All About Writing Standard #6:
Standard Progression and Research Base

6th – 12th – Writing with Technology

(Underlined portions indicate what is new to the grade level)

6th- 8th Grade	9th- 10th Grade	11th- 12th Grade
Use technology, including the internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.	Use technology, including the internet, to produce, publish *and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.*	Use technology, including the internet, to produce, publish and update individual or shared writing products *in response to ongoing feedback, including new arguments or information.*

About Standard #6

Standard #6 requires students to proficiently use technological resources to enhance the overall quality, production, and publication of their writing. Collaboration at the eleventh and twelfth grades includes responding to ongoing feedback from others, including new arguments or information.

Research Base for Standard #6: Technology

Technology Truths

Technology has infiltrated our world and students are unable to function at any job without certain technological skills in today's world. Educators are hard pressed to consider one job that doesn't require some form of technology to be mastered either with a computer, hand held device, or other electronic device. Many students arrive in classrooms sharing the new technology with the teacher rather than the other way around. The technological insurgency has caused a flurry of cost, safety, and curricular concerns that did not exist when many instructors were students. This has caused a gamut of professional development issues that continue to press the education community as well.

Anchor standard six of the ELA Standards states "Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others" (CCAS, p. 18). In a national survey of teachers, the top tech skills that teachers felt they need to work with students, peers, and parents, according to *The Journal,* since 2005 are the following:

- word processing, database, spreadsheet, and electronic presentation skills
- email, networking to school systems, video conferencing, digital cameras
- website navigation, website design, downloading/uploading capabilities (ebooks, music, pictures, photos, etc…)
- Blackboard/WebCT teaching, computer related storage devices (USBs, discs, DVDs, Cloud, etc.), scanner knowledge, interactive whiteboard technology
- Educational copyright knowledge
- 2014 list noted: blogging and Youtube collaboration, unlocking mobile devices potential, connecting with social media, using Google productively and searching the web efficiently.

If other educators feel these skills are required of themselves in the workplace, it isn't surprising that many employers would expect student hires to come prepared with some knowledge base from the classroom. Unfortunately, the disparity is widespread for a variety of factors. Many teachers, as well as students, have independently mastered a variety of tech skills. However, these skills need to be accessible to all students and on a consistent level of digital literacy.

Technology offers an untraditional way to engage students and encourages them to build literacy skills while making sense of course content. Today, teachers at all grade levels should actively seek any means necessary to involve safe and engaging activities that will involve tech skills in their instruction daily. "Research scientist Harold Wenglinsky, looking at math achievement scores in a 1998 Educational Testing Service study, found positive benefits for educational technology, as long it was used for challenging activities such as simulations. Using computers to drill students on fundamental skills, in comparison, had a negative impact on achievement. Researchers have determined that, when used for more ambitious learning goals rather than basic skills, technology can help students develop higher-order thinking skills, creativity, and research abilities" (Boss, 2011). "Even with budget pressures, instructional/classroom technology saw 11 percent growth from 2012 to 2013 and should continue to grow at a compound annual rate of 8 percent through 2018" (Nagel, 2014). Given these data points, it isn't surprising technology is in the hands of students and schools are leveraging for it. Teachers need to be prepared with the kinds of projects and integrative practices that will allow for students to be prepared to compete in a global economy.

The Partnership for 21st Century Skills (P21) was founded in 2002 as a coalition bringing together the business community, education leaders, and policymakers to position 21st century readiness at the center of US K-12 education and to kick-start a national conversation on the importance of 21st century skills for all

students. Some of the founding organizational members included: AOL Time Warner, Apple Computer, Inc., Cable in the Classroom, Cisco Systems, Inc., Dell Computer Corporation, Microsoft Corporation and the National Education Association.

P21 has identified and brought to the forefront a comprehensive set of skills that, along with content mastery, are what all sectors can agree are essential for success. Outlining these skills, the P21 Framework for 21st Century Learning took several years to develop in collaboration with hundreds of educators who have shown how to integrate 21st Century Skills within their disciplines. Maps were created in disciplines with project ideas for content areas such as English, Mathematics, Science, Geography, Social Studies, World Languages and the Arts. "Rapid changes in technology and the globalization of the world's economy have ensured that we need to do a better job of educating all our students in order to prepare them for success. 21st Century Skills are no longer just for the top tier, or just for those students headed to college, but essential for all students" (Partnership for 21st Skills, 2011). Another free resource for digital literacy and classroom curriculum is located at https://www.commonsensemedia.org/educators/curriculum.

"The latest National Education Technology Plan, "Transforming American Education: Learning Powered by Technology," was released in November 2010 by the Department of Education. It outlines a vision "to leverage the learning sciences and modern technology to create engaging, relevant, and personalized learning experiences for all learners that mirror students' daily lives and the reality of their futures. In contrast to traditional classroom instruction, this requires that we put students at the center and empower them to take control of their own learning by providing flexibility on several dimensions." The plan also calls for "connected teaching" in which educators connect to "resources and expertise that improve their own instructional practices and guide them in becoming facilitators and collaborators in their students' increasingly self-directed learning" (Boss, 2011).

References

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