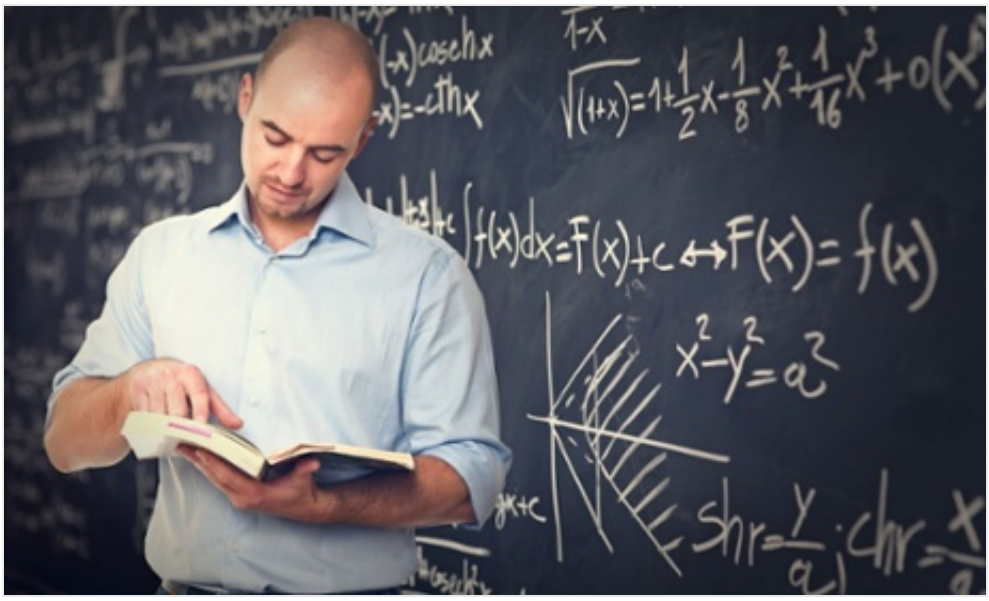
Faster internet expected to shake up health and education by 2025



A new report published by the Pew Research Center and Elon University aims to predict how the advent of gigabit-speed internet connections will affect our lives by 2025.

The Killer Apps in the Gigabit Age research involved asking 1,464 “experts and internet builders” what they think humans will be doing once they have access to broadband 50-100 times faster than the average home connection now, and collating their thoughts.

The report is based on the premise that just as dial-up internet access drove email and web surfing into the mainstream; and broadband internet spurred music downloads, video streaming and social networking; so gigabit-speed internet will spur a new set of technologies and services.

The predictions include some familiar futurology themes: holograms and virtual reality, wearables and the internet of things, 3D printing and ever-more

sophisticated artificial intelligence.

However, its most interesting sections focus on the potential changes in health and education, as well as warnings about the dangers of a widening digital divide between the technology haves and have-nots.

In education, the report includes predictions of blurred boundaries between real and virtual classrooms, as children make greater use of devices to learn and share that learning with their peers.

“The school day will disaggregate into a number of learning sessions, some at home, some in the neighbourhood, some in pairs, some in larger groups, with different kinds of facilitators,” claimed JP Rangaswami, chief scientist for Salesforce.com.

Bruce Mehlman, co-chair of the Internet Innovation Alliance, predicted an end to “one-size-fits-all broadcasting from the front of the room” teaching, while business and economics professor Ed Lyell suggested that teachers will become less talking-head experts, and more “teacher-coach” figures for their students.

Healthcare is a major topic for the report, with its predictions of “continuous health monitoring” through a variety of sensors and personal devices. “Having a personal healthpod you strap yourself into daily will become normal,” suggested Rangaswami.

“You will be able to purchase health-monitoring systems just like you purchase home-security systems,” claimed Google’s chief economist Hal Varian. “Indeed, the home-security system will include health monitoring as a matter of course.”

“Tools will monitor us from birth and predict sickness and heal us faster. Genetics will be patented and evolve to have cures to current and new disease that will arise,” said Breanne Thomlison, president of BTx2 Communications. “People will be able

to connect with others who share similar DNA and experience a personal connection to focus on prevention versus treatment."

The major concern raised by the report is over the potential widening of the digital divide between people with the fastest internet access and people with the slowest – or no access at all.

"If there is a digital divide now, it will still exist in 2025. The divide's existence will be magnified by the new killer apps—who has access and who does not, beneficiaries and those left out," said Danny Gillane, cited in the report as an information science professional.

"We may see a new class divergence between those able to access immersive media, online telepathy, human consciousness uploads, and remote computing while the poor will be left with the low-bandwidth experiences we typically use today," added Rex Troumbley of the University of Hawaii.

Some participants suggested that the digital divide could narrow, however. "We may see a lot more innovation in the developing world in the near future because they adapt to wireless mesh networks and leapfrog past countries that are hamstrung by incumbent service providers," said David Solomonoff, of the Internet Society.

The report makes space for participants who think predicting the results of increased bandwidth is a fool's game, too.

"Many, starting with Taylor and Licklider in 1968, have been able to see that networked computers would give rise to new communication media. But who could have foreseen YouTube?" said author and sociologist Howard Rheingold.

"I could not have predicted Google, Facebook, Blogger, or certainly Twitter. So

there's no way I can predict what ubiquitous gigabit bandwidth will bring," said journalist, professor and critic Jeff Jarvis. "I only know I want it."

- **20 ways gigabit-speed internet access might change our lives**