How can a distracted generation learn anything?

By Nicholas Mancall-Bitel - 20 February 2019

Today's students have a problem, and it's not the one written on the board. They're so accustomed to constant stimuli from smartphone apps and streaming platforms that they can't concentrate in class. Now teachers have a problem too: how do you adapt the traditional curriculum to accommodate students raised by technology and is there a price for compromising on traditional education?

Attention, please

Early brain development is a complex topic, but over the last few years researchers around the world have raised concerns about the impact of smartphones and media multi-tasking on concentration.

"There is a growing body of evidence – that is, yes, not fully validated and can be argued against – but pretty clear evidence that technology, social media, immediate access to the internet and smartphones are hurting kids' ability to focus," says Dr Jim Taylor, author of Raising Generation Tech.

Tech's effects are clearest in the most traditional school task, reading, especially as kids migrate from text-based digital media to image-heavy apps like Instagram and Snapchat.

"Students, now, seem to find it particularly exhausting to read complex or long text without regular breaks." says Erica Swift, sixth-grade teacher at Herman Leimbach Elementary in Sacramento, California, not far from Silicon Valley.

Attention isn't just a value in itself, but functions as the gateway to higher forms of learning – especially memory – which in turn leads to deeper comprehension. "Without the ability to pay attention to something, kids are not going to be able to process [information]. They're not going to be able to consolidate it into memory, which means they're not going

to be able to interpret, analyse, synthesise, critique and come to some decision about the information," a teacher says.

The classroom of the future

When students can't seem to pay attention to long lectures, many teachers simply hack lessons into smaller chunks. Gail Desler, the tech integration specialist for Elk Grove school district, where Swift's school is located, points to teachers who begin classes with mindfulness exercises or deploy meditation when students need to concentrate.

Some teachers also choose to "meet kids where they are" on platforms like YouTube and Instagram. There is the example of a teacher who films himself performing a science experiment, posts it to YouTube and then uses the video in class to illustrate material in the textbook, which can seem boring to students. Similarly, Schad keeps students on task through Instagram, reminding them about homework and upcoming field trips.

These platforms especially extend attention when they reflect students' interests. Desler praises teachers who do things like tie the history of Nazi propaganda to cyberbullying.

Meanwhile, specialised learning platforms like Flipgrid, which allows students to share videos of themselves giving presentations, help teachers engage students in their native media. A 2018 study from Pearson found that Gen Z students eschewed physical books, preferring video as a source of information second only to teachers. By meeting kids where they already engage and create, teachers can better capture attention.

Technology can even help mend the damage it does to reading skills. Schad says at her school in Philadelphia, teachers use computers to target struggling students. The school's preferred reading platform, Lexia, uses

gamification to motivate participation. The programme also automatically splits up students based on performance, moving successful students to more advanced tasks offline while keeping struggling students engaged with digital exercises until they fully internalise the lesson. This targeted approach helps bridge the gap between students impacted to varying degrees by technology.

Blended learning'

Still, while some educators are embracing technology in the classroom, multiple studies have shown more traditional classrooms can be more successful. A 2015 study by the London School of Economics showed GCSE test scores improved when schools in Birmingham, London, Leicester and Manchester banned phones from class. Neuroscience professor William Klemm, author of The Learning Skills Cycle, points to a 2014 study that found taking notes in longhand helped students retain information better than using a laptop.

Klemm also points out the dangers of chopping up lessons into small chunks, suggesting switching between small lessons too quickly could rob students of valuable comprehension. He says students need time to engage with a topic once the teacher introduces it before moving on.

Even many tech-forward educators find value in traditional methods and suggest a "blended learning" approach. While Katie Davis, associate professor in the University of Washington Information School admits new media could provide valuable skills, she still believes lectures have their place.

Elizabeth Hoover, chief technology officer of public schools in Alexandria City, Virginia, works to enhance education in her district through technology, but she says she would never replace direct instruction from teachers.

"The face-to-face interaction with the teacher is still the most important component in the classroom," she says, favouring technology only when it enhances a lesson in ways impossible offline.

Schad also points out that many teachers rely on technology only because they don't have sufficient resources offline.

Learn to think

While technology undermines some aspects of education, it has also empowered students in unforeseen ways. For instance, students impatient for educators to address questions are increasingly willing to seek answers for themselves. "They might be in algebra and go to YouTube to figure out how to solve a problem before going to a teacher or consulting a textbook," Choksi of Pearson says.

Taylor points out that as information becomes ubiquitous, success is no longer about knowing the most. Instead, it's the ability to think critically and creatively, ironically the very skills that digital media undermines by lowering attention spans.

"If you think of the Zuckerbergs and the Gates and the Sandbergs and all these people who became successful in the tech world," he says, "it wasn't because they could code; it was because they could think."

Digital natives will continue to voraciously adopt new media. Teachers have no choice but to evolve, not only to ensure students can access and take advantage of new technologies, but to fundamentally educate students to succeed in a world constantly trying to distract them.