

In using Technology in Education, 'due diligence' is essential to 'do no harm' to children

- an appeal from the [National Coalition on the Education Emergency](#) (NCEE) to the Government of Andhra Pradesh

The Government of Andhra Pradesh (GoAP) wishes to be a leader in the use of digital technology to improve educational outcomes for its children. This is a commendable goal. It has been announced at the World Economic Forum that an MoU will be signed between the Department of Education, GoAP and BYJU's, a leading Educational Technology (EdTech) company in India. We request that the GoAP adopt the principle of 'Do No Harm' to children, especially those of the poor and vulnerable sections studying in government schools. In its capacity of representing the people's interests, the Government should do its due diligence vis-à-vis private vendors to ensure that it is protecting the interests of children, ensuring true learning, and getting value for money.

Technology in Education

We are supportive of using EdTech to promote equity in education and open new learning horizons for children. Textbooks, blackboards, learning aids, TV, radio and other technologies used in education are powerful tools in the hands of capable, committed and trained teachers; likewise digital tools can augment the learning experiences for children. For this, they need to be properly designed and deployed in a safe and supportive learning environment, with trained teachers who understand the tools. But while EdTech has enormous advantages over previous technologies, they also bring great risks and dangers to children.

In particular, we wish to highlight that many of these tools are used to create "profiles" of children based on their performance on repeated tests, and to harvest enormous amounts of data about children. **There is no evidence that these tools have supported meaningful education of children. Far from "accelerating" learning, these tools provide highly efficient modes of rote learning, deepen stereotypes of children as "advanced", and "lagging", reinforce caste and gender discrimination due to hidden biases, and stigmatize children.**

Secondly, the use of these tools will displace the teacher and reduce her to an appendage of the tool. The resulting deskilling of teaching and reduction of teacher agency can only harm educational processes and outcomes.

We note the need for a due diligence on the contents and processes of the digital tools. Textbooks and other tools, as well as what teachers do, is open to scrutiny and public accountability. The same should be equally true of EdTech tools. The government has to be transparent about the agreements with private for-profit vendors of technology, especially as it concerns the rights and future of children.

PROPOSED MOU WITH BYJU'S

BYJU's is an EdTech company which provides learning apps for individual students, ie it primarily operates in the B2C (Business to Consumer) segment of the private market. The individual consumer (the parent of the student) is supposed to make an informed judgement about the purchase of/subscription to the app. Even so, as widely reported through media articles and government press releases, the regulatory authorities have found evidence of numerous malpractices and false claims relating to BYJUs. **The Ministry of Education, Government of India has thought it necessary to issue an advisory warning parents and educational institutions, asking them to beware of malpractices of EdTech companies.**

What exactly will the MOU between a private for-profit vendor of educational learning apps and a Government department responsible for the education of millions of children cover? What is the benefit to the private vendor? **Even if it is providing the use of its apps “free of cost”, it is well known that the true value is not from the price of the app, but from the volumes of data that are generated which can be used to refine/perfect the algorithms, make profiles of students and their families, and can be lent, sold, re-sold to other entities, including for targeted advertising and exploitation of vulnerable people.**

Protecting child rights in the digital world is clearly emphasized in the United Nations “Convention on the Rights of the Child”. How is the GoAP ensuring that the vendor is not harvesting the data of thousands of children in the government schools, where this program is proposed to be implemented, in violation of this convention? It is accepted that children are even more at risk if data from them is harvested. How will the vendor be accountable in the case of data breaches or lack of effectiveness of the digital tools?

The GoAP has to be transparent, and release the MOU in the public domain. Third party education experts and education technology experts along with civil society must have a chance to review the MOU and the program. The GoAP is accountable to explain to parents about the contents of the MOU.

Education Technology for achieving aims of education

The purpose of using educational technology is to improve the education of all children, not to deploy or improve technology per se. We propose the following steps:

- The pedagogical approaches adopted by the digital tool with respect to the context in which it is being deployed should be reviewed and approved by independent education experts. The assumptions and learning models underlying the programming of algorithms should be available for review. The validity of the tests and of the value of data generated should be assessed by such experts
- The data that is collected must strictly be what is required for helping students and teachers and not be available to the business entity for harvesting. Data on students (and their families), teachers and others be subject to a legally binding, transparent privacy and data security agreement. This agreement should be phrased in simple comprehensible language and made available to every teacher, student and their parent. **Data breaches and data harvesting by the vendor, can make the GoAP vulnerable to legal actions from affected parties.**
- There is also a need to clearly assess the cost-benefits from any intervention. Digital technology programs particularly need to be examined, as hardware is expensive and fragile, needing intensive maintenance and replacement. In the proposed program, GoAP has announced procurement of tablets for hundreds of crores of rupees. The same funds could be invested in meeting physical and academic infrastructure needs of schools, which may provide much higher value in terms of education quality. This needs to be investigated in an open and robust manner. Equity must be the paramount consideration in all education programs and the provision of tablets to children from vastly different socio-economic contexts will not be in line with the need to consider contexts, needs and priorities for each learner.
- The pandemic triggered school closure created a need for digital technologies to allow opportunities for students to access content and connect to teachers. However, **months of exposure to digital devices has created addiction in children. Parents in many states have strongly demanded a program of digital de-addiction. Teachers too have warned that student learning habits such as being attentive, remembering and responding to instructions and interactions, desire for learning have been negatively impacted due to use of digital devices.** There is thus a potential for actual harm as a result of indiscriminate use of technologies without evidence.

LET US NOT FALL FOR THE HYPE – IF SOMETHING IS TOO GOOD TO BE TRUE, IT PROBABLY IS

BYJU'S makes many claims about the effectiveness of its apps. Unless these are independently tested, there is no reason to believe them. Let us not forget that other companies have made similar claims. One such example in India is Educomp. Educomp was the pioneer of the 'smart class' program. Through aggressive marketing they were able to sell their proprietary products to thousands of schools and also implemented programs in government schools. However, even with such reach, there was no independent review by academic experts, of the cost-benefit of their programs. Due to their overselling and other dubious practices, the company collapsed and declared bankruptcy. **Central government agencies are pursuing cases of fraud against the company.** Another prominent international example is KNEWTON, which was touted – just 4 years ago – as the “robot tutor in the sky”, which could “use data from millions of students to find the best pieces of content, proven most effective for people just like you, and give that to you every single time”. Today, nobody remembers that company.

China has the most advanced EdTech programs in the world, including in the use of AI in Education. Recognizing the grave danger from commercial entities using proprietary algorithms in Education, China banned all commercial EdTech entities last year; only 'not for profit' EdTech entities are allowed to operate. Secondly China has banned all proprietary (closed) AI; only open AI that is available for scrutiny is allowed. Both actions are essential to ensure that children are not exploited or harmed by the use of AI. BYJU'S is a commercial EdTech company that uses proprietary algorithms.

It is the business of private for-profit companies to oversell themselves. It is the duty of governments to protect its citizens. And as it is the duty of civil society to be watchful and vigilant, we are writing this appeal for the government to ensure that due diligence is done before the program is implemented.

Specific asks of the GoAP

We suggest that the GoAP immediately share the MOU in the public domain and appoint a team of academicians, who have deep experience and expertise in school education, to study the proposed collaboration with BYJU'S. The team should have education finance experts who can assess the cost-benefit from the program as well as its opportunity costs. The team should study the curriculum and pedagogic approaches in the products offered by BYJU'S and recommend the way forward. The report of this committee should be made available in the public domain and debated widely before a conclusion can be reached, on the way forward, on EdTech investments by the GoAP. In the absence of such clear shared understanding of the cost-benefits of the program, the implementation may not only not provide any claimed benefits but also harm the interests of the children, and education processes and public education system in the state.

- National Coalition on the Education Emergency

(The National Coalition on the Education Emergency is a group of individuals and organisations that have come together to work on issues relating to the impact on the pandemic on school education in India.

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Endorsed by: All India Forum – Right to Education, Development Empowerment Foundation, RTE Forum