



(5G Series) Does Digital Infrastructure Really Matter for Education?

By Iskandar Iskak, Director, Education Vertical

The crux of my job lies at the intersection of education and technology, with a large chunk of my time spent advocating for technology in education.

The principles of formal education and how educational institutions operate have remained largely unchanged for a long time, with a group of people seeking knowledge (i.e. the students) gathering at a specific location, with a person imparting the knowledge onto them (i.e. the educator). In my advocacy for technology (specifically digital infrastructure) in education, many question what technology can truly add to education.

Today, there are all sorts of gadgets and gizmos in the classroom. We've seen students and teachers move from textbooks to PowerPoint presentations, chalk blackboards to smart whiteboards, and many more. On the other hand, we often see teachers and students default back to traditional methods – why bother grappling with a smart whiteboard when an ordinary whiteboard serves its purpose just fine?

The key to effectively embedding technological tools into educational settings is to understand the outcomes it enables. Smart whiteboards not connected to the internet might not contribute very much to a classroom setting, as the outcome it serves is very much similar to its' predecessor.

However, beneath all the fancy tools that have popped up within the educational sphere, I do believe connectivity and reliable digital infrastructure is the game-changer for education – simply because it enables outcomes beyond anything we've experienced so far.

Imagine a young girl living in a rural village nestled amidst emerald rice paddies, attending virtual lectures delivered by renowned professors from top universities around the world. No longer confined by the walls of her local school, she now has access to stimulating discussions on astrophysics, marine biology, or the history of ancient civilizations – anything her heart desires – enabled by connectivity.

Reliable digital infrastructure and connectivity acts as a vital bridge, connecting any student to a universe of educational opportunities far exceeding the physical limitations of their surroundings.

Imagine an ambitious teenage boy; head prefect at school, a debating powerhouse who, one day, aspires to be the "Prime Minister of Malaysia". This ambitious teenage boy can now hone his leadership skills through international online leadership programmes, collaborate on virtual projects with peers from across the globe, and even gain insights into governance through interactive simulations crafted by leading policy think tanks.

Connectivity unlocks a treasure trove of resources that weren't just unimaginable, but unimaginable at scale. This unlocks the real power of digital infrastructure - democratising education and empowering a nation's future workforce with skills relevant for the 21st century, regardless of their zip code.

Remember the narrow focus of textbooks and blackboards? Digital learning explodes these boundaries, fostering cross-cultural understanding and global citizenship. Our teenage boy can participate in virtual exchange programmes, immerse himself in diverse perspectives through multimedia documentaries, and collaborate on solutions to global challenges



alongside youth from different continents. Digital classrooms become melting pots of ideas, nurturing the empathy and adaptability needed to thrive in a connected world.

But it's not just about access and exposure. Digital tools turbocharge teaching methods, transforming passive learning into active engagement. Imagine vibrant 3D models bringing abstract concepts to life, immersive VR experiences transporting students to the heart of historical events, or AI-powered personalised learning platforms tailoring their education to their individual strengths and weaknesses. Digital environments can make learning interactive, stimulating, and deeply captivating, igniting a passion for knowledge that transcends textbooks and tests. All these possibilities hinge on building reliable digital infrastructure for our educational institutions.

The impact ripples beyond individual students. Imagine villages transformed into hubs of innovation, with community centres buzzing with adults upskilling themselves through online vocational training programmes or farmers accessing real-time agricultural data to optimise their yields. Digital learning becomes a catalyst for community development, bridging the digital divide and fuelling economic growth from the ground up.

Of course, challenges remain. Bridging the digital divide requires addressing affordability, accessibility, and digital literacy. Teachers require training and support to integrate technology effectively. But the potential is undeniable. By harnessing the power of digital infrastructure and embracing innovative teaching methods, we can empower education to become a cornerstone of nation-building, preparing future generations not just for jobs, but for a brighter, more equitable, and interconnected world.

So, the next time someone asks, "What can technology add to education?", tell them this: it can add the boundless potential of a connected world, the power to bridge inequalities, and the tools to build a nation equipped for the challenges and opportunities of tomorrow.