

How to Monitor Results

Technology helps students develop 21st century skills—and helps schools measure the success of their programs



One of the biggest challenges for decision makers who create or fund school programs is measuring whether they are having a real impact in the classroom. Weaving technology into education allows schools to monitor and measure academic performance, right where teaching and learning occur, by tracking detailed metrics in real-time. So instead of merely looking backward, as traditional assessments often do, teachers and other decision makers can collect and analyze granular results. Based on those results, improvements can be made to the curriculum and, once again, the impact can be measured almost immediately.

Assessments need to measure what's important—not just what is easy to measure. Assessments need to tell us how well we're preparing our kids for the future.

*— Robert Fogel, principal architect,
Intel World Ahead*

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Creating an Academic Program for the 21st Century

Successful eLearning programs that encompass technology and media literacy lay the foundation for a skilled, educated workforce. An effective school program includes:

- 21st century skills and content knowledge
- Deep understanding of subjects, rather than just shallow, rote knowledge
- Understanding of real-world data, tools, and experts that students will encounter and they continue their education and ultimately enter the working world

As these elements are put into place, it's important to assess mastery by students.

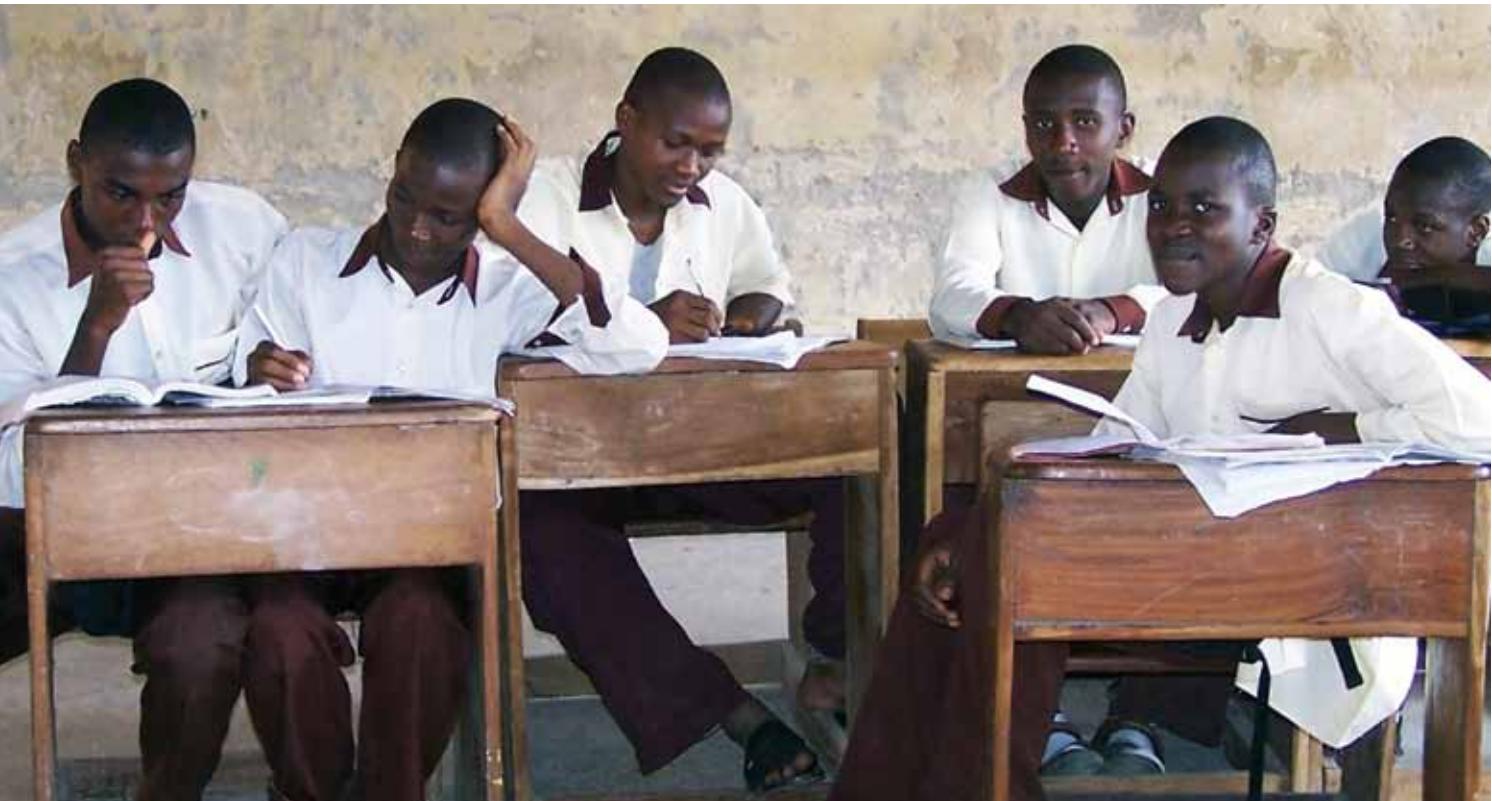
Creating Assessments that Matter

Today, every school system has its own academic performance assessment, usually driven by national academic standards that are set by the government. Those standards often include metrics such as an increase in reading literacy, for example.

Unfortunately, many traditional assessments do not measure a student's mastery of 21st century skills. Technology offers an opportunity to broaden those standards, improve assessment of student performance, and ultimately enhance curriculums to raise the academic bar.

An effective student assessment will:

- Gauge a student's prior knowledge and readiness
- Focus on 21st century skills and expertise
- Encourage the student to self-direct and collaborate
- Provide diagnostic feedback to both teachers and students
- Check for understanding and encourage the student to think broadly about a subject, as well as focusing within that subject content area
- Demonstrate a student's understanding and skill





Success Measurements

When creating or modifying an assessment, schools should begin by considering the positive effects they would like to see in the classroom and then determine the best measurements to use. Those measurements might include:

- Student attendance rates
- Student graduation rates
- Access to technology
- Access to the Internet
- Teacher readiness for technology
- Technology usage in classroom
- The ways students access and manage information
- The ways students pose and solve problems
- The ways students analyze and interpret evidence

- The ways students analyze complex systems
- The ways students construct learning objects over time
- The ways students work collaboratively
- The ways students communicate ideas & knowledge
- The ways students are motivated to participate
- The way students utilize new (technical) skills
- The way students can utilize multiple resources to meet their needs.
- Parental involvement

Several reputable educational organizations have developed meaningful assessment standards that can be used or adapted (see next page).

Going Digital

Most academic assessments take place at the end of a learning cycle and miss the opportunity to provide feedback to the teacher and learner regarding continuous improvement.

Making the assessment process fully electronic allows teachers and school administrators to collect, track, and analyze detailed data throughout the school year. Sending e-form evaluations to teachers is a quick way to begin. The teacher can quickly key student information into the form, from wherever they happen to be. That information can then be incorporated into the school's learning management system to conduct analysis and generate useful reports.

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The following organizations have developed rigorous, relevant education standards that can be adopted by schools or used as a reference.

Educational Testing Service's iCritical Thinking

www.ets.org/icriticalthinking/about/
An outcomes-based assessment developed jointly by ETS and Certiport, this exam uses a range of real-time, scenario-based tasks to measure a student's ability to critically evaluate a wealth of information available through digital technology.

International Society for Technology in Education (ISTE)

www.iste.org

This organization has developed a defined set of standards for measuring technology skills in the context of school subjects. It also measures a broader set of skills including creativity and innovation, communication and collaboration, research and information fluency, critical thinking, digital citizenship, and technology operations and concepts.

The Partnership for 21st Century Skills

www.p21.org

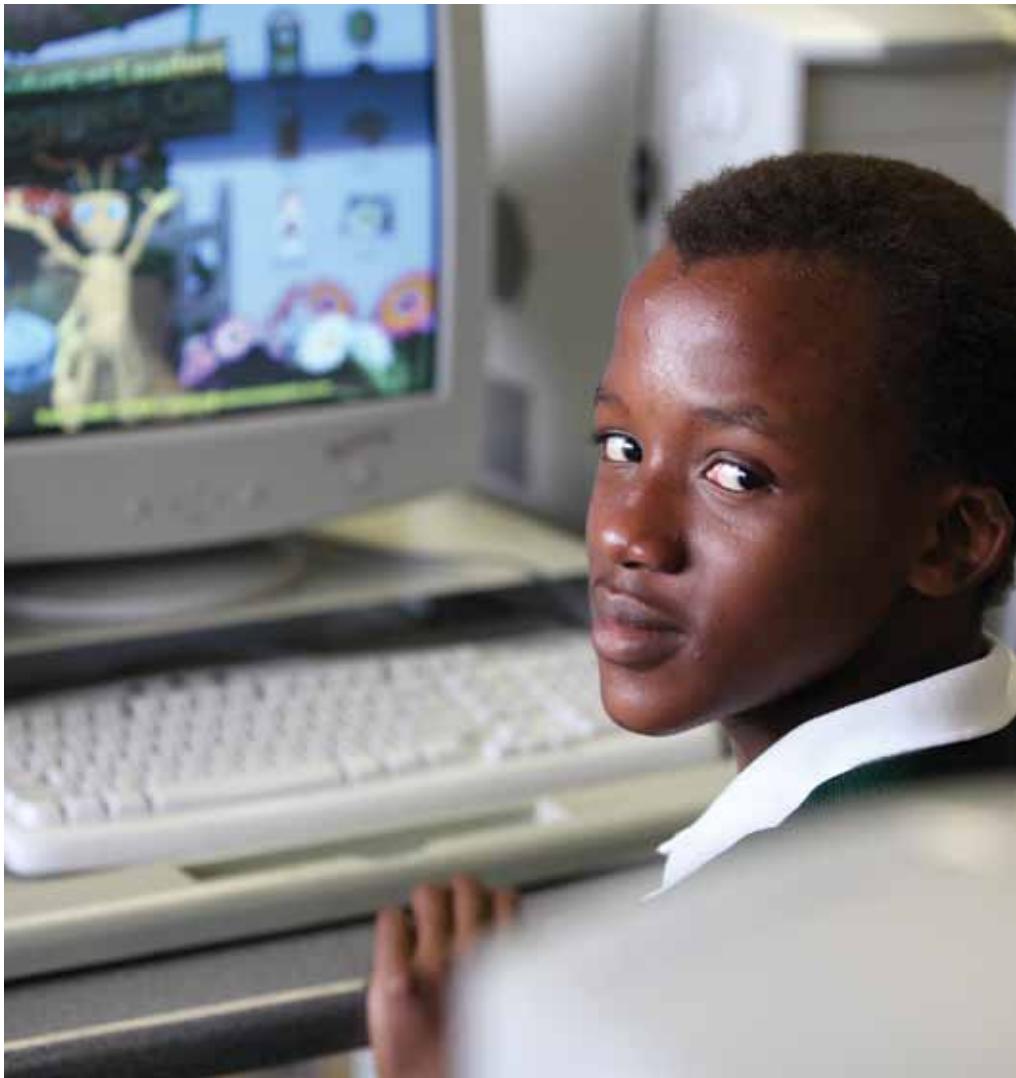
Built around core subjects, measurements include learning and innovation skills; information, media, and technology skills; and life career skills. This model has been adopted by a number of states in the United States.

UNESCO ICT-Competency Standards for Teachers Project

<http://cst.unesco-ci.org/sites/projects/cst/default.aspx>

This set of standards is based on approaches to education that correspond to improving a country's workforce and boosting economic growth. In addition to measuring training on computer skills, the standards address six components of the educational system—policy, curriculum and assessment, pedagogy, the use of technology, school organization and administration, and teacher professional development.

Assessments are a key component of education improvement. They are the means by which a community can determine how well students are learning.



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For more information, visit:

[Assessment in 21st Century Classrooms](#)
[Project-based Approaches](#)

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