Higher Education: A vision for 2050

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The situation today

Education today is still based on the industrial model sheltered in institutions, mostly within the four walls of the school or the university. It is assumed that institutional credential is the most objective and valued method of judging attainment.

Successful universities are judged by their ability to respond to the world of work. Few Institutions, situated mostly in developed countries, stand out in the world ranking of universities on that count. This situation has, over the years, accentuated the divide between the rich and less rich categories within most countries, and more so, between diverse nations, thus accentuating a class divide worldwide.

Today, the traditional model is highly questionable, especially with the advent of information technology that has the potential to disrupt and redefine the education system and employability model worldwide.

The Education to be

The most decisive influence in education will be that of Information Technology (IT). Education for 2050 should be considered in line with the speed of change and advancement in the IT sector. The precursor of a new mode of education is already here as many successful entrepreneurs who rule the world and have dictated the change in knowledge, employability and the economy today were not university educated. Several less well-known successful people are not necessarily university graduates but have devised ways to accumulate professional knowledge and expertise in diverse fields.

In a few decades from now, employment should no longer rest on credentials to be acquired over long period of stay in universities for an undergraduate degree or post graduate qualifications. Lifelong learning and employability will be necessary in all sectors as technology is likely to make many jobs and processes possible without intensive human interventions. Universities should, therefore, provide qualifications that have embedded pathways for a lifelong education. This will be possible through more of micro credentials that could fast track entry in the world of work and allow for a continuous just-on-time learning.

The present qualifications should be redesigned to follow a model which emphasizes applied, practical and multidisciplinary learning. Even science that has been dominated by traditional segregation into pure sciences of Physics, Chemistry and Biology will need to redefined on a more integrated perspective based on the acquisition of scientific knowledge. No doubt, pure sciences will be pursued by people, but fewer, depending on whether they wish to pursue career in pure science. However, employability will necessitate multidisciplinary skills of the workers.

University should provide knowledge that are based on the need of the learner and not only one tutor-driven, or dependent on the decision of a restricted number of tutors employed to dispense courses. Online technology for learning should become open knowledge, and it should aim at providing a cross-frontier quality content knowledge. This will help to build an inclusive world system of educational content where knowledge is built jointly, and universities worldwide have the ability to customize such

contents through a minimum effort. It will help to break the cost of knowledge production, make open-source education freely available with no barrier to poorer countries a reality.

A new conception of the curriculum

A rigidly prescribed curriculum should become something of the past. The learner will have the choice of an "a-la-carte" education customized to the learner's preferences and employability needs of the economy. Learners should be encouraged to become more self-taught. Motivation for learning will be built in the nature of the experience the learner will be exposed to at a distance. There should be less emphasis on reproduction, more problem-based learning and a demonstration of critical thinking and creativity. It should allow students to display their knowledge of the field; the tutor should be able to assess students' determination to learn, creativity, independence and innovation. The learners will have more freedom to explore and demonstrate a coherent outcome of their learning. The role of the tutor will be intervention-on-demand, and for validating of the knowledge and other skills demonstrated by the students. It will demand much more flexibility and openness on the part of the university tutors while assessing students' outcomes.

There should be progression based on individual needs. Universities should become centers for learning opportunities to be accessed online from any part of the world. Opportunities should also be provided by non-university organisations who should create learning content and space, based on emerging needs of the economy. Such courses should be accredited by universities as part of their students' on-the-work learning modules. It will create a partnership with business organisations and it will help to cut down on direct university's investment, while attending to the needs of the economy.

The three or four-year degrees should be accessible from home. The universities will not have to run such degrees on a blocked linear model. However, universities will continue to preserve another type of control as institutions of learning for quality and excellence. To be awarded a degree, universities should require a compulsory one or two years on-campus work designed to offer opportunities for students to develop other important skills such as learning to learn under stressful conditions, simulations of social skills, design thinking, learning to work and live together, encourage social mixing, building strong networks with fellow learners that will serve as assets for personal growth and employability once out of the university. The success model of social networking which is currently offered by world renowned business schools should become part of all universities. However, it is equally true that this model will also help to demarcate universities. The most sought-after credentials will be from institutions that will provide opportunities for higher quality networking, facilitate search for jobs by offering better marketing of the skills of graduates to employers worldwide. Universities should collaborate to offer such networking experiences. Big renown universities should offer networking with universities in less developed countries as a compulsory requirement so that the students in less developed regions are not left behind, and for the world to benefit from skills and knowledge of a wider network of learners.

Assessment and Accreditation

No doubt, advanced higher learning will always be necessary but university education with traditional modes of delivery and accreditation will no longer be advisable. A lot of skills will not be required and learning in diverse domains will become redundant as technology becomes more sophisticated. In the process, compartmentalization of learning, framing of knowledge should give way to a multidisciplinary approach.

As learning and work becomes more flexible, universities will have to adopt other means of verifying what people have gained through their learning path. This will be possible through accumulation of

evidence of students work using blockchain technology that will provide sustained and lifelong credible source of verification of anybody's achievement at any time. Since there will be no fixed and compartmentalised knowledge, students will be able to demonstrate achievement through multiple means. Thus, assessment through examinations, that shows gains at a particular time based on acquired knowledge, should become obsolete and no longer justifiable as the only valid form of accreditation.

The biggest boost to education will be through the incorporation of big data and blockchain technologies. Technology will take over several routine jobs which today provide employment for the now middle classes. As many jobs fade away and we will need a new mindset for learning, and assessment should be designed to give a boost to every section of the population.

Where do we start for Higher education to succeed?

For people to progress in their learning, it is not only higher education that should change, but there should be a change in the mindset right from a young age. Thus, change in education and the adaptation to a flexible and self-driven, self-taught system can only be successful if children are taught to become self-motivated learners from a young age. This should be driven by a thorough redefinition of the curriculum right from the early age. For children to acquire the basic skills, knowledge and competencies for the future, it will require a redefinition of the core knowledge and skills that they should develop in schools. Today, the core skills consist of language and mathematics. No doubt these will continue to be so. But emphasis should be on applied skills from a young age. Many countries still place emphasis on learning and one-off examinations that are used for credentialling of learners. The lack of oral skills, creativity, and learning as fun and discovery are all eroded by an over-emphasis on examinations. This should be questioned and removed if we are to prepare children for a mindset to embark on the new post-secondary education.

Programming will become one of the core skills just like mathematics that every child should learn right from a very young age. The classification and framing of knowledge, the boundaries between subjects should be broken in the young children's curriculum. This should give way to assessing cross-curricular skills such as communications skills, problem-solving, creativity, critical thinking, innovation as early as possible. This will lay the basis for more autonomous learners as they grow into adolescents ready to join the university and the higher learning sphere.

The social dimension- why we should start at an earlier age?

The need for teaching values and caring for the well-being of children, adolescents and young adults should always be our major preoccupations. Human social needs and their dependence on the family and close adult supervision will be a necessity. Students should not be left to handle technology on their own without the guidance that it requires. The curriculum will always need a human touch. The alarm that the anti-social media activists have raised needs to be understood. Education should be carefully redesigned as learning tolls of social skills for living in a more caring world.

The new learner

Every domain of learning should benefit from the support of IT. Artificial Intelligence and blockchain technologies should be the greatest aids to all professionals be it science or non-science, humanities, law, or business sectors. This will help to fast-track knowledge search, create depositories, accelerate the creation of new forms of knowing and knowledge that will match with the curiosity of all learners and be an aid to the professionals. As they become familiar with such technologies, they will be able

to fast track their outputs. While such changes seem to be creating more divide, IT should continue to extend the human intelligence.

Universities should also not lose sight of the need to strengthen research as one of the main objectives of higher education. However, more emphasis should be placed on the needs of the learners to cope with the growing uncertainties of the world, and how to maximise on human ability to ensure their well-being and a work life balance.

An Inclusive society

I believe that an inclusive society will be possible if we create opportunity for all to be equipped with new set of skills and mindset right from the early years. It will build the basis for a just society by making access to knowledge open to all, breaking boundaries between countries, enhancing the stock of knowledge of all through IT.

However, some big names and traditional universities that have maintained exclusivity will still have the possibility to maintain their exclusiveness as they will continue to offer opportunities for social networking distinct from many other universities. This will, undoubtedly, create a hierarchy that will continue to benefit a few. Since these universities will always find people willing to pay for their quality and exclusivity, they should not have any apprehension on opening-up to build a more just higher education landscape envisioned in this paper.