

IMPACT: Using the Lens of Digital Products

Student digital work is becoming more valuable as tangible, visible artifacts of the teaching craft and how effectively technology is integrated within our learning environments. Rigorous proof and deep understanding of teaching and learning results can be found in the work our students produce. How do we know all of our students are meeting high standards? Their work will show us. The process of studying student digital work is a meaningful, rigorous approach to being data-driven, reflecting critically on the challenges and successes of our instructional practices, and building teacher capacity for elevating the quality of student thinking and craftsmanship in their performance-based communication. Using student digital work as a body of evidence is not only a high-yielding instructional strategy for teaching and learning but also provides schools with a systematic large-scale accountability process serving grants and initiatives.

Expanding the Assessment Toolbox

In 1999, Illinois Learning Technology Centers embarked on a state-wide project to develop a comprehensive set of assessment tools called NextSteps. This common toolbox gives all IL schools the same ability and tools to measure, analyze, and plan forward (MAP) technology's continuous impact. In order to deepen the evaluation of technology's effects on student performance beyond surveys, interviews, and quantitative data from state tests, student digital work was targeted as instructional artifacts using similar processes being used for assessing student writing.

Bernajean Porter initiated *The Digital Media Scoring Guides* project in partnership with Kristin Ciesemier, Director of North Central Regional Technology in Education Consortium at NCREL/Learning Point Associates (1999-2000). Two years were spent

developing an assessment framework based on TYPES of communication, prototyping, field-testing, and validating these scoring guide tools along with constructing researched-based processes for systemic whole-school evaluation strategies. Read an ISTE article on using these digital media scoring guides: *Raising the Bar for Student Performance and Assessment* (May, 2003)

[Here is a link to list as a resource footnote at the end of article OR do you have an ISTE link to the same article?

<http://www.digitales.us/resources/books.php#raisingthebar>] After years of making these assessment tools available online to teachers, district and project teams as well training workshops, there is now a readiness to begin using them as a lever in taking their student successes next level of implementing them systemically. The scoring guides are designed to score student work, inform instructional practices and systematically conduct technology impact reports. While we are still in early learning stages of methodically using student digital products to influence and assess impact, we have already learned a lot!

Types of Communication:

- Personal Expression
- Short Story
- Myths/Tall Tales
- Docu-Drama
- Summary Report
- Book Report
- How-To Directions
- Biographies
- Advertisements / PSA's
- Describe and Conclude
- Analyze and Conclude
- Analyze and Persuade
- Compare and Contrast
- Cause and Effect
- Documentary
- Participatory

Students and Teachers Use Digital Products to Improve Technology Uses Mirror Learning Practices

Technology uses magnify and make visible all that works and all that needs to work better in our schools and learning practices. Bernajean (1990)

Introducing a school-wide expectation to use scoring guides for digital products [does provide an](#) visible opportunity to also introduce and re-enforce research-based, best learning practices. After being part of almost 2300 technology impact reports, here is blinding flash of the obvious (BFO's): we can spend more but we can't make more happen for kids beyond access without the tasks and assessment tools directly targeting student learning. [If you are considering](#) focusing technology uses to accelerate high-yielding instructional strategies and learning environments, [here are six lessons learned from TLCG and EETT grants along with numerous school and district assessments sharing the first journeys of systematically using student digital work as a body of evidence.](#)

1. Thinking HeadWare NOT HardWare: The scoring guides for digital media were developed as TYPES of communication to organize purpose and content FIRST regardless of the technology being used in the final product. MODES of communication are the technical tools being used: podcasts, comic, websites, slideshows or movies. The effective use of technology tools is still measured but considered the “craftsmanship of communication” within the context of delivering the content. The craftsmanship's six traits can be consistently applied to many MODES. For example, assessing the image communication trait as decorating, illustrating or illuminating is constant whether used in a slide show, enhanced podcast or a movie.

The majority of assessment tools, if any, used by classroom teachers are unintentionally focused on measuring the student's mastery of technology modes like slide shows, podcasts, websites or movies. Beware of rubrics over focused on technical elements giving a majority of points to the use of the technology. One teacher's rubric gave students the highest credit for using pan and zoom more than five times! Another gave high points for “using text boxes, graphics, sound; all buttons work.” However we also found many student digital products are not assessed at all – like other non-technology products students were simply given credit for

Content Comments of One School's Evaluation of 33 Digital Products

- Cognitive task was minimal
- Lacked clarity of audience
- Pictures did not go along with content
- Purpose not clearly identified
- Product lacked organization
- Audience not clearly identified
- More appropriate information needed
- Substance lacking
- No documentation of sources
- Too much text
- Original content and synthesis lacking
- Cut, copy, pasted information
- No real summary (summarization)
- Just statements of information
- No citing of sources
- Could use more rigorous content
- Original conclusion/thoughts comparison from student needed
- Hard to tell if this is student's own words
- Flashlight on morphing photos, content learning minimal
- Voice from students would have made work more authentic
- It would have been nice to show real charts with all the wonderful data
- Not much content there
- Cookie cutter look-alike products

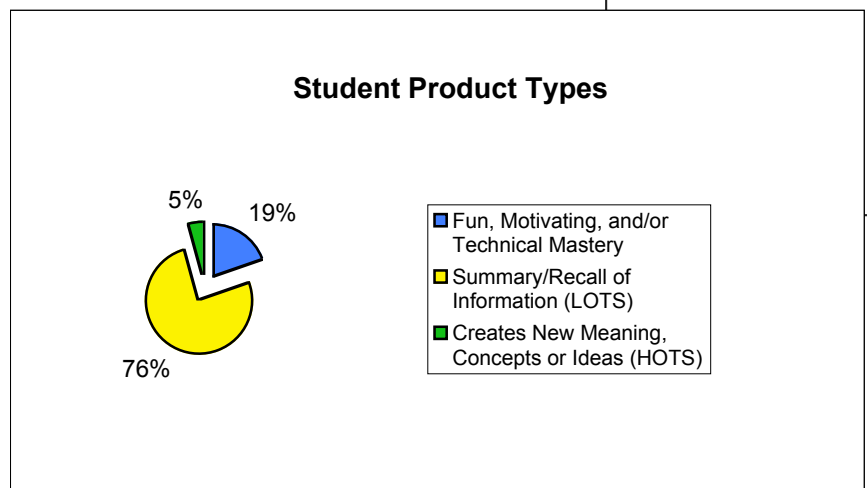
being turned in. “I look to see if students followed directions and if they completed the assignment,” stated one teacher.

Lessons Learned: *The quality of digital work definitely benefits from focusing students on their purpose, audience and headware NOT the hardware.* When the task and assessment tools were consistently focused on doing a specific MODE of technology, the comments collected from evaluators reported a similar pattern identifying rigorous content as superficial or missing. However focusing on a TYPE of communication shifts authors intentionally to deepen their thinking into rigorous, worthy work that is signed off on by their teacher BEFORE packaging it with any technology tool.

2. Creating Engagingly H.O.T. Products: Digital products reveal present pedagogical technology uses and instructional practices of teacher. Wiggin’s Understanding by Design (UBD) model asks teachers to identify what they want student to know and deeply understand. And then to define how students will demonstrate their learning and determine their assessment tool(s) should be designed before any classroom activities ever begin. Teachers can design lessons to deliver lower order thinking skills (LOTS) or higher order thinking skills (HOTS) by keeping an eye on the verbs and depth of knowledge expected in student tasks and products. Are students expected to be information consumers creating products ABOUT topics resulting in LOTS of summary reports? Or are students expected to find new patterns and ideas making meaning beyond existing information that create HOTS products of original thinking?

Lessons Learned: *The quality of teacher task expecting students to demonstrate deep understandings through their digital product gives a “window” into learning results data.* The culture of present pedagogical practices is made visible giving educators a reality check on their actual technology uses and present instructional practices. Most educators were very, very surprised when they peered past their rhetoric and hardware uses to reflect on the content thinking within the products. View *My Life as a Granny Smith Apple* for an example of a richly fact-based product developed in a third-grade science class. (http://www.digitales.us/story_details.php?story_id=103)

Our baseline digital product data from schools represented in the pie chart shows a common pattern found in many school technology evaluations. 1) A majority of schools we evaluated did not pedagogically expect students to even be making digital products as their technology resources were being used primarily for drill and practice or uses became something to do when the real classroom work was done. 2) But when student



digital work existed, HOTS products were scarce even with 21st century skills being expected or practiced in our classrooms. 3) Not surprising the role of information consumers (summary reports) dominated all types of technology use from slide shows, websites to movies. 4) When schools leave technology uses optional, we found 75-85% of the products being coded as summary reports. 5) Digital products having little or no content knowledge were found in student work being assigned to motivate or have fun like sugar cube pyramids. Also student tasks designed to practice technology skills used content as fodder while learning the tools. Products completed in pullout computer classes were generally found to be content superficial as their outcomes were focused on knowing the technology tools.

Are results from assessing digital products worth the money and time invested with technology? Is the culture of pedagogical practices made visible delivering highest expected results? Each school will need to decide that locally. But the data collected from digital products definitely provides a picture of actual technology uses and pedagogical practices.

3. Assessing FOR Learning: Rick Stiggins compares the differences in using assessment tools as a process during learning or as an event that takes place after learning.¹ Research shows that students at all levels see assessment as something that is done to them or to their class work by someone else. Assessment FOR learning processes can be accelerated by using the scoring guides as a way to engage students in grooming self-reflection and insight into their own learning. How effectively does the digital product communicate understandings to others? Have they demonstrated content mastery? Is original thinking demonstrated - going beyond existing information? What would they do different next time to improve their thinking and craftsmanship?

Teachers are learners as well using student work to learn forward in the Stiggins' model. They similarly reflect on samples of digital work in order to adjust instruction, tasks and pacing needed to continuously increase student successes. Action research teams, teacher reflective dialogues and journaling, as well as specialized programs like The Schlechty Center's Working-the-Work (WOW) promotes quality work being assigned to students, an expectation of students demonstrating learning in their work, and processes to reflect on their actual work.

Lessons Learned: *Technical tools are available to accelerate assessment FOR learning.* Using digital products can easily accelerate a community of learners (students and adults) reflecting and documenting student work over time. However, few schools-wide cultures were found to be pervasively using teacher study groups, action research teams, regular student reflective practices or performance-based assessment processes. However, presently the best practice of Working-the-Work is primarily left up to individual teacher choice in using the technologies in this way or not!

4. Promoting Students in Owning their Own Learning: Determining how learning in curriculum will be demonstrated is considered student choice and responsibility in some

schools. The online student scoring guides easily allow students to create custom scoring guides while choosing their own type of communication. Teachers might establish one or two non-negotiables like developing a persuasive product or focusing on image communication. By using a common database of traits to create custom rubrics, teachers are able to shift the learning responsibility to students. Before formally assessing student products, the authors' product criteria can be used to re-enforce self-reflections or peer feedback to inform revisions. These reflections packaged with the final product reveals for teachers and other critical friends the processes engaged along the way of creating their communication product.

Lessons Learned: *Teacher-directed tasks presently organize when, where and how students will use the technology still defines most classroom activities with technology.* Even classrooms with 1:1 initiatives still frequently expect students to wait for teachers to direct their technology uses. Presently, the best practice of promoting independent self-assessing learners is primarily left up to individual teacher choice in using the technologies in this way or not!

5. Accelerating Differentiated Instruction: Out of the nine multiple intelligences identified by Howard Gardner, curriculum tasks and assessment tools are still dominated primarily by verbal/ linguistics and mathematical/logical. The multiple intelligences research and increasing pressure to develop 21st century skills promote students creating performance-based assessments that enable them to demonstrate their thinking, learning and effective communication beyond words. These research-based Digital Media Scoring Guides now enable learners to produce digital products that express their thinking in their own way . . . and for teachers to assess student products beyond words.

Scoring The Six Traits for
Craftsmanship of
Communication

Text Communication
Image Communication
Sound/Voice Communication
Design of Communication
Presentation of Communication
Interactivity of Communication

Lessons Learned: *Words and paper still reign superior in most classrooms as the primary learning and assessment mode.* Optional uses of technology limits the pervasive use of digital products being incorporated in curriculum tasks. A goodly number of schools didn't even have enough digital products to conduct a baseline evaluation. Students as knowledge workers reading and writing multimedia as a best practice is primarily left up to individual teacher choice in using the technologies in this way or not!

6. Expanding Assessment Strategies: What gets measured gets valued and also gets classroom time! State tests generally assess about a third of their state standards in any content area with many content areas not even being tested at this time. Assessing digital products as instructional artifacts adds an important dimension to test scores by increasing the depth and demonstration of student learning beyond numbers. Creating authentic products useful for others beyond the teacher can now be posted online with opportunities literally for worldwide feedback. Students begin to care more deeply about their learning products when they have real audiences beyond the teacher and when their

work might have a very real impact on their community. One student in Birdsville, TX wasn't willing to stop revision on his digital product pleading, "But it isn't perfect yet."

Different assessments show different perspectives of information with each having something to contribute. Educators need multiple tools to assess students fairly, accurately, and authentically. The process of creating e-Portfolios provides teachers and students with an excellent authentic way of acknowledging strengths, recognizing areas for improvement and processes for setting future learning goals with milestones.

Lessons Learned: *Our evaluation projects thus far found very few schools supporting pervasive expectation that student digital products and e-portfolios would be essential to the curriculum and learning environments for all students.* Illinois is presently prototyping a web-based site for their 8th grade literacy test that would include posting and reflecting on student digital products but at this time participation is still optional for school districts. Other schools using portfolios weren't necessarily targeting the use of digital products yet! High stakes testing is the singular and dominating assessment tool in most classroom cultures. Unfortunately authentic student work is presently not a norm. Even though there are bright spots of classrooms using the lens of digital products as a key data set is relegated to individual teachers deciding whether to use the technologies in this way or not!

Reflections on Using Digital Products for Large-Scale Accountability

Large-scale accountability serves policy makers, program planners, supervisors, and teachers. Even though using performance assessments like digital products are well documented as significantly and substantially improving teaching and learning in classrooms, they come at a price. Performance-assessments are less efficient, more difficult to administer, more disruptive to school organization, less cost-efficient and more time-consuming than multiple-choice testing programs. This resource dilemma continues to make the use of digital products as instructional artifacts an unlikely choice for most schools thus far. While the scoring guides and evaluation processes for digital products have been found valid and credible, the culture in schools for best practices using performance-based assessment is presently compromised by the priority of the singular high stakes testing environment. It is also true that the role and types of technology uses in teaching and learning is still considered an optional choice of teachers.

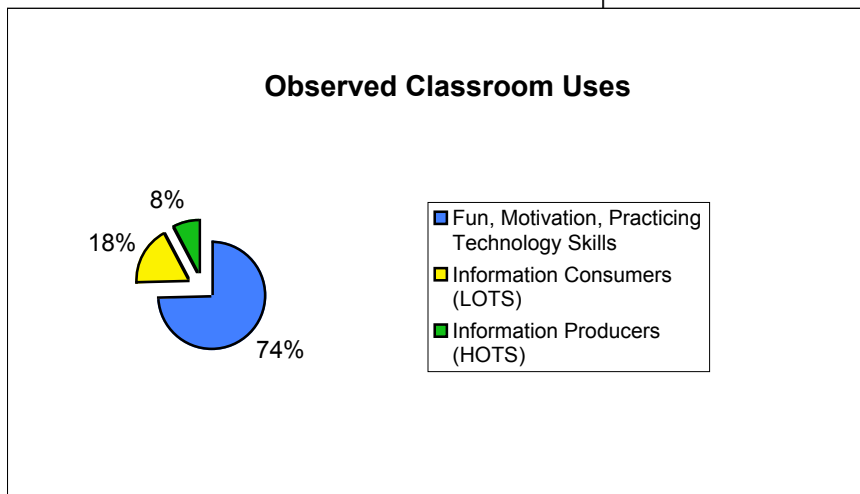
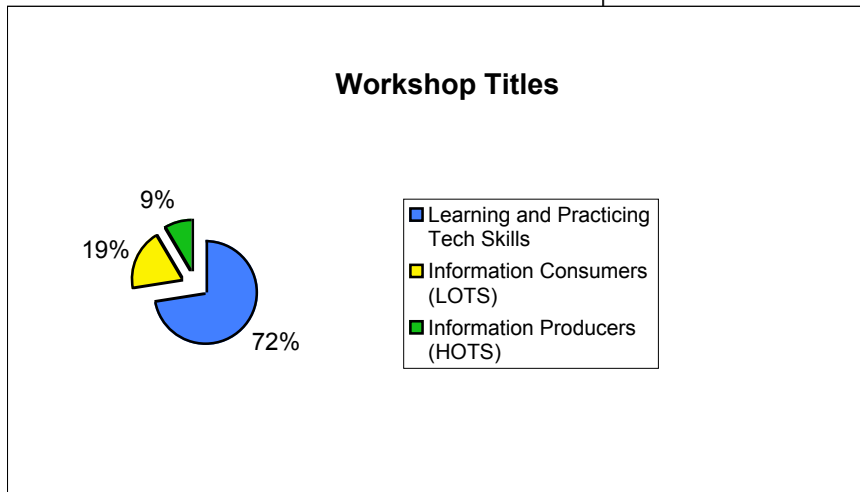
Nevertheless, the opportunity to gather digital products for large-scale evaluation of grants and new initiatives using technology resources does enable us to deepen our assessment of instructional practices as well as directly evaluating student *content mastery, visual/sound literacy, problem-solvers, innovative creative thinkers, effective communicators, and technologists* beyond the standardized tests. The school data collected thus far also gave us some surprising patterns that influenced decision-makers to refocus their implementation strategies particularly staff development.

Lessons Learned:

Instructional practices and learning results can be accelerated with technology uses but not if the teacher training, student uses, standards and benchmarks are focused on students learning and practicing technology skills.

1) Here is another blinding flash of the obvious (BFO). The patterns found in workshop titles became a predictor of classroom uses as well as types of digital products found in classrooms. Focusing on training technology products rather than letting the instructional strategies lead the headlines creates the unintended consequence that using the “stuff” is THE point. 2) Using

digital products as a body of evidence does give grants and initiatives definitive data to assess content mastery, visual/sound literacy, problem-solvers, innovative creative thinkers, effective communicators, technologists, and producers of knowledge. 3) Using digital products to assess projects like the CESA #3 EETT grant in Fennimore, Wisconsin was hard work. Teachers were volunteering or volunteered by others to attend staff development, to work with their students and to implement what they could with little reward or sustainable resource support. The grant money barely covered their staff development costs. CESA #3 is in the third year of using digital products as their body of evidence in order to promote visible artifacts of students demonstrating higher order thinking and craftsmanship of communication. In the second year almost all the projects were still summary reports – creative but still re-packaging existing information. Time and resources continue to dramatically impact teachers being able to deliver these targeted results for their students. Another large-scale technology literacy challenge grant to increase inquiry in lower elementary classrooms found this best practice did increase in classrooms but student digital products were still summary reports. Out of 400 student digital products assessed for higher order thinking, only 6% were determined as higher order thinking.



The layers of instructional learning and understanding teachers needed to craft meaningful work, coach students demonstrating their thinking and craftsmanship as well as the skills needed to use rubrics outstripped the professional development time funded in their project.

Final Thoughts: More Impact is Possible

Thus far using student digital products hasn't yielded many findings to celebrate. But we have learned a visible lesson to influence our future initiatives: It's not about the hardware! We can begin refocusing our staff development, student tasks and tools used on accelerating best practices that support students as knowledge workers delivering evidence of inquiry, thinking, and effectively communicating content.

As technology speeds and widens our access to information and as the sheer amount of information grows exponentially, we will need fewer memorizers (summary reports) and more thinkers (going beyond existing information). We will need creative, resourceful problem-solvers to sift through the piles of information for insight and ideas. It matters less and less whether educated people know thousands of bits of discrete information and matters more whether they can analyze, synthesize and communicate the information they find. While it may be more challenging and more expensive to design large-scale assessment systems around performance, is there really any choice when standardized tests by themselves don't come close to measuring whether students can think?

Pervasive use of research-based scoring guides for digital media products can help accelerate much needed best practices. Any projects, grants, or other school-wide initiatives will find digital products creating a visible, viable "lens" into the impact of technology on the quality of teaching, thinking and learning. Evaluating digital products for large-scale grants and new initiatives using technology resources definitely enables us to deepen our assessment of student performance and achievement beyond the standardized tests.

Resources Do you want the URLs for the articles – including them just in case? Also a little combobbled by the punctuation – sorry!

A Guide to Looking at Student Work Collaboratively. Blythe, T. Teacher College Press.

Assessment Without Victims: An Interview with Rick Stiggins.
<http://www.nsd.org/library/publications/jsd/stiggins202.cfm>

Beyond Words: The Craftsmanship of Communication. Bernajean Porter. ISTE, May 2006. <http://www.digitales.us/resources/books.php>

Evaluating Digital Products: Training and Resource Tools for Using Student Scoring Guides by Bernajean Porter. <http://www.digitales.us/resources/books.php>

Online Digital Media Scoring Guides. www.DigiTales.us → Evaluating Products

Portfolio Practices: Thinking Through the Assessment of Student's Work. Seidel, Walters, et al. NEA Restructuring Series.

Project Harvard Zero: Teachers Learning Through Student Work. Pzweb.Harvard.edu

Raising the Bar on Student Performance and Assessment. Bernajean Porter. ISTE, May 2003. <http://www.digitales.us/resources/books.php>

Understanding by Design. Grant Wiggins.
http://xnet.rrc.mb.ca/glenh/understanding_by_design.htm

Schlechy's Working the Work (WOW) as Used by Birdville, TX.
<http://www.birdville.k12.tx.us/StaffDev/wow.html>