

TECH TRENDS PAINT VIEW OF THE FUTURE

Insight on what's to come suggests the need for more creativity and innovation.

By Brent Marcus and Lori H. Schwartz

Change today occurs at an exponential rate. The unique aspects of digital technology drive that incredible speed. In a world of cloud-connected software, people can constantly upgrade, innovate, and iterate. Even the physical world is rapidly changing due to the digital revolution. Capturing the attention of students is already difficult. So, what educational challenges and opportunities do we, as futurists, see looming around the corner?

Screen Bloom

Kids have become much more active consumers of media, and screen time has risen dramatically. According to market research firm ChildWise, children ages 5 to 16 spend an average of 6.5 hours a day in front of a screen, compared with around three hours in 1995.

Screens are now a gateway to interactivity, community, shared experiences between parents and children, and the interface to connectivity. Interacting with a screen is part of daily life whether as a TV, a heads-up display, in the hand, or on the wrist. It's safe to say that screens not only enable lifestyle; they are a lifestyle.

Communicating effectively with children will require growing awareness of their media consumption habits and using their media-savvy language. Voices of educators have a choice: either be increasingly aware, omni-channel present, and relevant, or risk being drowned out.

Big Data and Little Data

The idea of "big data" grabs all the headlines, but little data drives your customized and personalized world. This personalization is driven by PII: personally identifiable information.

The little data of PII is the basis of your online identity. Any information that can be used to distinguish you from another person can be considered PII. These data are then coupled with the advancing field of artificial intelligence or intelligent agents that use sensors and behavior to then offer up a logical programmed response. Intelligent agents such as IBM's Watson, Apple's Siri, and Google's Now, will increasingly anticipate and stand at the ready to deliver continuous, relevant information based on the data each person generates.

We're rapidly nearing an era when these agents will become ubiquitous and the impact on educators and education could be tremendous. In the classroom, artificial intelligence may bring powerful support. Imagine a tireless assistant who identifies which students need additional guidance based on cues from the quality of an

in-class response. The long-term effect of artificial intelligence will be even more dramatic outside of the classroom as members of the workforce compete with technology for employment. The ability to think creatively will be a powerful distinction against the growing tide of computer competition your students will face in the labor market.

Smart Toys, Smart Classrooms

Tomorrow's kids will grow up in a world universally enriched by digital sensors and feedback. Large venues such as sports stadiums, theaters, and public facilities are now implementing digital upgrades to foster fan engagement and ensure the live experience can compete with digital media.

For example, Kansas-based Sporting Innovations wants to enhance live games by giving fans data to let them engage with players. Not only will students of the future increasingly expect fully connected environments, but the capabilities in these platforms will also dramatically increase the classroom instruction expectations and effectiveness.

Physical toymakers are exploring digital upgrades in the form of artificial intelligence and connected technology. These upgrades make the toys more interactive and, hopefully, more stimulating to kids' imaginations.

Tangible Play's OSMO, an iPad game, uses real-world objects to affect



Marietta Center for Advanced Academics, Marietta, Georgia, is embracing new technology in their Maker Studio.



the gameplay in an app. As a result of innovations like these, children have already begun to see fewer distinctions between physical and digital play, often looking at the two worlds equally interwoven. Similarly, tech-enabled play and learning merge as children's virtual experiences offer them a new lens on how the world works and where their imaginations can take them.

Preparing for Tomorrow

Preparing today's children for tomorrow's challenges will ultimately require more than an understanding and adoption of new technologies. As technology becomes ubiquitous, students need the dispositions and flexible mindsets to use unique tools in competitive job environments. Work will be performed through technology platforms, and students who are ready to embrace change and try new technology will adapt well to the technology that is not yet built. Educators ask what can be done today to best prepare students

for the unpredictable innovations they will face tomorrow. Building creative capacity is essential.

For the foreseeable future, creativity will be a key component in the lives of students. Futurist predictions about the increased importance of creative thinking and innovative mindsets are consistent with the Education Technology Standards written by the International Society for Technology in Education. First and foremost, these standards identify creativity and innovation as the mindsets and skill sets students need.

Understanding today's technology, with an eye on what's coming, is a precursor to helping prepare students for the future. Educators who explore these changes and embrace these trends will have tremendous impact on their students' tomorrows. 

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