


# PROFESSORS WITHOUT BORDERS



In association with



## Conference Report Teaching Tech to Generation Z

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## 1.0 INTRODUCTION

The future has been transformed by the **digital revolution** that has overtaken the workplace and the personal space these last ten years. This '**Fourth Industrial Revolution**' is disrupting systems of management, technology and production, governance, communications and of course learning. It has benefitted many, improving efficiency and productivity, but has equally contributed to growing inequality, fuelling discontent across the demographic divide.

It is more important than ever to **equip Generation Z** with the tools they need to adapt to the digital age. Yet schools and universities in the 'West' remain chronically unaware of the transformation currently taking place and their **responsibility** in preparing 'Gen Z' for the changing social and professional space.

"Teaching Tech to Gen Z" was PROWIBO's first student-led event in collaboration with The German School, LSEIdeas and Gulf Futures Center, where participants in education, tech and research examined the ways in which education needs to adapt to address the needs of Generation Z in a changing world.

The event was open to the public and presented two panel discussions. The first panel examined **the challenges and opportunities of 'Teaching Tech'**, while the second panel focused on the **social and mental wellbeing of young adults in the digital age**.

"Teaching Tech to Gen Z" took place on 18 May 2019 at the German School London.

## 2.0 PANEL 1. TECH TOOLS FOR GEN Z

Tina Gotschi, Vice-Principal and Head of Computer Science at ADA, the National College for Digital Skills opened the panel by highlighting its exceptional nature, which included the voices of participants between the ages of 12 and 50 in a discussion on tech education. Referring to them as "neo-millennials", Gotschi characterised **Generation Z as fundamentally diverse, digitally-native, tech-savvy, concerned, entrepreneurial, passionate and inherently well-versed in social media**. She added that she taught in a tech-focused computer-specialist school.

Offering a student's perspective, Frederick Zahn who is in his second year learning Computer Science at the University of Southampton, described the intensified global interest in the rapidly-growing fields of cybersecurity and artificial intelligence. He discussed his experience as a witness to technology's entry into education both in the classroom and as an extracurricular activity. Nonetheless, Zahn explained that he **faced difficulties learning computing** as his secondary school did not teach it. The headmistress of the German School stepped in to explain that this was due to programming not being a part of the German curriculum. **In some nations, Computer Science is still not regarded as a "core" topic compared to the "traditional" subjects such as Maths, Sciences, Language and History**. In an ever-changing field, Zahn also stressed the importance of self-writing code or "automatic code generation" as a milestone in computing, which in part of his curriculum in preparation for its foreseen imminent arrival.

In response to Zahn's presentation, Gotschi questioned whether school curriculums should be partially or entirely technology-based, as is the case with online teaching at the Open

University. The consensus of the panel was that a mixed, hybrid approach should be introduced, still **cherishing the value teacher-student interactions**. However, the panel did note that as society is progressively becoming more technologically-reliant, new challenges will occur.

Young gamer Henry Adams, who is a student at St George's College in Weybridge and a digital-native member of the Generation Z, defended the role of **tech and online platforms as efficient mediums of education, regardless of school practices**. He explained that they provide easy access to documentaries, online reading material, and entertainment such as YouTube or Twitch, which fosters opportunities to explore interests beyond the school curriculum. Adams described the implications of the "on-demand" culture, drawing from personal preferences of consuming online gaming content from video sharing. Now online media consumers have a wide variety of choices of entertainment with near-instantaneous access. **Adams concluded that gaming requires players to be creative, as in the case of Minecraft, where participants literally build their own adventures.**

Video-sharing sites are already an important educational device in the courses developed by Marc Lewis, Dean and Co-Founder of the School of Communication Arts. A member of Generation X, Lewis learned of the growing role of digital technology through his compulsory 4-hour weekly coding classes at school, which he credits for flaring his passion for technology and ultimately leading him to create his first dotcom in 1997. Lewis warned however against the over-reliance on technology **as extensively using online resources can dampen creativity and create homogenised and saturated creative output**. Lewis added that **the most sought-out skills of employers for the future will be "creativity" and "empathy"**. Creativity is the essence of being human and should, therefore, be taught and encouraged. **Education should be aimed at helping students find their *telos*, an ancient Greek concept for "true calling" or "purpose"**, using Mihály Csíkszentmihályi's concept of "flow". This concept represents a state of mind of extreme focus and enjoyment away from negative emotions such as apathy or boredom. Lewis' School of Communication Arts attracts more female students, but an imbalance in racial diversity continues to pervade the industry. He stressed that diversity in culture and background encourages alternative and innovative approaches, which in an ever-changing professional landscape provides a creative edge in a crowded market.

An experienced data-science manager at Nielsen, Laurens Geffert took on the future of self-writing code. Geffert explained that, whilst coding can become easier, it is ultimately dependent on its reproducibility, leading him to conclude that **code writers will never become extinct**. Speaking to the wider and social implication of algorithms, Geffert focused on the YouTube recommendations algorithm, which he views as a double-edged sword: one as a great discovery tool and on the other hand a potential risk for "unwanted or undesired" content. Geffert faults the use of "simplistic" Key Performance Indicators (KPI) for recommendation algorithms, which in turn are a result of complicated and laborious coding efforts. Ultimately, Geffert concluded that recommendations should be based on "view-time" and genre of videos.

The panel further discussed the lack of diversity in the programming and coding job sectors. Members of the audience raised the issue of the high-demand nature of computing and the gradual change of women's lifestyle beyond 30 years of age. Gotschi, however, blamed the

**malfunctioning hiring process and the environment surrounding computing for the lack of diversity.** In discussing potential solutions, Geffert explained that in data science, efforts are being made to accommodate different needs and employees can now work from home, moving away from the antiquated practice of permanent office work. He believes this is the reason for the 50/50 gender balance in his company. **The arrival of self-writing code within the near future will enable human efforts to be spent on creative processes possibly addressing the serious need for diversity in computing.** Therefore, such diversity issues should be tackled as early as primary or secondary education by promoting and accommodating under-represented demographics in the field of computing.

### **3.0 PANEL 2. SOCIAL AND MENTAL WELL-BEING IN THE DIGITAL AGE**

Dr Carola Hieker, Associate Professor of Organisational Behaviour and MBA Director at Richmond University London, addressed the emotional duress that social media can play on its consumers. She expressed her frustrations regarding the lack of research conducted on the issue and stated that, while **users may express fluency in being able to use social media, they are generally not sufficiently educated on how to protect themselves from the possible dangers.** Hieker recommended means to effectively protect those more vulnerable to harmful online content, such as the introduction of guidelines to minimise risks such as harmful or unwanted content.

This angle was challenged by Allison Cole-Stutz, Vice President for Student Affairs and Dean of Students at Richmond American International University in London, who viewed social media as a device, both with the power to harm and benefit users. Cole-Stutz explained that **the comparison culture found on social media is part of human nature and the need for self-validation rather than a fault of new media.** She argued that providing effective mental services in larger universities is nearly impossible, with smaller communities such as Richmond University able to better prepare to cater to their students' individual needs. Cole-Stutz interpreted **social media as a positive instrument, a unifier and a method to further integrate diversity,** referring to Richmond University students' use of social media platforms, with the 'It's OK Not to be OK' campaign.

Aspiring software engineer and student at ADA the National College for Digital Skills, Andrea Rodriguez acknowledged the pressure of online material and explained her method of deleting social media apps when she needs to focus her energy. On the other hand, she also applauded their ability to provide a "community" when she needs one. When protecting children or young adults from online dangers, Rodriguez explained that advice from a friend or peer will benefit users more than a parent giving advice or confiscating devices. Rodriguez's remarks stirred controversy with the audience who **queried whether the profit-driven models of social media companies encouraged them to create addictive material.**

Prowibo ThinkTank Manager and a graduate student in Public Health, Mary Sullivan explained that her education in digital literacy prepared her for the **abundance of inaccurate online material and taught her the process of searching for validity and truthfulness behind**

**online resources.** As a result, Sullivan stressed that internet users must apply objectivity, subjectivity and caution when online. She supported the concept of a form of **government regulation to control social media**, to protect those most exposed and at risk. She also presented data on recent trends of **online abuse issues such as sexual harassment or “slut-shaming” through social media platforms.** With respect to the positive side of 21st century digital technology, Sullivan discussed the rise of e-therapy, or online therapy, which takes form in podcasts, apps and video services, as new ways of dealing with mental issues; **the anonymity of digital users can provide a sanctuary and remove anxiety when dealing with certain mental health problems.**

University student Paul Azrak, who reads Politics, Philosophy and Economics at Exeter, pointed out that **Generation Z is more conscious and openly communicative on prevalent societal issues such as mental health, thus removing its attached stigmas.** While Azrak noted that the UK is becoming a standard-bearer in terms of quality of service and accessibility, he noted further resources should also be applied to secondary teaching, particularly in public schools. Unlike Sullivan, Azrak believes that conventional forms of therapy, including face-to-face contact, provide a more complete service than e-therapy. Finally, Azrak addressed the **problem of online privacy**, claiming that most online users are complacent when accepting cookies, having their data harvested, and other forms of passively distributing personal information.

Offering an institutional perspective, Laura Hills, Academic Developer at the London School of Economics explained that distance learning could be a good option for students with special requirements such as agoraphobia. Recollecting her experience at the Open University, she claimed that approximately **20% of students enrolled suffered mental health issues.** While social media is blamed as a trigger for mental health problems, Hills argued that **many of the mental risks associated with online activity are pre-existing.**

The audience subsequently discussed the role that governments should play to address online addiction. This included limiting exposure to harmful content and introducing protective restrictions. However, several participants noted that illicit practices and environments will always occur both online and offline. Nevertheless, technology provides a new platform to address mental health issues with the rise of e-therapy as a viable route of advertising the services and creating self-help communities. Discussing the role of social media as a trigger and as a tool to address mental health issues can and should become part of the ‘tech’ education of Gen Z.

#### **4.0 CONCLUSION**

This conference on Teaching Tech to Gen Z was organised by Professors Without Borders and hosted at the German School in London in collaboration with Gulf Futures Center, Richmond the American University in London and LSE Ideas. Thinktank Without Borders published this report along with a video of the conference. Further cross-generational discussion on developments of education will occur in our future conferences, offering a solution-orientated dialogue on the ever-changing educational and professional job sector.