

2017 Idaho Information and Communication Technology

Standards White Paper

Information and Communication Technology Standards Recommendation

“The members of this committee unanimously recommends the 2016 ISTE Standards for Students as the guideline for proposed Idaho Content Standards for Information and Communication Technology.” ISTE standards are the standards for learning, teaching and leading in the digital age and are widely recognized and adopted worldwide. They were written with input from stakeholders in both education and industry. They work together to transform education (iste.org/standards).” The ISTE standards are recognized worldwide; it is the opinion of this committee that they serve as a standard for students in Idaho to be prepared as learners and citizens in a global economy. Utilizing these standards will allow Idaho to leverage economies of scale in the purchase and adoption of K-12 curricula.”

Weakness of current Information and Communication Technology Standards

The current 2010 standards, also adopted from ISTE’s 2007 standards, were written to support students using technology in the classroom. Emphasis was on the importance of cognitive and learning skills, creativity and innovation. While needed in 2010, these standards are completely outdated, as the world has changed immensely in these few short years. The 2017 standards will focus clearly on learning and collaboration in global environment. Students will use technology as a means to an end when appropriate to take charge of their own learning.

Since the first desktop computers were installed in a classroom or computer lab, educators have experienced cognitive dissonance regarding how to best use that technology to support student learning. On one hand, teachers and administrators suggest that technology has the potential to transform student learning. Yet, more often than not, we see technology used primarily to automate marginally effective traditional instructional strategies. We know the latter does not impact student learning, but we continue to promote low-level, ineffective uses for classroom technology. It is well past time to move beyond rudimentary use of classroom technology. A December 2015 report from the Organization for Economic Co-Operation and Development finds that schools still are not taking advantage of technology’s potential to ameliorate the impact of the digital divide and level the instructional playing field. However, things do not have to be this way. We have access to technologies that were the stuff of science fiction less than a decade ago. We have research that points out pathways to making differences in student learning. Now we have the 2016 ISTE Standards for Students that reflect a significant change from the 2007 standards. The new standards lead with learning by focusing on encouraging students to engage in deeper learning—to take ownership of their learning, becoming more effective learners in and outside the classroom.

Standards as a Fulcrum of Change

One definition for fulcrum is the point on which a lever rests. Another definition that is more germane for this discussion is “Something that plays an indispensable role in an activity or situation.” How does this pertain to the ISTE Standards?

Education institutions have changed in the last 30-plus years. Perhaps not to the degree some of us would like to see, but there are differences. More schools than ever have broadband connectivity. Most schools have developed policies related to classroom use of technology. The ratio of students to internet-connected devices continues to decrease. We are poised to make significant change, but need something to give us the buy-in required to move in the right direction. That something is the 2016 ISTE Standards for Students—the fulcrum educators can use to apply leverage for change.

Emily Dickinson said, “I dwell in possibility.” In revising the student standards, ISTE’s goal was not only to reflect what is possible in terms of instructional technology, but also to anticipate how pedagogy could be changed and improved in the future through the use of technology. This means keeping in mind that in order to serve today is kindergartener, it was imperative to develop standards that will have a shelf life that will take her through most of her academic career. This focus on the future is designed to help ISTE keep things real while remembering to always consider the possibilities.

Underlying Assumptions

When the original standards were developed in 1998, it was assumed that the primary focus for student learning needed to be on how to use technology tools. By 2007, when the standards were refreshed the first time, this underlying assumption had

changed. Emphasis shifted to the importance of cognitive and learning skills, along with creativity and innovation. However, basic skills were still the focal point of one standard. Now, with this latest standards refresh, underlying assumptions have changed once again. In this new iteration of the standards, the focus is squarely on learning, not tools. Yes, students still need to be proficient in foundational technology skills, but that is not the end. It is the means to an end where the expectation is that students will use technology when appropriate to take charge of their own learning.

There are additional underlying assumptions that informed the work of developing these refreshed standards. For example, the committee wanted to ensure that these standards would work for students of all ages in concert with content area standards, but also be able to stand alone when necessary. It was important that the performance indicators describe behavior that is measurable or observable, but at the same time make it clear it is not ISTE's intention that these standards be used to lay the foundation for high-stakes standardized testing of students' technology proficiency. Finally, the standards are vendor and technology neutral. The reasoning is that by emphasizing learning over specific tools, the standards can be relevant for the next five to 10 years, giving students and teachers ample time to become familiar with them.

Themes and Shifts in the Standards

If they are not based on themes promoting students "using" technology, what is the thrust of the 2016 ISTE Standards for Students? The new standards provide an aspirational framework to leverage technology for learning transformation by:

- Capitalizing on recognized attributes of responsible learners.
- Offering increased opportunities for learner-driven activities.
- Serving academic and workforce goals.
- Clearly aligning with content-area standards in both language and goals.
- Including the learning sciences in relationship to pedagogy and learning environments.

Themes interwoven throughout the standards also reflect shifts in thinking about how technology can be leveraged to transform learning and are critical to include in conversations about the new standards. They include:

- Empowered learning, which includes motivating students to engage more fully in their education by allowing them to make choices about their learning and encouraging self-reliance.
- The evolution of our thinking about where the locus of control lies in modern learning environments (from teacher-directed to student-centered to learner-driven) and how that impacts new ideas about education.
- The emergence of new key roles for teachers. For example, there was an assumption that when given the freedom to pursue their own interests, students would leap at the chance to be more self-directed. In reality, most students need more guidance than anticipated as they learn to take more responsibility for their own learning. Teachers are the logical people to offer this critical support.
- The emergence of new roles for students. Teachers can assist students in accepting new roles by preparing students for greater autonomy, but students also need to rise to the challenge if they are to become empowered learners.
- The identification of how learning can change when technology is leveraged for authentic, purposeful activities and deeper, engaged learning.

Refreshing the standards is serious business. ISTE has reached out to stakeholders around the world to engage in a process meant to result in a shared vision of what becomes possible when technology is used appropriately in education settings. However, the real work begins once the standards are released. If the refreshed standards go no further than national, state or provincial levels, there will be no impact on what happens in classrooms. Local educators—teachers, principals and heads of schools, as well as those who support site staff—must work to understand the standards and implement them.

Innovative education organizations will invest in curriculum development, adopting new instructional strategies and professional development.

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