DIGITAL DISRUPTION

Will tech supremacy have a detrimental impact on teaching and learning?

QUIZ

How well do you know Generation Z?

Gen Z is best described as?

- The most diverse generation
- The largest generation by population
- The most anti-social generation
- Less dependent on technology than Millennials

Which is not a nickname of Generation Z?

- Centennials
- Post Millennials
- iGeneration
- The Z Squad

Gen Z spends approximately __ hours a week on their smartphones

5 10 15 20

Gen Z is less visual than the generations before it

True False

Want to talk to a Post Millenial? Make it:

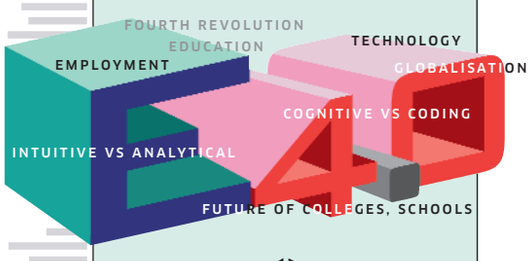
- Short and sweet. They have short attention spans
- Long and detailed. They want all the information

When it comes to technology Gen Z uses __ screens on average

3 4 5 6

Source: Talerang

For answers, log onto *http://www.talerang.com/express/genz.php*



Spark Creativity

AROUND 85% OF students and 91% of teachers see creativity as essential to students' future careers, and **93% of students and 73% of teachers view technology as key to their career preparedness.** Gen Z students shared that classes focusing on computers and technology are among their favourites to take and will best prepare them for their futures.

The Adobe study, 'Gen Z in the Classroom: Creating the Future,' was released in end 2016. The study found that 75% of the more than 1,000 US students between the ages of 11 and 17, and more than 400 Gen Z teachers surveyed expressed a mutual wish to see an increased focus on creativity in the classroom. When asked if they thought their future careers would involve creating, **83% of students agreed, and 94% of teachers feel their Gen Z students will have careers that do not exist today.**

"Gen Z students have grown up in a tech-enabled and information-driven world," said Tacy Trowbridge, Education Programs, Adobe, at EDUCAUSE 2016, conference for educators who use IT to transform higher education. "Gen Z and their teachers agree that they learn best through doing and creating, and that the curriculum needs to evolve to let students explore their creative ideas and to prepare them for a rapidly changing world."

While excited about the prospects, Gen Z students – who define themselves as smart, creative and hard-working – express nervousness about their future careers. **Almost 30% feel unprepared for the future,** and nearly half feel what they learn outside of the classroom is more important to their future careers than what they learn inside.

Education is the most powerful weapon which you can use to change the world

– NELSON MANDELA

Don't limit a child to your own learning, for he was born in another time

– RABINDRANATH TAGORE

FOCUS ON KNOWLEDGE

PASCALE QUESTER
DEPUTY VICE CHANCELLOR & VICE PRESIDENT (ACADEMIC)
UNIVERSITY OF ADELAIDE

UNIVERSITIES the world over are struggling with the digital disruption. For traditional academics, this question is an existential one: can universities survive in an environment where content is ubiquitous from a myriad of sources and the 'sage on stage' approach loses currency with Gen Y and Z brought up as digital natives? Can these august and conservative institutions now jump into future where private providers and massive online open courses (MOOCS) all but 'steal' the potential audience from under their feet? As vice chancellors and deans across the globe ponder the future, many assume that technology increasingly encroaches on their capacity to educate future generations.

I take a very different view. It seems to me that, despite appearances, universities were never in the content business but in the knowledge business. We had to provide content because this was a necessary (but far from sufficient) step to educating our students. Without the platform of content, bringing students to the desirable levels of understanding was impossible, so we scaffolded our degrees to provide first content and then, for those who pursued higher degrees, greater insights and understanding of the discipline. That content is now so readily available is, in my opinion, a blessing; universities can now concentrate on the business of creating and inducing meaning.

We can coach young (and older) minds to wade through a plethora of facts and figures and to extract from it understanding. We do this by demonstrating critical thinking, by building up analytical skills, by showing up logic and, perhaps as importantly, by teaching students how to express clear thinking in understandable terms, how to share that understanding with others in order to lead effective problem-solving teams.

Unlike Kodak who never predicted their own demise because they saw themselves as film-makers, as opposed to image suppliers, universities have a choice. They can remain content merchants, and die or they can transform in knowledge brokers and thrive. If they chose the latter, as most of the smartest ones do, they will need — not fear — what technology can offer. They will harvest, not decline, the bounty that is the internet. They will praise, not denigrate, the digital natives who will come to them to seek not merely content or information about the past, but the understanding and the key to a different, but equally rewarding, future.

In my university, the 143-year-old University of Adelaide, we have embraced MOOCs and now count over 450,000 learners from 90% of world countries. They have joined an on-campus community of some 25,000 and I feel that we are all very much the richer for it. After all, was it not to encapsulate a universal ideal that they are called universities?

Do not train a child to learn by force or harshness; but direct them to it by what amuses their minds, so that you may be better able to discover with accuracy the peculiar bent of the genius of each

— PLATO

TEACHER, VITAL GUIDE

RAVINA AGGARWAL
DIRECTOR
COLUMBIA GLOBAL CENTERS, MUMBAI

DIGITAL technology has brought about deep transformation in education. It has facilitated new forms of discovery, new methods of knowledge sharing, and new connections for hitherto excluded communities. Educational institutions have to now ramp up infrastructural investments to harness the potential of technology. They have to address the needs of students to acquire digital skills for sustaining them in globally competitive markets. But the question remains as to whether technology-based education has superseded and made obsolete more human-centered approaches to pedagogy and learning.

Techno-centrism is the belief that technology lies at the heart of educational success above all other interventions, including human ones. Proponents of techno-centric education presume that teachers will be rendered obsolete as knowledge will be readily available through search engines and students will have all the tools they require at their virtual fingertips. They argue that technology allows for student-led innovation, producing purposeful and savvy entrepreneurs and workers.

I contend, like other scholars have done, that the role of the teacher may have changed but the teacher still remains a vital guide and leader in a student's educational journey. Technical devices and applications can communicate with classrooms at a largescale but the absence of teachers for student masses perpetuates class divides, as in other sectors, where personal and customised service that can supplement an anonymous, electronic interface is only the privy of a few. Equal access to technology continues to be a challenge with every generation of smart devices that are affordable only to a select number of students.

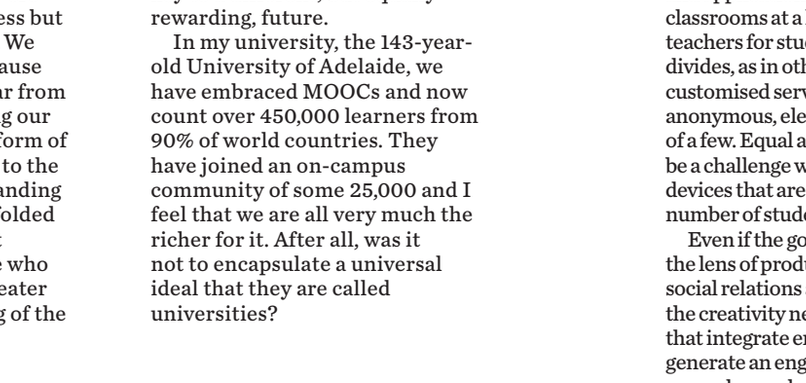
Even if the goal of education is seen through the lens of producing innovative employees, social relations are a critical part of sustaining the creativity needed for innovation. Curricula that integrate empirical and field studies generate an engagement with the environment around us and with communities of difference and diversity that teach students, as they enter the workforce, the irreplaceable skills of how to manage social relationships. And above all, away from compulsions of the instrumental, student years are as much about lingering, taking risks, failing, questioning and exploring the world through friendships and sociality that cannot be fulfilled by social media alone.

Ours is an age of science, technology and practical specialisms, which explains why these courses are so desirable. But there is a great need for reflective understanding of the ideas, perspectives and insights the humanities provide. For, it is these that are the marrow of mature and civilised societies

— AC GRAYLING
Master, New College of the Humanities, London

A CLASS APART

Indu Shahani, president and chair, ISDI, ISME, ISDI WPP, on how the classrooms of the 21st century are changing



THE classrooms of the 21st century will not be propelled by school and college administrators but by the young learners. Today's learners require new dynamics and new direction which facilitate active learning and new teaching strategies. Conventional classrooms have to modify and co create existing spaces to provide adaptable, multi-use configurations and new pedagogies.

According to Patrick Joets, a STEM co-ordinator, the 10 signs are technology, integration, collaborative environment , opportunities to create an expression, inquiry based approach, justification for answers, writing for reflection, use of problem solving methodology, hands-on-learning, teacher as facilitator, transparent assessment.

We have heard of B-schools moving students from classrooms to boardrooms, but the 21st century must bring the boardrooms within the classrooms where boards of companies interact with students who are their futures trend-setters and indeed their customers and significantly campuses should move into corporate spaces so that students after graduating have to just take elevators to their new jobs.

No longer should students learn, work and think in one place all day, spaces have to be flexible and integrated with the real world. Corridors should become student workspace zones, staffrooms and student lounges should become special gathering zones which encourage class meetings, wrap-ups and mini lessons.

New age education is dominated today by DICE — design, innovation, creativity and entrepreneurship. It is important to orient young minds in understanding innovative learning practices to capture the new elements of DICE. Boot camps have become popular methods of ideation, creation of prototypes, validation, making business plans and testing the market. Student-led incubation centres and accelerators will be the future classrooms.

Today's learners prefer interactive and social activities and experiential learning and teaching. They like instant access to information and a mobile teacher can move casually from group to group to field questions and facilitate discussions. A big advantage of collaborative learning is that it permits movement. It is time to redesign classrooms, rethink teaching and revolutionise learning. Teachers cannot be a sage on the stage, but a guide by the side. Welcome to the 21st century New Age Education.

– As told to **Anisha Sahijwala**