

Implementing 21st Century Technology in Today's Classroom

April Shinpaugh

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Description

The emerging technology in which I would like to implement would be the iPad Mini. iPad Minis are portable so students could use them in the classroom as well as anywhere on campus if necessary. There are hundreds of educational apps already available for iPad Minis with more emerging each day. Many of these apps are free to download. The apps that do cost are cost efficient. Additionally, iPad Minis are kid friendly. The use of iPad Minis in education provides a student-centered environment as well as engages diverse learners.

General Purpose

IPad Minis can serve many purposes in the classroom. First, and most importantly, they provide students with an engaging learning experience. From kindergarten to fifth grade, students could use iPad Minis to assist them with any subject area or project. They could help students with reading, vocabulary, math, science, and even social studies. iPad Minis are very versatile so students could use them at their desks or with partners. iPad Minis would be used to improve skills in all content areas through individual student needs and small group instruction. Additionally, iPad Minis would be utilized for assessments, applications for skill re-enforcement, and independent practice across the content.

Vision

The vision of Fannin County's Technology department is *Technology is an essential part of the daily operation of the school system. It is part of the teaching and learning process, and it is an integral part of the curriculum.* Providing ten iPad Minis in each classroom would be an investment that would pay off in the future. As part of the teaching process, teachers could use technology in day to day lessons and classroom operations. For instance, iPad Minis could be

Running head: TECHNOLOGY IN THE CLASSROOM

used as a classroom management tool. They could be used in a small group setting explaining concepts to struggling students using apps.

Age Range

Any student attending Fannin County School System would have access to iPad Minis. It would be ideal to have a set in each classroom; however, considering costs, having ten in each classroom would be sufficient. By doing this, iPad Minis are accessible to both teachers and students at any time they are needed. Additionally, with easy accessibility, usage of the iPad would be increased since they would not have to be rotated.

Requirements

To begin implementing iPad Minis, iPad Minis first have to be purchased. Along with the iPad Minis, protective cases would need to be purchases. Next, keyboards could be purchased to assist students in typing. Also, headphones would be ideal to decrease sound in the classroom if students are using iPad Minis for centers. Since, wireless is already available in the school system; the requirements for implementing this technology are at a minimum. The technology department could also map the iPad Minis so they could print to the printer already assigned to the classroom.

Technical Support

Technical support could be provided through the schools Information Technology department. This group would be able to set up the iPad Minis and add any initials applications. An additional Apple Care Protection Plan could be purchased through Apple in the event of damage or issues the IT department could not manage.

Running head: TECHNOLOGY IN THE CLASSROOM

In addition to this support, the Information Technology department could pair with school academic coaches to provide training to staff on a Professional Learning Day. This could cover basic information regarding the iPad such as powering it on and off, charging, sound, and any additional questions that may come from teachers.

Limitations

One of the biggest limitations of the iPad Minis is the fact they do not support Flash. However, with HTML 5 emerging, Flash issues are becoming a thing of the past with iPad Minis. Also, students could wander into other sites easily while on the iPad. Luckily, with the internet policies in place, students do not run the risk of viewing inappropriate content. Viewing multiple windows in the iPad is also a challenge, but if students are assigned applications to be using, this should not hinder their education. Lastly, typing can be a bit challenging on the iPad; therefore, if keyboards were purchased, this would also eliminate this issue.

Cost

Since purchasing iPad's could become quite expensive, it would be more cost efficient to purchase iPad Mini's. They contain the same qualities as the iPad, but they are just a bit smaller. The cost of one iPad Mini is \$329 without any accessories. The protective cases for each iPad would be \$39. The total purchase for one iPad and one protective case would be \$368 ("Apple store," 2013). If each classroom gets a total of ten iPad Minis this would bring the total number needing to be purchased at 220. This would bring the total to approximately \$80960. If additional headphones or keyboards were to be purchased, the cost would increase. However, these items are optional and would not hinder production if they were not purchased.

Funding

Part of the funding for this purchase could come from Title I funds. In addition to this, the school could do fundraising such as selling candy bars, candles, and wrapping paper to raise the additional money. The proceeds from the annual school carnival could also be compiled and used.

There are also many grants available to assist in funding iPad Minis. Such grants include Digital Wish Grant, Hearlihy/FTE Grant, K-12 School Grants, and Academic Enrichment Grants("Georgia grant watch," 2013). Many of these grants vary in the donation depending on the need. Since we are a public school in a low income area, our school would probably qualify for at least one grant.

Usage

Bringing iPad Minis into the classroom would promote an engaged learning environment for students. iPad Minis offer a variety of education applications as well as ebooks for curriculum. This technology would allow students to view videos and podcasts, read books, and research topics. Students will be given the opportunities to collaborate with classmates as well as other professionals around the world. With iPad Minis students can create authentic projects such as movies and podcasts. They can even write, illustrate, and narrate a story they have created. When used as a workshop tool, iPad Minis can provide cooperative learning environments for students interacting together. The device can be used as a tool to promote higher order thinking skills when researching and creating projects or just using available educational apps.

Running head: TECHNOLOGY IN THE CLASSROOM

Since there are a variety of apps on the iPad Minis even writing can be enhanced. For instance, an app such as Popplet could be used by students to record ideas and thoughts regarding writing, connecting ideas, and even creating drafts.

Teachers can use iPad Minis for classroom management. Apps such as Class Dojo provide feedback to teachers and students about positive behaviors in the classroom as well as negative behaviors. This simple app could eliminate distractions because the teacher could use the iPad to award positive behaviors or discourage negative with the touch of a button.

For our ELL students, there are a variety of applications to help with language translation and learning. Students can practice vocabulary or have stories read to them enhancing comprehension.

IPad Minis could also increase differentiation in the classroom. Since there is a variety of apps, students could choose apps that appeal to their interests. Additionally, teachers could assign skills practice based on deficiencies in certain skill areas. iPad Minis could also be used to challenge students with innovative projects in which they could create. The iPad could also be used in a one on one setting to provide extra practice with students on particular skills using virtual manipulatives.

Students would have the ability to communicate with other students around the world using an iPad. Projects such as Flat Stanley where students become penpals with other students around the world would be possible. Additionally, students could use technology such as Skype to videoconference with a student at the high school if they needed additional help in a particular subject area. Students could also send E-vites or electronic invitations to parents or other community members announcing parties or events happening at the school.

Running head: TECHNOLOGY IN THE CLASSROOM

Unlike Smartboards, iPad Minis provide direct learning opportunities for students who are struggling with content. For struggling readers, iPad Minis allow for reading e-books, tapping on specific words for memorization, phonemic awareness, vocabulary re-enforcement, and comprehension building.

Research

There is an abundance of research pertaining to the benefits of using iPad Minis in the classroom. Students are able to research and apply knowledge with the touch of the screen. Students are also able to create geometry projects using Prezi which is similar to PowerPoint. Since Common Core Standards want students to become real life problem solvers and critical thinkers, iPad Minis are the researched way to do this. Students have unlimited access to applications which challenge students on a daily basis in each content area. According to the constructivist learning theory, the learner should generate their own knowledge through experience-based activities rather than being taught it by teachers.

Technology also increases problem solving abilities in children. It engages and motivates children, supporting learning needs, and prepares students for future learning (Roblyer & Doering, 2011). iPad Minis could be used to model, scaffold, discover, and develop concepts.

Implementation Plan

The implementation model to be used for this implementation is Kotter's Theory of Change. Step one is for each individual to see the need to change. Using a professional learning day, the urgency to incorporate technology will be brought up to teachers. This is urgent due to the Common Core Standards requiring more rigor, critical thinking, and problem solving from students. It is important for teachers to feel comfortable about the new iPad Minis becoming a

Running head: TECHNOLOGY IN THE CLASSROOM

tool in their classroom. The next step will be building a guiding team to help implement this technology and reassure others. Therefore, one person from each grade level will be chosen. They will be chosen depending on their comfort level with current technology. In order to assist with choosing a team member, a survey could be used to get teachers' true feeling and comfort levels regarding technology. The next step is creating a vision about why this project is so important. Since the technology department has a vision that technology increases learning, this will be used. All teachers in the school already see how students are engaged in technology just by using classroom computers and the Smartboard. Step four is having leaders and others use the technology and express how important this will be to learning. The team members chosen to guide others will have the opportunity to try out the iPad Minis and apps prior to the roll out with everyone. This way, they will be able to promote positive feedback to each teacher. The next step will be to recognize technology usage in the school. Therefore, administration, technology instructor, and the academic coach will visit classrooms taking pictures of the great things that are happening when technology is being used. The pictures will be posted on the school webpage as well as in the main entrance for teachers to see. Additionally, learning communities will be established to continue support and encourage for teachers. As a motivator, administrators will keep a log of teachers and students they see using technology. The names of the teachers will go in a basket and a drawing will be done each week where a door prize will be given to the teacher or class. To ensure the technology keeps moving successfully, the learning communities will meet and discuss what works and what doesn't. On other professional learning days, teachers who are strong in certain technology areas can meet with teachers who feel deficient in that area. The stronger teacher can share tips, tricks, or lessons they use that are successful. Finally,

Running head: TECHNOLOGY IN THE CLASSROOM

teachers should start seeing the improvements in students' engagement, enjoyment, and motivation each day in the classroom due to the interactive lessons they are using (Kotter, 2012).

Implementing from county level

As far as implementation on a larger scale, usage policies would need to be established and communicated to each employee. It is important everyone knows exactly what the iPad Minis can be used for. Additionally, this policy would include tracking information for the iPad Minis. Next, a standard policy for the applications would be put into place. By doing this, the iPad Minis could contain many of the same applications which would be essential for promoting learning. Following this, a professional learning day would be set aside for teachers. This would be a time when teachers could have hands on experience with the iPad Minis. A list of applications would be distributed to teachers with a description for the iPad. The teachers would be able to ask questions and use the apps. Also, if there were any additional apps teachers request or find to be useful, a list would be compiled and reviewed. A point person for problems or questions would be established at the school. This person would be the technology instructor and the academic coach. The iPad Minis and components would then be distributed to teachers for classroom use. It would be communicated to the teacher that monitoring usage on the iPad Minis would still be an appropriate policy to follow.

As far as classroom use, teachers would have the freedom to use the iPad Minis during times of their choice. It would be their responsibility to run updates and monitor student use. The protocol for this would be given to them at the Q & A session. It would also be their responsibility to ensure students knew proper procedures for storing the iPad Minis, charging the iPad Minis, and any general housekeeping they may see fit.

Reflection

By reviewing the new Common Core Standards, one detail that emerged in each content area was increase rigor, critical thinking, and real world problem solving skills. By using iPad Minis, this can be achieved. I found many teachers who had wonderful experiences using technology. By creating blogs, they were able to share all of the positive experiences they and their students had. Just by reviewing various education apps on my personal iPad, I began to see how this technology could be used on a day to day basis. From apps that improve simple math computation to apps that take students on virtual field trips where they can explore areas they may never see, the possibilities for enhancing the learning environment in my classroom are endless. It is such an exciting time with all of the new technology. I think about how exciting it would have been for me to learn algebra, biology, or even write a paper on an iPad when I was in school. In order to give our students a remarkable learning experience, it is important to embrace the new era of learning.

Resources

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