ROLE OF TECHNOLOGY IN SHAPING THE HIGHER EDUCATION IN FUTURE

Dr Gedam Kamalakar Researcher Dept. of Political Science Osmania University Hyderabad Telangana India 500007 : kamalakarou@gmail.com
Dr.Kandi Kamala, Assistant Professor, Dept. of Political Science, Government Degree University for Women (Autonomous) Begumpet, (Affiliation) of Osmania University, Hyderabad, Telangana State, India. 500016

ABSTRACT
In recent years, the educational landscape has changed drastically with increased connectivity and technology that promotes outside-the-box thinking and innovation. Classrooms at all levels are evolving to meet this "new normal" through virtual lessons, smart technology in schools and online access for students and parents an individual possession of knowledge, skills and experience through education certainly transforms the nature's endowed resources as marketable products/services with 'economic value' is termed as human capital and knowledge economy. Enhance and enrich of human capital fillips nation's sound and health economy is the rationale of education. Education thrives to (a) educate, enlighten and encourage teaching, (b) input of understanding and (c) spirit and urge true facts. Education policy needs a clear-cut and transparency to lead in commercialisation and determination of values and proactive to the market logic. The great challenges accompany have been thoroughly exposed in recent periods through Covid-19 crisis. Interaction and integration with the economy of the rest of Worlds Counties, has now become a new emerging facet to bring out a unifying roof of the whole-teaching contents and methodology to attain the socio-economic development. To become a world-class academic institute heavily depends upon the committed faculty, quality infrastructures, supportive administration, and learning environment. Last but not least is the hardworking and brilliance or vividness is the foremost factor of promising among the young students. The corporate philanthropy to higher education is the call of the day to ensure trueness of education system for urging the prime goal of socio-economic development. This study focuses on the emerging trends in Indian higher education.

Key Words: Brilliance, Education, Human Capital, Knowledge Economy and Trend

Introduction

Digital technologies are an increasingly prominent feature of contemporary education provision and practice around the world, and are central to the popular imagination of futures of education. The educational significance of digital technologies has been amplified by the widespread take-up of digital education resources during the pandemic. As such, the hope that digital technologies might transform education along expansive and empowering lines is, once again, and despite their uneven history to date, being actively promoted. In contrast, this paper makes a case for approaching the future potential of educational technology in more circumspect and, we would argue, more realistic ways. It proposes that discussions of education's futures need to move beyond the simplistic idea that digital technology can offer ready solutions to the long-standing problems that continue to blight education. Instead, this paper looks back to lessons that might be learnt from the past 40 years of educational technology (specifically, digital technologies used for teaching and learning and administration) and uses these to develop both signposts and warnings about how these technologies tend in practice to interact with the lived realities of schooling.1The paper therefore offers a historically informed counterpoint to the speculative ways in which education and technology is usually discussed by early adopters, advocates and especially vendors of digital 'solutions'. The paper is based on our joint and separate work in the fields of Educational Technology and Educational Futures since the mid 1990s. One of us (Neil) has been researching and writing around the subject of digital technologies and education since 1995. Hehas worked in universities in England, Wales and Australia, and conducted numerous empirical research projects on technology use in primary and secondary schools, colleges, universities and informal adult learning. Neil's work on educational technology takes a deliberately critical approach –

focusing on the actual experience and 'messy realities' of educational technology use in situ. He has described his approach as focusing on the 'state of the actual' rather than 'state of the art'. One of us (Keri) has

Technology has rapidly changed every facet of our society, including the education industry. Today students grow up with internet-connected devices at home and in the classroom, which changes the way they learn. Future education technology will transform learning by giving teachers and students a variety of new tools to work with.

Description of topics or subjects that emerge or get more social attraction from the crowd over the past is termed as emerging trends. Higher education is a facilitating factor for learning or acquisition of knowledge, competitive skills, values, beliefs and habits through discussion, teaching, training and innovation. It promotes (a) industrial economy on its own right and (b) personnel for the rest of the economy of agriculture and subsidiary occupations for economic growth and development of nation. Education never stops and is lifelong students' learning always and also focuses on learning 'how to learn' and learning 'how to solve' problems. Learning is not only just in classroom but from projects, field study, interviewing experts and experiments and prototypes and in a variety of other ways. Knowledge is human capital and plays a key role in strengthening through available nature's endowed resources, in fact, a driving force in rapidly changing economy of the society.
No generation is more at ease with online, collaborative technologies than today's young people—"digital natives", who have grown up in an immersive computing environment. Where a notebook and pen may have formed the tool kit of prior generations, today's students come to class armed with smart phones, laptops and iPods. This era of pervasive technology has significant implications for higher education. Nearly two-thirds (63%) of survey respondents from the public and private sectors say that technological innovation will have a major impact on teaching methodologies over the next five years. "Technology allows students to become much more engaged in constructing their own knowledge, and cognitive studies show that ability is key to learning success
Globalisation means integration of nation economy with the rest of the world countries economy and thus has become an emerging trend and encompassing mutual interest of nations towards the ultimate goal of socio-economic development by bringing under a unifying roof the whole teaching contents and methodology to attain the goal of high rise in living standard, improving health and envisioning higher education including technology advancement n an area of communication and computers which are the pillars of economic development. To make India power and shining thrust, globalisation of higher education has been a positive move in all the fronts of her economy. Therefore, the academia would need to understand fully the facets of globalisation for better relations and more cordial harmony; what referred it as internationalisation of higher education.
A sound policy inscribes vision to achieve the intended objective of a concern/nation. Hence is the call of the day for 'healthy education policy.' The challenges of higher education confronting are commercialisation of education, obstacles in merit based admissions, deterioration in academic standards, encroachment in institutions and autonomy, teacher service conditions and education becomes subservient (Passive) to the advanced private sector market logic.
India is home to 1,050 universities and 45,000 colleges, the world's largest higher education system. Now, she sets to witness a major transformation in the space of higher education. Higher education system has been undergoing a tremendous change due to Covid-19 pandemic and the vital role of New Education Policy 2020 in shaping higher education. The upcoming trends in Indian higher education are highlighted below.

Curriculum Perspective: The curriculum, in the past, was more subjective with emphasis on the pre-defined content led to *monotonous coursework* with little or no scope to design on innovative thinking. Nevertheless, higher education will need space to motivate the students to utilize their creative abilities on the challenges of the society to invent means. Need to shift the focus on *how to think* instead of *what to think.* The education programs were often all about imparting theoretical knowledge. But only

textbook learning is not really fruitful to get a decent job. The colleges incorporate internships into their degree programmes and setting up for finding ways to start-ups.

Mobility: AS per All India Survey on higher education, Science, Technology, Engineering and Mathematics (STEMM) have become popular and increasingly gain more popularity among female students preferably than male students. Hence, need of focus on the studies of it in addition to the *mobility scheme* issues connected to the relocation of working women scientists. Foreign fellowship for women in Science, Technology, Engineering, Math and Medicine (STEMM) is another ways to allow women to participate in a research program in reputed universities in the US.

Private education: Did you know that one million students graduate 12^{th} grade in India every year? This has led to an increased demand for educational institutions. Therefore, the private education sector will prosper or flourish. The private educational institutions often ties-up with businesses to allow the students get experiential learning. Such collaborations and constant effort to meet the old standards will enable private educational institutions to offer an incredible learning experience. BITS Pilani have even appeared in QS World Rankings 2022. Higher education can be expensive in private universities in India. So if you want to opt for higher study in India you can take an education loan. Also, taking a student loan enables you to fund your own education. Trend of privatisation is sadly noticed. The private sector involvement in promotion of higher education is to the extent of 60% which is a crashing radical change. Raising free structure is again a drawback. Resultantly, most of the students discontinue their studies as they cannot bare such fees.

Enrich student experience: Technological solution of AI is already integrated into the educational system and evolving to become more robust to meet the new requirements. An innovative learning content change how the coursework is to deliver making tracking students' progress super easy.
Assessment: Attention is moving from pen and paper assessments to online automation enabled assessments. Online proctored exam allow faculty to capture photos, and videos using a web camera. So, invigilators can examine if the right candidate is appearing for the exams and also eliminate instances where students may cheat.

Call for Artificial Intelligence: With AI research and development increasing at a rapid pace during the pandemic seem unfounded. AI is appearing seemingly everywhere in higher education areas like management systems, proctoring, grading, student information systems, library services and disability support. Today, AI technologies are almost every facet of students' lives and hence require the universities and colleges to rethink curriculums in supporting it. Recognition of uploading a photo on a social networking site is an example of application of AI. The intelligent digital personnel assistants like Siri, Google, Alexa are all powered by AI. It endeavours to simulate the natural intelligence of human beings into machines, thus making them behave intelligently. An intelligent machine is supposed to imitate some of the cognitive functions of human like learning, decision-making and problem solving.
Trend of students is 'how to learn to solve problem' instead of learning to memorise facts and figures. So this needs to completely re-imagine education and allow students to learn independently. Changes need at every level and have to infuse things like entrepreneurship into the curriculum which create students' own jobs.

Online Higher Education: Thanks to the pandemic, Institutes have been forced to choose online mode of instruction, but only colleges continue if willing this approach. Online education has existed before the pandemic as well and referred to as distance learning. Distance education is an example for online education. Owing to the increasing demand, higher education institutes create programs and complete online. Along with the online learning development, youth shows an interest in learning various types of languages.

Women Enrolment: India has the largest education system with the participation of women but relatively low. In 2018-19, the admission approximately 1.82 crore women enrolled for higher education which grew at an incredible 4.9 per cent CAGR to that of 2011-12 enrolment.

Emergence Foreign Education: Going abroad for (further) education is close to impossible. But being normal, the number of Indian students going for abroad studies will show no signs of slowing down. Earlier, the most preferred-countries were the US, Canada, Australia, and the UK. Now, considering the change in US immigration policies and Brexit, Indian students are expected to move to new destinations such as New Zealand, Ireland, Germany, France, Russia, etc.

Demand for International Course: The demand for colleges and universities providing international certification has witnessed a surge is a fact. Global courses from world-renowned universities like Harvard Business School and more to ensure our students learn and keep up with what taught across the globe.

Need of Skill Development: Skill development is key aspect for every individual to find decent jobs. The Indian Government is soon expected to increase skill development programmes to cater to 500 million individuals. It is also working on bringing in new skill centres, creating a National Policy on Skill Development and Entrepreneurship, making Amendments to the Apprentices Act and more.

The academia considers privatisation of higher education is very useful, in fact, less expensive. The underdeveloped countries like Bangladesh and development countries like the USA, Japan, Australia and many other have successfully switched over to privatisation of higher education with making it absurd. Can India be consider on these lines especially if money earned can 'plough back' into educational sector for its own sound and healthy improvement?

Research: Research is a self-regulating and self-policing process wherein researchers conduct and present research without falsification and fabrication, giving credit to other scholars for their ideas when and where such credit is due. Research includes the aspects of competition including an emphasis on priority claims. Prestige has become associated with research excellence and high achievement. Hence, high quality of research is vital and as such it is equally important to conduct research in a culture which supports honesty and integrity to ensure the highest standards of ethical practice and behaviour.

Technology has transformed almost every aspect of our lives, and now it seems that education systems around the world are due for an update.

Educators are tapping into the digital revolution and adopting new technologies to help students reach their full potential, but can they adapt quickly enough to prepare children for the changing future of work?

The problem of scholarly wrongdoing is compounded in India due to rapid increase in the number of research publications in journals of dubious quality. It means research publications across the world have grown at a compounded annual growth rate of approximately 3 per cent over the two last centuries. This growth in research output has also been accompanied by a rise in poor-quality and predatory or greedy journals and lapses in ethical research practice.

Research misconduct is not uncommon because of ability to electronically scan documents and with the advances in machine learning and text analysis and data fabrication, falsification of results, mishandling of research subjects.

Transformations in technology have greatly impacted the way we live and learn. In 2020, in particular, given the peculiar challenges thrown up by the Covid-19 pandemic, education and technology have become pretty much two sides of a coin. Educational institutions and faculty have been forced to find newer ways of applying technology to ensure students continue learning away from campuses, often in far-flung locations.

Young minds now have the opportunity to chase their dreams and passions by accessing learning with a flexibility like never beforeAcademic bodies are giving students several options, most importantly, the choice to adapt and use technologies that one is comfortable with.

They can pick from an array of not only subjects but also technologies that augment learning. Futuristic technologies are bolstering such student-centric learning marked by a variable pace, active feedback, personalisation and better evaluation of strategies.

New-age learning

Several kinds of technology are responsible for advancing the education agenda. A couple of decades ago, the fashionable term was 'smart classrooms', or spaces that used gadgets such as cameras and microphones. Today, these elements have become smarter and more adaptable, leading to concepts such as flipped classrooms and online discussion forums. Open book exams and online tests are here to stay. Diverse learning forums supplemented by new pedagogies such as project-based lessons, question-based systems and open-source material are being widely adopted.

Peer-to-peer learning, multi-institutional collaborations and self-directed learning as alternatives to formal education are finding favour with new-age learners. Another important initiative is the virtual laboratory, which helps students gain practice and skills in lab work, and cuts cost for high-end or precision equipment.

Artificial intelligence (AI) is the buzzword now. The education sector is a big beneficiary of this tech. For example, biometric eye tracking helps a teacher understand the extent to which a student has absorbed the study material and give personal attention even in a large class. During examinations, AI and biometric eye tracking are already used to provide proctoring both online and offline, easing the task of invigilation and establishing wrong-doing, if any.

Game-based teaching

Tech enthusiasts have embraced wearable technologies, starting with wristwatches that perform a host of functions including mapping vital body signs such as temperature and heartbeat, and monitoring the functioning of vital organs. Similar tech can capture key aspects of a classroom situation.

Importantly, during online classes, students and teachers are exposed to different aspects of reality, interspersed with digital elements of animation. New-generation technologies such as virtual, augmented and mixed reality can take teaching-learning to greater heights by making them highly immersive. VR can make subjects like history lively and fascinating.

Game-based learning is making rapid strides. Placing the student at the centre of the process makes learning more enjoyable, and even effortless. Similarly, 3-D printing, a key aspect of distributed manufacturing, is now used in academics to bring to life design concepts through modelling, fabrication and prototyping.

Technology for information capture, storage, and processing is changing so fast that soon education will dispense with books, paper and pens altogether, replaced by a single device known as the foldable Liquid Crystal Display (LCD).

Technology empowerment

With the new education policy, India aspires to increase the Gross Enrolment Ratio (GER) from 26 to 50 per cent over the next 15 years. Cloud technologies, which are highly scalable, will be indispensable in meeting this goal by delivering quality higher education at a lower cost.

The 5G mobile technology, with its powerful and seamless communication engine, can help deal with high data volumes through the internet and enable superior versions of real-time support.

The options are endless for the role of technology in education, but one school of thought insists that technology can never supplant human beings. But no matter which way you look at it, it is clear that teachers will remain indispensable to education provided they remain tech-savvy in step with the changing realities.

Conclusion

Our analysis of the history of digital technologies in education is that this imagination, focused on the disembodied learner, separated from her communities and from the existing material conditions of her education, at best, will produce mixed outcomes. At worst, it can cause significant intensification of

educational inequalities. A new approach is required -one that operates with a different imagination that foregrounds and envisages students and teachers as working in highly divergent, socially and contextually situated learning spaces, and where the tools will have their value precisely in their mobilisation and practice, not despite them. This approach foregrounds the fact that any educational technology is only one, necessarily flawed and highly unpredictable, resource in the much wider range of strategies that are open both to teachers and to educational policymakers seeking to create sustainable educational futures. In short, recognising that education is a highly situated, contextual, human and unpredictable endeavour provides a much more secure basis for educational decision-making than the fantasy of futures of universal digital efficiencies, transformations, and disruptions.

Reference

1. Masani, Zareer, India still Asia's reluctant tiger, BBC Radio 4, 27 February 2008.
2. Science and Technology Education". Press Information Bureau, Retrieved 2009 08-08
3. Mitra, Sramana, How To Save The World's Back Office of Forbes, 03.14.2008
4. Henard, Fabrice, Report, Learning our Lesson: Review of Quality teaching in Higher Education, 2008.
5. Higher Education in India: Twelfth Five Year Plan (2012-17) and beyond
6. FICCI Higher Education Summit 2025.
7. Király, O. and Z. Demetrovics (2017), “Inclusion of gaming disorder in ICD has more advantages than disadvantages”, Journal of Behavioral Addicti ons, Vol. 6/3, p. 280-284, htt p://dx.doi.org/10.1556/2006.6.2017.046.
8. Kostyrka-Allchorne, K., N. Cooper and A. Simpson (2017), "The relati onship between television exposure and children's cogniti on and behaviour: A systemati c review", Developmental Review, No. 44, p.19-58, htt p://dx.doi.org/10.1016/j.dr.2016.12.002.
9. Lee, E., J. Spence and V. Carson (2017), “Television viewing, reading, physical acti vity and brain development among young South Korean children”, Journal of Science and Medicine in Sport, Vol. 20/7, p. 672-677, htt p://dx.doi.org/10.1016/J.JSAMS.2016.11.014.
10. Livingstone, S., M. Stoilova and A. Kelly (2016), “Cyberbullying: incidence, trends and consequence”, in Ending the Torment: Tackling Bullying from the Schoolyard to Cyberspace, United Nati ons Offi ce of the Special Representati ve of the Secretary-General on Violence against Children, New York, htt p://eprints.lse.ac.uk/68079/.
11. Livingstone, S., J. Davidson and J. Bryce (2017), Children's Online Acti viti es, Risks and Safety: A Literature Review by the UKCCIS Evidence Group, UK Council for Children Internet Safety, London, htt ps://assets.publishing.service.gov.uk/government/uploads/system/uploads/ att achment_data/fi le/650933/Literature_Review_Final_October_2017.pdf.
12. Meshi, D., D. Tamir and H. Heekeren (2015), “The emerging neuroscience of social media”, Trends in Cogniti ve Sciences, Vol. 19, p. 771-782, htt p://dx.doi.org/10.1016/j.ti cs.2015.09.004. Mills, K. (2014), “Eff ects of Internet use on the adolescent brain: Despite popular claims, experimental evidence remains scarce”, Trends in Cogniti ve Sciences, Vol. 18/8, p. 385-387, htt p://dx.doi.org/10.1016/j.ti cs.2014.04.011.
13. Neuman, S. (1988), “The displacement eff ect: Assessing the relati on between television viewing and reading performance”, Reading Research Quarterly, Vol. 23/4, p. 414, htt p://dx.doi.org/10.2307/747641.
14. Newsweek, Special Report: The Education Race, August 18–25, 2011.

