

Editorial

Need for Education 4.0: Assessment and Reflection

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While there is no denying the truth in the age-old adage that 'change is the only constant', keeping up with the fast-paced constant changes in the recent times has proved to be a challenge for policy makers in the education sector in India. Though the vision and mission of both governance and leadership factors in foreseen shifts in both social and industrial sectors while framing curriculum and attempts to ensure that higher education is in sync with demands of employers, and that skill sets match industrial needs, but the rapid changes brought in by information technology, cloud computing, artificial intelligence and the likes have made five year plans redundant and obsolete. The need for assessment and reflection is perhaps even more pertinent in today's times. Change has always been the order of the day, but shifts were perhaps neither of this magnitude nor this critical and compelling.

A brief overview of the trajectory of education in India reveals three significant phases. The move from the erstwhile and much acclaimed Guru-Shishya mode of teaching to Education for the masses was inherent in the change from Education 1.0 to its avatar in 2.0. This shift catalyzed by the advent of the printing press and subsequent sharp rise in literacy levels saw a long gap of hundreds of years. Though desirable, as the former had led to brahmanization of education, limited to a privileged few, the latter transposed education into a generic mass education for all. Transmission of knowledge, content and pedagogy though paid a heavy price as 'one size fits all' policy ignored the specific needs for learners. This though led to mushrooming of universities and colleges establishing scientific and empirical methods in research strengthening the public education system and making way for inclusion of women and other marginalized sections of society, who had hitherto been

denied access to it. This also led to a move from religion based and controlled education to the establishment of universities in Calcutta, Madras and Mumbai by the British in the mid 19th Century. Aided and regulated by the Government, first by the British and post Independence, by the Nehru led Congress, planning and reform of the Education Sector gained significance. The University Grants Commission, a statutory body was set up by the Government in 1953, as the nodal agency responsible for systematic planning and coordination of its outreach and learning outcomes and maintenance of standards.

Thereafter the nineties witnessed the influx of private players who capitalized on the potential of education as a commercial enterprise post globalisation and liberalisation. Though the enrolment in higher education institutions had increased exponentially, the gap between skilled graduates and the demands of the changing nature of industries was at an all-time high. Furthermore, policy makers were at logger heads trying to keep pace with the WWW world and the impact of virtual space on the real world. This necessitated a transition to Education 3.0. The keywords of this third generational shift were the Internet, Information Technology and Innovation. The digital platform made space for an alliance with the podium and blended learning collaborated with the lectern. Besides, the outreach of the education sector had also now traversed to online programmes, certificate skill-based niche courses had become huge value additions, literacy now included digital literacy, computers and personal devices replaced books and e journals reduced the number of subscriptions of print journals drastically. These shifts though, were not limited to pedagogy and curricula only. HEI administration policy, process and procedure are now governed by LMS and ERP i.e Learning Management System and Enterprise Resource Planning for the uninitiated. This has become a significant chunk of HEI budgets. Assessment, accreditation, collaborations with other Institutions, improved institute - industry interface, social extension activities, sensitization programmes etc jostled with the core academic sphere to pave way for holistic learning. Education 3.0 also spawned multifarious players offering certification in value added courses. Uncontrolled and unregulated by government agencies, these are making a killing by filling the gaps in the government planned and aided educational programmes. The focus here is on new technologies and specific demands of the job market. Skill based curriculum, online driven classrooms and state of the art technology are their USP, enticing students as government supported institutions are caught in the web of restrictions both in budgets and procurement protocols.

Education 3.0 in India was envisaged as a boon, which in many ways it was but 'change' reared its new mutants yet again, much sooner this time making this shift obsolete even before it could make its presence felt across the education sector. Though the policy makers attempted to keep pace with the changing environment, they could not envisage the speed with which changes would outstrip them. Cloud computing, artificial intelligence, social media, genomics, robotics etc are just a few challenges in a long list.

What has also been missing in all these three generational shifts in education has been the need of the student. The focus needs to be more learner centric, teaching should be augmented with mentoring, classrooms must collaborate with learning on the field, MOOC - massive open online courses should be regulated and monitored, the potential of the digital platform and the specific needs of employers must be factored in. Formal Learning and training are no longer controlled by a rigid time frame, it needs to be replaced by a format which encourages and supports continuous lifelong learning. Customisation of education, individuated flexible programmes, community-based activities, harnessing of students' competencies, application of knowledge are some of the key areas that Education 3.0 seems to have missed out on. Though the examination system included testing of value added or higher order thinking skills (HOTS), it is still nevertheless in India more memory based i.e on rote learning. What needs to be tested is not factual knowledge but application of the same. Furthermore, students are not framers of their curriculum, their inputs in syllabi revision are at best skeletal. Alumni who have established themselves as entrepreneurs or employed professionals should also be part of revision committees instead of just academicians. Our vision must visualize and anticipate changes in the future and be prepared for them. That the digital space is omnipotent, and the social mediated space pertinent cannot be ignored, shifting pedagogical paradigms must intervene and make education more relevant, efficient and dynamic. The higher education sector needs to realign with the fourth generational shift in the industrial sector. Our social, cultural and technological matrices have outstripped our teaching learning process. Education 4.0 is the need of the day, an educational culture that does not see education as an acquisition, but instead fosters meta skills, where both hard and soft skills enhance problem solving, participative citizenship, and students evolve as sensitive and sensitized beings.