# COMPUTERS in the CLASSROOM



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s society continues to advance, the demand for digital technologies in the classroom increases (Saine & Kara-Soteriou, 2010). In order to accommodate this changing need, iPods, iPads, and the SMART-Board have made their way into some classrooms across the globe. These tools are transforming literacy instruction and the way students are learning. Teachers claim when students are engaged in digital literacy activities, the students see these tools as exciting and unique, but often not as schoolwork. Teachers also claim students become more creative in their thinking. For example, Tricia, a language arts teacher, noticed the deep and creative thinking of her students as they used the app, Toontastic, to created story elements for their animated stories. On the other hand, researchers wonder why more classrooms over the last three decades havenit changed their curriculum and instruction to adopt the available digital technologies (Abadiano & Turner, 2007; Hew & Brush, 2007; Wepner et al., 2007).

For some teachers, these tools have become a natural part of the daily classroom instruction. That's what I discovered when I interviewed four teachers from diverse classroom settings, one Nigerian classroom teacher and three American teachers [elementary, middle, and high school]. I asked them to tell me how they made the most of digital technologies and how it has transformed their teaching and student learning in literacy. In this paper, I will share how these teachers have incorporated iPods, iPads, and the SMARTBoard into their instructional activities.

#### **Podcasting country projects**

Pagia George is a first grade teacher at the American International School of Lagos in Nigeria, West Africa who incorporates iPods into her social studies instructional activities. The iPods nanos are inexpensive, compared to classroom laptop carts or computers on wheels [COW], and their portability and durability provide students with learning tools that are equipped to perform a variety of tasks such as podcasting. Digital recording, in particular, is used to assist her students in creating podcast of their country projects. In the next section, Pagia will describe how she integrated iPods into instruction.

#### Focus of the lesson

- Deepening the knowledge of the culture of others
- Using Internet and reading informational text
- Writing expository stories and acrostic poems
- Researching country information

#### Technology used

- iPod nanos
- Podcasting

#### Description of the lesson

The first step was for each student to complete a homework assignment requiring them to self-select three countries they were interested in learning about [keeping in mind they have heard of many countries from their peers and their own travel experiences]. When they returned to class the next day with the names of countries in which they were interested, I listed all the countries on the board and placed the students' name next to those countries [I tried to give them their first choice but each child researched a country from their top three choices.]

I incorporated the *Step up to Writing Program* by Maureen Auman for guiding their writing. This program contains research-based, hands-on writing strategies and has helped my students write expository story. After students researched information on the Internet and in books, wrote, revised, and rehearsed their text, they presented them orally to the class.

During the second part of this project, students engaged in writing poetry and podcasting the acrostic poem [see Image 1] they created using information from their expository writing. After they wrote, revised, typed, and rehearsed their poem, they were ready to record them. Students used iPod nanos, a portable digital recorder for producing podcast for our class website [teachers can also choose to use Audacity, a crossplatform digital audio editor and recording application (Audacity, 2010) that can be downloaded for free from *Audacity* at http://audacity.sourceforge.net/].

The students included in their reports facts about flags, popular or common foods, type of government [democracy, monarchy], capitol city, the ruler of the country [president, prime minister, king, or queen], etc. The integration of iPods into my classroom enabled the students to share their experiences with a wider audience beyond our classroom walls.

#### Image 1 Acrostic Country Poem



## How technology enhanced students' learning in the classroom

With scaffolding, students were able to gather information from the Internet and informational texts regarding their selected countries. Their expository writing included topic sentences, three details, and conclusion. I noticed how eager and passionate they were about completing the written part of the project to share them digitally with classmates, their parents, family, and friends. By having students podcast the poem they created was a good platform for fluency practice as well as enhancing writing skills. They didn't mind rerecording their poem until it sounded "just right".

Overall, all students were able to retain facts about their self-selected country over a longer period of time because they continued to revisit, talk about and listen to the podcast they made. Usually students quickly forget about the content of previous projects once we move on to a different topic or content. But not this time!

#### Writing descriptions

Bethany Glass, a first grade Spanish teacher at the Academy of Multilingual Immersion Studies, has been teaching for five years. She offers her students an immersion and partial immersion curriculum aimed at fluency in Spanish. One of the many digital technologies she uses in her classroom is the PolyVision Board, an interactive whiteboard that has been designed to positively increase learning. This technology captures the attention of both the English language learners [ELLs] and Second language learners [SLLs] as well as makes her teaching more realistic. Bethany states that when teaching students a new language, it is important for them to be able to use the language in socially appropriate ways. This can be challenging when one is teaching Spanish to first graders. Next, Bethany tells how the use of the interactive PolyVision Board and Google Earth enhanced their writing lesson.

#### Focus of the lesson

- · Giving oral and written descriptions of scenes
- Building vocabulary
- Writing sentences

#### Technology used

- · PolyVision Board
- Google Earth

#### Description of the lesson

In the real world, people do not walk around pointing to things and saying what they are, so I wanted to take my students past saying "rain" and "cloud." In class, we practiced describing things verbally. Then we went outside, made observations, and brainstormed more descriptive words. We also looked in books and described the weather in pictures. We spent time looking at repetitive writing (which is what my students had been producing) compared to more fluent writing. Finally, we incorporated technology using my interactive PolyVision Board to travel the world on Google Earth and browsed photos of important places. When we found one that caught our eye, we spent some time looking at it silently.

My students used Spencer Kagan's Round Robin structure to discuss the photo. In their teams of four, each student said something about the photo in Spanish, their teammates cheered them on, and they kept taking turns until I called time. Students then sat down and wrote. I did this as a weeklong lesson on writing descriptions and took data at three points—Monday, Wednesday, and Friday. I took note of how my students' writing improved in this area.

## How technology enhanced students' learning in the classroom

This was Mya's [pseudonym] pre-assessment. Since I teach second language to very young children, their grammar is not always on target, but it is understandable. As you can see, before we began this unit, Mya was able to write sentences [see Image 2] with "Yo" (I) and relied heavily on "I see" (Yo vel- she meant veo). On her pre-assessment she wrote:

I see the bus. I see the rain. I am outside and it is raining. I see the trees.

Image 2 Mya's Writing Sample



However, her formative assessment showed evidence of her using a variety of descriptive words. Here is what she wrote:

## I am outside. I see a big tree. It has green, brown, and yellow leaves.

I feel this lesson contributed to my students' learning in many ways! First, using Google Earth and other pictures online caught my students' interest. I have many visual learners and artistic children in my class, so anything bright and fun to look at attracts their attention. Second, by explaining to my students that we use language to describe things every day, my students understood the real-world purpose of these writing lessons. Third, by showing them examples of good and "oh no!" writing, they were able to see, in very literal terms, how they could improve their writing.

Not only did I see my students' writing improve over the course of the week (ELLs and SLLs alike!) I also heard big improvements in speaking from my SLLs. When we did our Round Robins, they no longer relied on the same sentence structures at each turn. They became excited when they noticed their own progress and that motivated them to keep talking!

#### Toontastic, BrainPOP and Strip Designer app

Tricia Smith teaches 4th, 5th, and 6th grade language arts at Linden Elementary, an urban middle school. Her school district takes pride in the fact that they have been named the District of Character in the state of Ohio for two years in a row. Therefore, Tricia uses iPads as a tool to enhance the study of character traits in her classroom. The iPad is a tablet device that has many educational applications in which some of them are free and can be downloaded and installed from the Apps Store. However, those apps that aren't free can be purchased at a price ranging from \$0.99 and higher. In the section that follows, you will hear the voice of Tricia as she shares three sample lessons of how she uses apps on the iPad to enhance literacy instruction in her classes.

#### Lesson I: Toontastic (Digital Story Telling) Focus of lesson

- Story elements
- Character traits
- Mood
- Theme

#### Technology used

- iPad
- Toontastic app [\$1.99)]

#### Description of lesson

Students worked in pairs to create a short story that focused on a character trait (i.e., honesty, respect, personal responsibility, fairness, etc.) and story elements such as characters, setting, plot, problem, solution. Then students used a graphic organizer to plan their story by creating a story arc in preparation to put it to animation and narration. A previous lesson focused on the Toontastic app and how to use it.

Next, students created their own scenes and characters or chose the ones that were already in the program. Finally, the students created one scene at a time until they had entered each scene. Each scene reflected a different mood and the background music enhanced the mood depicted in the scene [Image 3]. One pair of students wrote:

#### Image 3 Story Animation



A princess loses a precious stone and is very upset about it. Another character, a pirate, finds the stone and struggles with making the right decision on whether or not they should keep it or try to find the owner. After much debate, the second character decides to find the owner and give it back to her. The princess is so happy that she honors the pirate by giving him something even more valuable. The story ends with a theme or lesson learned; if you are honest and respectful to other people's belongings, you may get rewarded for your actions.

## How technology enhanced students' learning in the classroom

Students used their creativity and imagination to create stories and put them to animation. This digital process has helped the students become more creative in their thinking. It has also helped students with sequencing of story events and identifying the key elements to a story.

#### Lesson II: BrainPOP, Nobel prize winners, and word processing/research skills Focus of lesson

- Extension of learning
- Research skills

- Word processing skills
- Writing a report

#### Technology used

- iPad, Safari
  - Pages (word-processing app)
  - BrainPOP app [free]

#### Description of lesson

Students began this project by watching the BrainPOP movie titled "Nobel Prize" to gain knowledge of what it was and how it was awarded. Then students researched three Nobel prize winners and filled out a graphic organizer to organize their thoughts. It focused on who, what, when, where, why, and how the prize winner benefitted others today.

## How technology enhanced students' learning in the classroom

Students' engagement in the BrainPOP movie extended their learning and increased their curiosity about the topic. After they gathered information using the graphic organizers, they successfully created well-written paragraphs with topic sentences and supporting details that were of great quality.

#### Lesson III: Geometry scavenger hunt and use of Strip Designer app Focus of lesson

- Geometry vocabulary
- Making connections with the environment and geometry vocabulary
- Personification/voice

#### Technology used

- iPad with camera
- Strip Designer app [\$2.99]

#### Description of lesson

This project was used as a culminating activity to a geometry unit. The students walked through the school building and used the iPad to take pictures of examples of geometry terms (i.e., types of angles, types of lines, planes, polygons, perpendicular, parallel, etc.). Then they published their pictures using the Strip Design app. Finally, they used the tools (call-outs, outline marker tools, text, color, etc.) in the app to create a speech bubble that told about their function and how they were named [see Image 4]. One speech bubble read, "I have parallel lines and I'm a plane!" This was a very simple lesson that can be done across subjects with any content area vocabulary.

## How technology enhanced students' learning in the classroom

Students were able to apply their knowledge of geome-

#### Image 4 Geometry Terms



try terms in a creative way by designing their own comic strip using the Strip Designer. They were also engaged and enthusiastic about what they knew and shared it with a professionally finished product.

#### Literary terminology and poetry

Jessica Wertz, a high school teacher who teaches in a rural district at Carlisle High School, discusses how she used SMARTBoard to enhance literacy instruction and access popular web resources that helped students build a better understanding of literary terms that relate to poetry. In the subsequent section, Jessica explains how the SMARTBoard allows her to deliver dynamic and innovative lessons with the simple touch of her finger.

#### Focus of the lesson

- Understanding literary terms that relate to poetry
- Application of these terms to various poems

#### Technology used

- SMARTBoard
- Website Poetry 180 http://www.loc.gov/poetry/180/

#### Description of the lesson

I displayed a poem on the SMARTBoard. (The poems

were usually captured from the Poetry 180 website using the screen capture feature of the Notebook Software or were typed into the Notebook Software if it was a poem from a non-electronic source.) To the right of the poem were the literary terms we were studying (figurative language, metaphor, simile, symbol, personification, imagery, allusion, stanza, speaker and tone). Each word was created as a moveable object that could be dragged around the screen.

After we read the poem and discussed our interpretations of its meaning, I asked the class to look for examples of the literary terms in the poem (Image 5). For example, when a student thought they had found an example of a metaphor, he/she read it aloud and then the class decided whether or not they agreed it was a metaphor. If they agreed, then I would drag and drop the word "metaphor" next to the line. (A teacher could have the student come to the board and move the word, it is just more time consuming). For some literary terms, such as tone, there was not a specific place in the poem to drop the word. So, we discussed what we thought the tone of the poem was and then wrote that next to the word. Not every poem would have an example of every literary term. When selecting poems to use with these lessons, it was helpful to select poems that had at least 3 different examples of figurative language.

We did this same lesson with multiple poems and I used a gradual release approach. With the first poem, I went down the list of terms in order and asked them to find specific examples, and as we were looking, I reminded them of the definition. Then on another day using a different poem, I went down the list in order and asked them to find examples, but this time I asked them to give me the meanings as we were looking and I only

#### Image 5 Literary Terminology & Poetry Lesson



provided the definition if the whole class was stumped. We continued this on multiple days with a variety of poems until I could ask them to find an example of any term they saw and we only defined the words that were still giving them trouble.

## How technology enhanced students' learning in the classroom

By the end of the unit, students were able to easily identify various examples of the literary terms in poetry. These terms were a review of terms previously introduced in 8th grade. However, some class periods showed an average increase of 10% from pretest to posttest. It is important to note the their knowledge of the definitions was tested during the pretest, but their knowledge of the definitions as well as their ability to identify the type of figurative language of several examples were tested during the posttest tested, so it was a more rigorous test.

They were also required to write their own poems in which they included figurative language. Every student successfully included at least one example of figurative language and many included multiple examples of varying types (i.e., metaphor, simile and personification) in a single poem. This was an improvement compared to previous years (when these lessons were not used) in which some students still struggled to write one example of figurative language.

#### Conclusion

Whether teaching in an urban, rural, or international school, teachers of literacy are integrating iPods, iPads, and the SMARTBoard in the classroom to make their instructional activities more appealing and exciting for their students.

As these tools continue to transform literacy instruction, students internalize lifelong skills needed

for success in this global society. Despite the fact that students are being equipped with some or all of these changing literacy tools, such use should be available to all students. Therefore, we must not ignore the digital divide. We must make it a priority to equip all schools, especially low socio-economic status (SES) schools with students' access and use, as well as, teacher training and support (Hohlfeld, Ritzhaupt, Barron, & Kemker, 2008) for keeping up with these digital tools that are transforming literacy instruction and student learning in the classroom.

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