology

- Students will be computer literate.
- Students will be 21st century learners.
- Students will have a working knowledge of MacBooks and be able to use them when they have a 1:1 ratio beginning in fourth grade.
- Students will be able to integrate technology into daily life.

Evaluation of Research

- There is not a lot of research for Mobile Learning Labs. The Learning Lab consists of the cart and MacBooks.
- There is a vast amount of research about the use of laptop computers in the classroom.
- According to a study by Prakash Nair, RA, REFP., in *The Student Laptop Computer in Classrooms: Not Just a Tool*, you often hear, "The computer is just a tool, like a pencil." He states that, "I have started referring to computers in classrooms as "digital teaching assistants." He summarizes a computer's importance by talking about how when computers are properly integrated into curriculum it serves as a "mass customization". Computers allow students to make products that are customized to individuals. He emphasizes that students do not all learn the same way at the same time.

Evaluation of Research (Cont'd)

- A recent study was conducted in Oklahoma to examine computer assisted instruction for a year. Students received sixty minutes per week of WICAT (reading curriculum). Students in the experimental group showed significant growth over the control group.
- According to James Efaw, Scott Hampton, Silas Martinez and Scott Smith, in *Miracle or Menace: Teaching and Learning with Laptop Computers in the Classroom*, students of instructors who integrated laptops into their classroom scored significantly higher on six exams and their final exam. The experimental group scored 86.8 percent while the students from a traditional setting scored 83.5 percent. They also found student motivation was increased, it added efficiency to the classroom both in taking notes and the amount of material covered, and increased student learning.
- Studies are continuing to be conducted to determine the benefits of technology in the classroom.

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Reflection

As I reflect over the process of designing this project I know I have grown. The research process has taught me that there is the need to compare sources when looking for specifics, cost, and how to implement. It has taught me that I can assemble and evaluate information needed to effectively show why additional technology is needed in our school and county. I am now confidant that I could use this information and persuade our administration that we need Mobile Learning Labs as we move toward 21st century teaching and learning. At first, I struggled with the emerging technology for this presentation because there are so many options for educational purposes that are effective.

Reflection (Cont'd)

- I chose Mobile Learning Labs because last year I saw the look of sadness from lower grade students who didn't get MacBooks. The Mobile Learning Labs are a cost effective way that would allow more students access to technology. Research has shown me that the use of laptops is beneficial for academic growth in the classroom. It also showed me that research is continuing because there are so many factors to be considered. For example, is the teacher trained and how much time does the student get to use the technology. After feedback, I realized that my initial plan needed more development.