

Making things provides a powerful context for learning. An authentic, or real-world, audience for one's work is a mighty motivator. As teachers, we often promote the idea that process is more important than the end product, yet it is often the product itself that provides context and motivates students to learn. Knowledge is a consequence of experience, and open-ended creativity tools expand opportunities for such knowledge construction.

Emphasizing the process—the "doing" part of project work—should not cause us to lower our expectations for the final product. Sometimes we overlook shortcomings in a final product because the result is... well... cute. While cuteness may be a desirable attribute of student projects, *good* is even more desirable—and there is no reason why student products cannot be both cute **and** good. Interesting, timely, relevant, sophisticated, moving,



whimsical, charming, thoughtful, original, clever, imaginative, and innovative are all attributes that contribute to a *good* project.

While every project may not generate an objet d'art, we should assume that every project we undertake has the potential to do so. We must operate from a perspective that children are competent, talented, and capable.

#### Whatcha Gonna Make?

The advent of the personal computer 30 years ago was greeted by the metaphor of "computer as tool." Seymour Papert, who worked with renowned educational theorist Piaget, combines the constructivist idea that learning is an active process with the research-backed concept that learning happens most effectively when people actively make things in the real world. He calls this idea "constructionism." Papert refers to the computer as a raw material with which you can make all sorts of things. Papert believes, like many of us, that the construction of shareable artifacts—a poem, a robot, a computer program, a musical composition—is an effective way of ensuring the construction of mental models.

More so today than ever before, it is clear that many forms of student work live only on the computer screen.

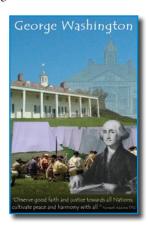
Computer graphics, digital storytelling, movies, animations, simulations, and video games are all screen-based. Many educators have embraced this technology fully and in many computer labs and technology-rich classrooms this aesthetic transition is in full bloom. But wait! Let's not forget the value of paper!

## Ah, Paper

I was reminded of the power of paper during my recent study trip in Reggio Emilia, Italy. Teachers there investigate the thinking of children by meticulously documenting what students do and say while engaged in projects and social interactions. Some of these "learning stories" are memorialized in absolutely gorgeous books—not eBooks, but good old-fashioned paper ones.

Web pages, podcasts, PDFs, and YouTube videos are great ways to share student work, especially when a project is enhanced by digital publication, but paper is timeless. Paper-based student work can become a family heirloom and be cherished for generations. Some tools, like Pixie, are equally suited for sharing work either way, allowing students to publish work as podcasts or online storybooks as well as printing greeting cards, booklets and graphic novels.

One of the most exciting revolutions in printing since the invention of movable





type is happening right now: print-on-demand. iPhoto can be used to generate spectacular books chronicling a project's development or life in your classroom. Sites like Blurb.com and Createspace.com make it easy for you or your students to create books-on-demand. Countless web sites will turn your art into a wide array of learning memorabilia. For students who have a large body of written work, there is an ever-growing array of "vanity press" sites where they can create, publish, and print books on demand.

Students might write more and with greater care if their work resulted in an actual book. The transcribed story of a pre-writer could become the first book a fledgling author reads to her proud parents. The teddy bear poems or collection of Nana's recipes takes on greater resonance as it metamorphizes from homework chore to beautiful book.

As I've written in previous articles, one of the noblest goals of education is to create memories. Beautiful paper books created by children add permanence to such memories and can last a lifetime.

#### **Biography**



**Gary Stager** 

Gary Stager has spent the past 26 years as an internationally recognized educator; speaker, and

consultant. He is the Executive Director of the Constructivist Consortium.

### **Curriculum Connection**

Technology as a motivator and equalizer



Amy Boehman-Pollitt

"In my role as a Teacher Specialist for Instructional Technology, I have the opportunity to co-plan and co-teach with teachers across grade levels and subject areas to integrate technology into their lessons. A fifth-grade teacher recently approached me to brainstorm ideas for her reading groups, ranging from special needs to above grade level students. Since each child was currently working on a self-selected mystery book, I immediately thought of using Pixie to showcase their individual book choices!

On the day of the lesson, I discovered that the students were new to Pixie. After a few simple directions, the kids were off and running on their own. You could have heard a pin drop as the children were consumed with creating trading cards about their books. They absolutely loved every minute of it! One child was pleasantly surprised to discover the drawing tools in Pixie allowed her to illustrate even better than when she uses paper and pencil. Meanwhile, I couldn't tell who had special needs and who was above grade level. All of the students were engaged, enthusiastic, and excited!

When everyone was finished, we printed the trading cards in color so the children could exchange them to receive a full set. The excitement buzzed through the classroom as the kids received their color cards to trade. Some children went as far as to put their trading cards in plastic protectors!

A mother of a high-functioning autistic student in the class approached me about a week after the lesson to share that her child was so engaged with the trading cards that he would read them over and over again at home. He carried them everywhere he went and proudly flashed them at others as he proclaimed, 'Look what we did on Pixie! I know Pixie! Do you know Pixie?' When asked what he likes best about Pixie, he responded, 'You can create things and use your imagination. It's awesome!' His mother shared with me that it can be difficult to keep his attention long enough to engage him throughout a lesson. Technology was the key to helping this student achieve success in a regular classroom environment.

The students who were above grade level added their special touches to their trading cards and were just as excited as the rest of their peers. 'I had such a great time making the trading cards,' commented Jillian. 'It was fun!' Technology was the great equalizer for this fifth–grade class!"

# Luna Lovegood Harry Potter and the Deathly Hallows



Traits: Quirky, dreamy, good friend

Quote: "It's the horn of a Crumple-Horned Snorkack!"

Summary: Voldemort is becoming stronger each day, taking over Hogwarts and the Ministry of Magic: Harry and his friends continue to search for Voldemort's Horcruxes so that they can destroy Voldemort. There is a huge battle at Hogwarts between good and evil. To find out who wins the battle and whether or not Voldemort is destroyed, read this book!

#### Limpy Toad Heaver



Character traits: Safe, kind, nice and

Quote:"I have another, better idea!"

Limpy wanted a safer and a happier place for him and his family to live. But there is a highway and a lot of humans on the way. It would be very dangerous and a long trip for a bunch of toads. Some how he finds this toad heaven, but how does he get to his whole family to tell them about it when they might be all the way across the world by now? Find out in this book Toad.