Why Do We Need Technology Integration?

The myriad benefits of integrating technology into the classroom.

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THIS GUIDE IS ORGANIZED INTO SIX SECTIONS:

Technology is a ubiquitous part of children's lives. It is transparent. Most homes have connected computers or Internet-enabled devices. As prices of technology drop, computers and digital devices may replace television as we know it. When pioneering educational technology advocate Jan Hawkins (http://cct.edc.org/newsarticle.asp?id=6) wrote an essay for Edutopia in 1997, "The World at Your Fingertips: Education Technology Opens Doors (http://www.edutopia.org/world-your-fingertips) ," about how technology brings the tools of empowerment into the hands and minds of those who use them, she couldn't have known her words would be even more relevant today.

Now, walk into a classroom. Are there computers and if so, how are they being used? Are they being used at all? Technology has revolutionized the way we think, work, and play. Technology, when integrated into the curriculum, revolutionizes the learning process. More and more studies show that technology integration in the curriculum improves students' learning processes and outcomes. Teachers who recognize computers as problem-solving tools change the way they teach. They move from a behavioral approach to a more constructivist approach. Technology and interactive multimedia are more conducive to project-based learning.

Students are engaged in their learning using these powerful tools, and can become creators and critics instead of just consumers.

Another reason for technology integration is the necessity of today's students to have 21st century skills.

These 21st century skills include

- personal and social responsibility
- planning, critical thinking, reasoning, and creativity
- strong communication skills, both for interpersonal and presentation needs
- cross-cultural understanding
- visualizing and decision making
- knowing how and when to use technology and choosing the most appropriate tool for the task

A great starting point for more information about 21st century skills is the Partnership for 21st Century Skills website (http://www.p21.org/) .

The Edutopia article "Why Integrate Technology into the Curriculum?: The Reasons Are Many" (http://www.edutopia.org/technology-integration-introduction) offers this summary: "Integrating technology into classroom instruction means more than teaching basic computer skills and software programs in a separate computer class. Effective tech integration must happen across the curriculum in ways that research shows deepen and enhance the learning process. In particular, it must support four key components of learning: active engagement, participation in groups, frequent interaction and feedback, and connection to real-world experts."

Technology helps change the student/teacher roles and relationships: students take responsibility for their learning outcomes, while teachers become guides and facilitators. Technology lends itself as the multidimensional tool that assists that process. For economically disadvantaged students, the school may be the only place where they will have the opportunity to use a computer and integrate technology into their learning (for more about equity, access, and digital inclusion, check out our Digital Divide Resource Roundup (http://www.edutopia.org/digital-divide-technology-access-resources) .)

There is a growing body of evidence that technology integration positively affects student achievement and academic performance. The Center for Applied Research in Educational Technology (CARET) (http://caret.iste.org) found that, when used in collaborative learning methods and leadership that is aimed at improving the school through technology planning, technology impacts achievement in content area learning, promotes higher-order thinking and problem solving skills, and prepares students for the workforce. Look at the research findings on student learning in CARET's *Questions & Answers* (http://caret.iste.org/in-dex.cfm?fuseaction=topics) for the question: "How can technology influence student academic performance?" (http://caret.iste.org/index.cfm?fuseaction=answers&QuestionID=1)

You will find more links to research and resources in the Resources for Tech Integration (http://www.edu-topia.org/technology-integration-guide-resources) section of this guide.

Continue to the next section of the guide, What Is Tech Integration? (http://www.edutopia.org/technology-inte-gration-guide-description)

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