

Call for inputs on the solutions to promote digital education for young people and to ensure their protection from online threats

Issued by OHCHR. Deadline 16 February 2024

1. What are the main challenges that young people in your country face in accessing digital education? Please consider the specific situation of marginalized young people and those in vulnerable situations in your response.
2. What are the main gaps and challenges to young people's protection from online threats in law, policy, and practice in your country and the impacts on young people's human rights? Please consider the specific situation of marginalized young people and those in vulnerable situations in your response.

Submission from IT for Change, Bengaluru. (www.ITforChange.net)

Digital Education ('EdTech') is no panacea. It can cause serious harm to education and to students and teachers. It is hence necessary to not take it as a given that digital education will be useful. The recent study by UNESCO makes it clear that the widespread adoption of EdTech during the Covid pandemic was a disaster, even more so for children from socio-marginalized communities. Hence the issue of 'access' (making digi-tech available to all students) must be necessarily considered along with the design of the EdTech. It is the design of EdTech that will decide whether it will be useful or harmful to students.

A few key drawbacks of poorly thought out design of EdTech include the following

Solutionism: Tech-driven programme design

Technologists (and technology companies) are considered experts on EdTech. On the other hand, inadequate teacher preparation for digital integration in education leads to teachers and educators not being considered knowledgeable enough to contribute to design of ICTs programmes in education. Consequently, policy-makers often rely on technologists for policy formulation and programme design. This reliance leads to 'solutionism', wherein programme design draws from technologists' knowledge and faith in digital technologies' potential, rather than from a domain-based understanding of requirements. Evengy Morozov (2013) explains solutionism as "recasting all complex social situations either as neatly defined problems with definite, computable solutions or as transparent and self-evident processes that can be easily optimised – if only the right algorithms are in place".

Centralisation and privatisation of educational processes disempowering teachers

Decisions on content and pedagogy tend to be complex and contested amongst teachers, school managements and education bureacracies (Talmage, 1972). Digital technologies can affect such

contestation by constraining teachers' curricular flexibility. School managements control the digital devices, the content used in these devices, and can access the audit trail of the teaching processes. While Krishna Kumar (1988) bemoans the "textbook culture" in Indian schools, which limits teachers' curricular choices, digital technologies can take the prescription of work processes to an extreme. Such "Digital Taylorism" is already seen in an advanced form in the retail and logistics sectors (Hirth & Rhein, 2021), and threatens to be the future of teaching. "Teacher-proofing models" (Curwin, 2012) seem to assume that 'good quality' content and detailed instructions can complement and even compensate for the deficiencies of inadequately equipped or demotivated teachers, this furthers de-skills teaching.

Students get enamoured by the novelty of digital technologies (which they may otherwise not easily have access to), and appear to use them with ease, while teachers seem less keen on adopting them. Furthermore, interactive digital technologies seem to be able to 'teach' students. This has led to the development of apps that support student 'self-learning', directly providing content, activities, and assessments, bypassing teachers (25 Apps and Tools to Inspire Self-Directed Learning, n.d.). Providing 'ready-made, expert' content and standardising pedagogies through digital pipelines, whether by companies or the government, dilutes the role and agency of the teacher in the classroom. (Kasinathan, 2015).

Teacher agency in curriculum and pedagogy decisions is also increasingly being constrained through CCTV cameras in classrooms, acting as a panopticon 'disciplining' teachers (Foucault, 1977). For instance, the Delhi government's programme to install CCTV cameras intends to allow parents to see classrooms on their phones (PTI, 2018), Firstpost, 2020). Since online education can be recorded, it could create a clear audit trail. The Tamil Nadu government announced that recordings of online classes conducted by teachers during the pandemic, would be available to parents and the public (The News Minute, 2021).

The reliance of bureaucrats on technology products from vendors, and their technology expertise for programme design also facilitates the privatisation of core educational processes. MHRD announced a Public Private Partnership (PPP) model for introducing AI-based personalised learning solutions in education (Ministry of Education, 2019).

Converting education into 'learnification'

Digital technologies support data analyses and number crunching. Hence, it can be used to analyse student performance. Thus, digitalisation increases our ability to look at 'learning outcomes'. Reducing learning to an ever-narrowing set of concepts, and tracking student achievement based on digitised responses to assessment questions dilutes education to 'learnification.' José van Dijck and Thomas Poell (2018) lament that "many data-driven, personalised education initiatives focus on learning rather than education, and on processes rather than on teachers and students. The (social) activity of learning is broken into quantifiable cognitive and pedagogical units, such as instruction, short quizzes, assignments, deliberation with other students, and tests. The 'learnification' model is predicated on the real-time, short-term process of learning rather than its long-term outcome,

which is, in most schools, to provide an education. Education, as critics argue, involves simultaneous nourishing of intellectual, social, technical, and cognitive skills”.

Teachers for the rich, technology for the poor

There is a discourse that the education system is ‘broken’, and that digital technologies can mend the broken system (Hendrick, 2018). Although communication and information sharing are key processes of learning, they need to be organised meaningfully as curricular inputs by a capable adult who needs to be perennially sensitive to diverse learner contexts and complex learner dynamics in the classroom environment, to achieve learning aims (Eisner, 1991). The phrase ‘capable adult’ encompasses an understanding of several areas including philosophies of education, sociological perspectives, psychology, in addition to subject matter expertise and pedagogical repertoire. Such complex organising of the teaching-learning processes, in a manner that retains the engagement and curiosity of the learner, cannot be done by a digital device.

From the learner’s standpoint, learning must involve ‘meaning-making’, where an activity is meaningful and simultaneously extends the boundaries of their understanding. ‘Meaning-making’ is a seemingly contradictory term, it transcends the ‘meaningful-meaningless’ binary. It indicates why good teaching is a complex process (Postman, 1971). In the resource-starved contexts of schools catering to students from marginalised communities, the task of making learning meaningful is even more challenging because learners need greater empathy and support from teachers, and consequently, are even less amenable to being achieved through digital technologies.

Nonetheless, many NGOs and businesses have tried to identify digital technologies that can enable poorly-resourced schools (both government and private) to support learning without addressing the fundamental issues related to the poor resource base. These programmes appear to envision technology as a resource that can make up for poor investment in schools. Yet tablet-based content delivery models would never be given pride of place in well-resourced government or private schools. Thus, this approach of ‘teachers for the rich, technology for the poor’ is pernicious and increases social stratification. Toyoma (2011) says that, “Computers can help good schools do some things better, but they do nothing positive for under-performing schools. This means, very specifically, that efforts to fix broken schools with technology or to substitute for missing teachers with technology invariably fail”.

A multi-country study (Tamim, 2015), by the Commonwealth of Learning (COL), of projects providing content through tablets to achieve educational aims found that “none of the identified initiatives was supported by a rationale or evidence for why tablets in general would help achieve the articulated objectives” (The World Bank Group, 2015).

Regulating the Ed Tech sector

Business platforms like Google (search engine), Facebook (social media), Amazon (retail), Uber (mobility) turn social interactions and economic transactions into free or paid services and collect and monetise their users’ data (Sadowski, 2021). Platforms lay down the rules of the game and exploit other actors while focusing on making profits. The Big Data collected by these platforms

about their users is increasingly processed through machine-generated algorithms to identify patterns and make predictions. The pandemic-triggered school closures have given a fillip to online education – facilitating data collection, and making education platforms mainstream. Google and Byjus – the biggest education technology vendors announced a collaboration that will be able to reach millions of students in India (Business Standard, 2021).

The NEP (2020) suggests that AI can process Big Data to develop ‘personalised learning paths’ for students. Data about students’ responses to assessment questions can be analysed to develop a machine-based understanding of the trajectory of conceptual errors, identify solutions that can address them, and create learning paths. Since AI is based on a projection of the past, it tends to exacerbate biases. In the history of Indian education, social bias (gender, caste, creed, region) has severely impeded quality universal education. Using AI for personalised assessment and learning will aggravate these biases and create an even more inequitable education system (Kasinathan, 2020). AI is usually implemented through black box algorithms which neither the teacher nor the learner are able to navigate, let alone design its implementation. Thus, platforms dilute teacher and learner agency by prescribing teaching and learning paths. The use of AI in other sectors has sufficiently indicated its dangers (Acemoglu, 2021), and its role in education must be regulated to prevent harm. China has issued stringent rules for its ed-tech sector, including stipulating that ed-tech coaching services must be not-for-profit (Koenig, 2021) and limiting collection and harvesting of user data to protect students and teachers from commercial exploitation and abuse.

While regulating the private sector is an immediate necessity, building critical media literacy among teachers and students and the wider community, so that their alert responses can help mitigate the harms of using digital technologies provided by businesses or governments is the long-term solution.

Conclusion

Dominant forces in society seek to design technology to reinforce existing power hierarchies, while persuading us that we should allow them to techno-fix every social problem. Hence discussions on digital technologies and education, largely focus on ‘learning to use digital technologies’. But the discussion amongst educators (and political thinkers) needs to start with ‘what technology do we need to fulfil identified aims in education (and larger socio-political goals)? What role can technologies play in addressing our current crises (and what has been their role in causing these in the first place)? What kind of ownership over the EdTech is needed?

The solutions to the crises of our age require that we develop critical thinking – an important aim of education. Universities should be the spaces that enable debates which develop new thinking and impetus for appropriate political choices. These discussions and ideas need to be shared widely, including by proactively using digital media/social media. This will build a larger understanding about technology and its place in society and education. While this submission has explored a few strands for such integration, more research is required to evolve effective technology interventions in educational processes and programs.

References

1. Acemoglu, D. (2021). AI's future doesn't have to be dystopian. Boston Review. <http://bostonreview.net/science-nature/daron-acemoglu-redesigning-ai>
2. Curwin, R. (2012). How to beat "teacher proof" programs. Edutopia. <https://www.edutopia.org/blog/beating-teacher-proof-programs-richard-curwin>
3. Eisner, E. W. (1991). What really counts in schools. Association for Supervision and Curriculum Development. http://www.ascd.org/ASCD/pdf/journals/ed_lead/el_199102_eisner.pdf
4. Foucault, M. (1977). *Discipline and Punish: The Birth of the Prison*. Pantheon Books.
5. Harari, Y., N. (2018). Why technology favours tyranny. The Atlantic. <https://www.theatlantic.com/magazine/archive/2018/10/yuval-noah-harari-technology-tyranny/568330/>
6. Hendrick, C. (2018). Challenging the 'Education is Broken' and Silicon Valley Narratives. *ResearchED*, 1(1), p. 15. <https://researched.org.uk/wp-content/uploads/2020/03/researchEDMagazine-June2018-web.pdf>
7. Hirth, J., & Rhein, M. (2021). Algorithmic assembly lines: Digitalization and resistance in the retail sector. TNI Longreads. <https://longreads.tni.org/algorithmic-assembly-lines-digitalization-and-resistance-in-the-retail-sector>
8. Kasinathan, G. (2015). Domination and emancipation: A framework for assessing ICT and education programs. International Development Research Centre, Canada. <https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/56846/56892.pdf>
9. Kasinathan, G. (2020). Making AI work in Indian education. Artificial Intelligence in India, 6. <http://library.fes.de/pdf-files/bueros/indien/15953.pdf>
10. Koenig, R. (2021). Online tutoring in China was booming. Ed Surge. <https://www.edsurge.com/news/2021-07-26-online-tutoring-in-china-was-booming-then-came-a-dramatic-shift-in-regulations>
11. Kumar, K. (1988). Origins of India's "textbook culture". *Comparative Education Review*, 32(4), 452-464. <http://www.jstor.org/stable/1188251>
12. Ministry of Education. (2019). Ministry of HRD announces National Educational Alliance for Technology (NEAT) Scheme for better learning outcomes in Higher Education. . <https://pib.gov.in/PressReleasePage.aspx?PRID=1585558>
13. Morozov, E. (2013). To save everything, click here: The folly of technological solutionism. Public Affairs. https://books.google.co.in/books/about/To_Save_Everything_Click_Here.html?id=fdggBahA1qsC&redir_esc=y
14. 25 Apps and Tools to Inspire Self-Directed Learning. <https://blog.planbook.com/self-directed-learning-apps>
15. PTI. (2018). Student safety: Delhi govt. to install 1,46L CCTV cameras in its schools. The Times of India. <https://timesofindia.indiatimes.com/home/education/news/student-safety-delhi-govt-to-install-1-46l-cctv-cameras-in-its-schools/articleshow/64194032.cms>
16. The World Bank Group. (2015). Tablets in education. World Bank Blogs. <https://blogs.worldbank.org/edutech/tablets-education>
17. Van Dijck, J. & Poell, T. (2018). Social media platforms and education. *The SAGE Handbook of Social Media*, 579–591. <https://doi.org/10.4135/9781473984066.n33>