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BEYOND NATIONAL EDUCATION POLICY 2020: DEFINING THE BUILDING BLOCKS OF OUR FUTURE EDUCATION SYSTEM

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BEYOND NATIONAL EDUCATION POLICY–2020: DEFINING THE BUILDING BLOCKS OF OUR FUTURE EDUCATION SYSTEM

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The recent National Education Policy (NEP–2020) has been a ground-breaking accomplishment by the government to reengineer the education system from the grassroot, reboot human intellect and create newer opportunities with a futuristic vision. The Policy has scaled down the routine mechanical approach of the current education system and provided an opportunity for human intellect to blossom as a function of creativity. However, given that we are living in a world that is Volatile, Uncertain, Complex and Ambiguous (VUCA), it follows that unfamiliar situations may soon emerge that one didn't factor in. The future course content may require periodic interactions among students, teachers, industries, thought leaders, social organisations and hiring consultants. With the introduction of NEP–2020, the rise of intelligence seems to have a bright future. Given the fast-paced world and the unforeseen challenges, the best practices of today may soon require a major upgrade. The future generation of students would need rigorous training in the cutting-edge technologies to not only benefit from the technological evolution but also find novel career pathways. Due to this reason, there is a need to look beyond NEP–2020 and walk the space of unknown in search of the building blocks for the next generation of the education system.

PRELUDE

For the last couple of centuries, our education system was designed to create obedience, rather than intelligence. This comes from the British era of subjugation where the need was to create

followers, not leaders. Ever since independence, our education system has undergone a massive evolution in terms of the content and delivery. Parallelly, India has witnessed immense population growth and changing societal values leading to the development of novel survival strategies. The recent National Education Policy–2020 (NEP–2020) has been a ground-breaking accomplishment by the government to reengineer the education system from the grassroot, reboot human intellect and create newer opportunities with a futuristic vision. It is a well recognised fact that to make NEP–2020 and its future versions more effective, implementation is the key, i.e., it's time to practice what we preach. Given the fast-paced world and the unforeseen challenges, the best practices of today may soon require a major upgrade. Due to this reason, there is a need to look beyond NEP–2020 and walk the space of unknown in search of the building blocks for the next generation of the education system.

THE PURPOSE OF EDUCATION

Education must be a joyful experience. The purpose of education is not whipping of the body and mind but blossoming human potential to its fullest expression.

In its purest form, our traditional education system in Bharat was an emotional and life-long connect between the knowledge and the knower. The focus was not entirely on the content itself but building up of skills, knowledge, character and a deep connect between teacher and the student. For example, the son of an ironsmith generally used to become an ironsmith, the children of a farmer generally used to be connected to the farm and so on. Employment was not a big issue as parental practices were respected and carried forward. Though the system had its own advantages and limitations, employment needs were largely met within the family and people were happy carrying forward family businesses for generations.

For thousands of years, our skill and knowledge based educational system retained its strong character, mainly due to our cultural strength, reasonable population numbers, abundant environmental

resources and a strong value system. With a rapid population increase post-independence, immense pressure on natural resources, changing societal expectations and rapid globalisation, our education system evolved towards information management than emotional and character upbringing.

The recent NEP-2020 restores the much-needed balance between information generation and emotional connection. The Policy has scaled down the routine mechanical approach of the current education system and provided an opportunity for human intellect to blossom as a function of creativity. Students would now be able to take sufficient breaks in their education and return to continue from where they left off. A number of much needed changes have made their appearance for the first time in the NEP-2020. The question is now that of implementation than investigation.

Given that we are living in a world that is Volatile, Uncertain, Complex and Ambiguous (VUCA), it follows that unfamiliar situations may soon emerge that one didn't factor in. The future NEP–2020 upgrades would demand additional discussions and plug-ins.

It has been well recognised that industries that are currently doing wonderful may be gone tomorrow and replaced by jobs that we nobody has perceived yet. Courses designed long back (and not revamped) widen the gap between the training and employability. A lot has been discussed, read and written but in our opinion the future NEP upgrades may need to move along the following skeletal system:

Redundancy of Paper Degree

It is increasingly clear that in future a paper degree may not be required for employment. Employers would want to see sharp hands-on skills and high levels of intelligence that goes beyond a degree. Recently, Elon Musk said, "*Applicants don't need a college degree for a job at Tesla*". The idea of degree-less employment is fast catching up, as competence turns out to be the only criteria of getting the employment. Imagine if this widely happens across various sectors, a structural change would be immediately required in the educational system.

It appears that in future, universities would offer 'a range of courses' than a 'fixed menu under a certain degree' program. The silo nature of degree programs may would have to be dismantled at some point in time i.e., the paper degree may look like a bouquet of flowers created for a specific purpose. In this model a University would offer a basket of courses and students would fill up their basket according to individual tastes and expectations.

The Content

The future course content may require periodic interactions among students, teachers, industries, thought leaders, social organisations and hiring consultants. Over time, the role of the government would be to actively review the content and ensure that students are not misguided but beyond a regulatory role, the development of content would be left to the educational institutions.

To enable this phase shift, there is a need to make a Special Task Force that will actively deliberate upon the topic, involve relevant stakeholders and design future courses.

The Technology

For the last decade or two, the technology has become so advanced that a cell phone is doing most of the jobs of a computer. Communication has become faster, and problem-solving ability has gotten enhanced manyfold. We will see more rapid technological upgrades in future, requiring students to be technology savvy. The next generation of students would need to handle blended (offline and online) modes of education. They would be expected to be familiar with virtual classrooms, virtual meetings and virtual financial transactions and switch between the physical mode and virtual world, whenever required.

Technological advancements have moved the world from a mechanical typewriter to a cell phone keyboard to the speech-to-text mode. The next generation technology may involve 'thought-to-text' apps.

It is quite likely that in the near future, Augmented Reality (AR), Virtual Field Trips, 3D printing, game-based learning and biometrics may find applications in the educational institutions. The future

generation of students would need rigorous training in the cutting-edge technologies to not only benefit from the technological evolution but also find novel career pathways.

Actualisation of Five Senses

Our five sense organs comprising of eyes, ears, nose, tongue and skin are 'human USB ports' for sensing, transferring, processing and storing information leading to survival outcomes. Interestingly, animals, birds, insects, microbes have unique sensory systems, unique compilation algorithms and processing mechanisms, and experience the real world quite differently from us.

Interestingly, we see a lot of examples around us in the animal kingdom in terms of the use of sensory organs: an eagle has a very sharp eyesight that can detect a mouse from several miles; a shark has a significantly superior sense of taste; dogs have much higher sense of smell; owls can see clearly in darkness; and beetles have infrared sensors for a highly sophisticated sense of touch that far exceeds the human technology. In short, our experiences are only 'compilations' to the extent that is allowed by our sensory systems. In reality, they are partial, but they give us a 'feel' of the only version of reality available.

To fill the gap and enhance our sensory experiences, our future education system must provide special training modules to enhance human perception from an early age. This will not only augment the existing human capabilities but also provide new job avenues.

For example, some jobs require a heightened 'sense of touch', like massage therapists (applications sports injuries and health conditions), textile designer (to feel the fabric), ceramics maker (sense the clay) etc. There are jobs that require a good 'sense of smell' would be perfumer, food scientist, aromatherapists and so on. Jobs that require a good 'sense of taste' comprise of professional food tasters, chefs, and food critic. Jobs that require an excellent vision (sense of sight) include airline pilots, air traffic controllers, defence personnel, police, lifeguards, photographers, and surgeons. Jobs that require a heightened 'sense of hearing' involve sound engineers, musicians, firefighters and so on.

Thus, the next generation Education Policy must pay special attention on enhancing sensory experiences by refining all the five input devices.

Evolution of Intelligence

The word 'evolution' means moving from lesser possibility to a higher one. Before the arrival of humans, evolution spontaneously occurred from single cells to multicellular forms. With the straightening up of the spinal cord from animals to humans, consciousness found a new expression. Earlier, organisms didn't discuss or debate evolution even though they were going through it. However, with the arrival of humans, evolution became a much-debated topic due to installation of a highly evolved mind in the human system.

Unfortunately, education that was supposed to heighten intelligence and speed up the evolution of mind has resulted in its deterioration instead. Competence seems to have been replaced by complacence. This said the good news is that the process is reversible.

With the introduction of NEP–2020, the rise of intelligence seems to have a bright future. However, for intelligence to reach its peak levels, it is important that process of collecting and processing the information is conscious.

In the next phase of education, we need to train students to perceive the difference between compulsive and conscious actions, the need for information optimisation from the current phase of information overabundance and information toxicity. To help in this process, it is important that classic and scientific literature on consciousness finds its place in the school and college textbooks. In their early years of formation, young minds are impressionable and their capacity to adopt and adapt is remarkable.

Experiential Learning

A conscious look at the simple process of eating reveals that the food served on our plate has gone through a long journey before reaching us. The process begins by preparing the field, sowing the seeds, providing the right nourishment to the plants, protecting them,

harvesting the crop, delivering, and finally storing the products till they arrive in our kitchen.

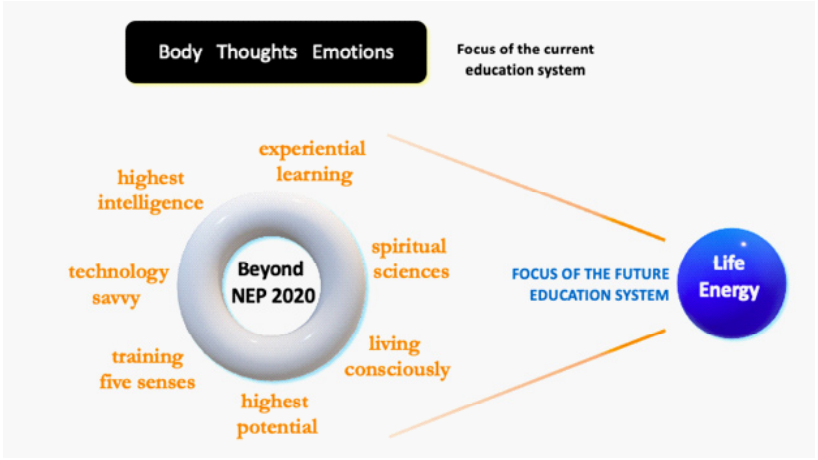
Unfortunately, due to compulsive nature of living, most of the students are opaque to this entire process. We have become descendants of fast-food outlets and usually care for services and final products. The food is grabbed fast, eaten fast and forgotten fast. It's time that we make even the simple process of eating conscious.

It would be great if cultivation of the plants, their nurturing and harvesting becomes part of the learning and evaluation process. Likewise, students must spend some time in animal farms to see how animals live and produce products for human consumption. The skill of farming may take several years to develop at a professional or expertise level. However, if students get a hands-on experience of how mud is converted into food, they will respect nature and optimise their consumption. The need is to be sensitive and turn into education into an experiential experience (Fig 1).

Living Consciously

The modern culture of fast travel, fast communication, fast-food and fast disposal has turned people into mechanical and insensitive consumers. Given the ever-expanding greed for power, money, and comfort, humans are the new pests plundering the planet at an

Fig 1 : Summary of the Next Gen Education System



unprecedented rate. Some back of the envelope calculations indicate that if everyone in the world lives the life of an average American, we may need more than 3 planets for providing the supply.

The need of the hour is to bring conscious actions into our daily routine and read the user manual of life. Only when we live consciously, we can collectively find a stable life and solutions to the challenges. It's time for students to explore existential space early on in life and create societies based on responsibilities.

To enable paradigm shift from compulsion to consciousness, we must redesign curriculum to acquaint students with the non-physical dimensions of life, explore the life operating system beyond matter and complete the purpose of evolution.

Broadly, living systems exist at four levels:

(i) gross body level (from atoms to organisms);

(ii) thoughts;

(iii) emotions; and

(iv) life-giving substances.

Our current education system mainly functions at the first level, i.e., the gross level. Through social interactions, we gather thoughts and emotions and usually oscillate between these three levels only.

The final level, i.e., life-giving energy can only be logically predicted. Is there a periodic table of the soul ? What needs to added to 'solar energy' to make it 'soular energy'? Does the Universe run on a fixed soul budget or are brand new souls cooked into physical existence every moment? We have no clue. It's time to know our fundamental life operating system through experiential education.

The future educational system must delve upon these topics and make knowledge experiential. We are aware that phenomenal human beings came from this nation because education in its classic form was all about enhancing human capabilities. People didn't go to the university; they went to the universe. Going in was considered to be the way out.

In future, curriculum must be upgraded with the content that connects students with their Life, giving them new data, new perspectives and new career pathways. The need of hour is to plan the next version of the National Education Policy and bring in additional features that enable students to experience their full potential.

Life-long Learning

An interesting initiative of delivering education for adults has been successfully practiced for the past few years. However, the concept of learning later in life has evolved into another version, i.e., Life-long Learning. It essentially involves two components: (i) adults who did not receive the education due to various reasons; and (ii) alumni who are working in different positions and need a knowledge upgrade (mostly part time).

The former is a well-established program of the Government of India. Training alumni after their degree is something that may also be explored in the next version of the NEP–2020. In this new model, alumni may also be enrolled as and when University offers new programs that were unavailable when students graduated. The advantage of educating alumni is that application of training will be quick and effective. This admission and training could be outside the standard numbers of students enrolled for regular courses. To encourage more people join this initiative, special fee structure and tax rebates may be offered.

In general, the delivery of education at the primary and secondary levels has largely remained unchanged throughout the country. The moment a student delves deep into a subject, suddenly the bell rings and a teacher enters. This teacher starts to build the momentum when another bell rings. This process continues till students are exhausted with information overload and ultimately just wait for the last bell! You often see joyful faces coming out of the class than going in the class! This must change.

Education is a process of broadening the horizons of perception, memory, and skills, to make the recipient intelligent, competent, and responsible. However, the way education has been delivered in a rapidly changing society for the last several decades, students have

largely turned into mechanical cogs for (Multinational Corporation) MNCs in this huge gear of employment – the top grader became a bigger cog and others became smaller cogs. Almost everyone is living mechanically with money as the main goal. The society urgently needs a fresh approach.

Reports indicate that approximately 40 per cent of Europeans and 20 per cent of Americans live on chemicals to keep themselves sane. These are the countries with some of the highest levels of education. Our students need to know that dominance and consumerism are not the way of life. The only way out is IN. That's where Bharat stands out from the rest of the world.

To ensure that the future generations are vibrant, competent, and live the life of highest accomplishment and fulfilment, our educational system may need periodic upgrades. The vision needs a revision. Some of the steps that may be considered for future are:

1. Enrich Bharat with students who are highly skilled, intelligent, and have a strong sense of belongingness to this great nation.

2. Integrate fitness, sports, classical music, classical dance, Sanskrit, and yoga into formal education.

3. To build the right *samskar*, students knowing their *sanskri*ti is as important as science. This does not come under the current education system.

4. Part of teaching should come from observing the nature. Organise educational tours to hill stations and forests. Sensitivity to life around us will bring in responsibility.

5. Identify standard human tasks in daily life and build problem-based-education around these, for example, how does a bike work? Embed Physics, Chemistry, Math, and Computers into the answer.

6. Teach leadership, cultural values, and social responsibility courses early on. Not many in our country are leaders. There are however many bleeders and pleaders. A sense of responsibilities more than rights need to be inculcated from the beginning itself.

Creating 'world-class' universities has become a global obsession as governments across the world have placed the science and education at the heart of their economic strategies. Global ratings are taken seriously and efforts are made to plug-in the gaps between the idea and the outcome.

Brainstorming is on, self-help manuals are written, knee jerk responses are taken, and then it ends up largely as business as usual. The recipe for getting into the elite top 10 or top 100 in the world is no longer a secret. Even then, only a few universities make it.

In this context, at least two types of activities are needed in future: (a) define success and build a strategy for reprogramming the culture of an existing university towards achieving the goal; and (b) start a new university where expectations are predefined from the day one.

It is important to be best-in-the-class and first-in-the-class. Irrespective of the educational institution, the key policy interventions required for moving educational standards to the highest levels must be based on defining the need and filling the need. The need must be viewed as a challenge, not a problem.

The need of the hour is to continuously discuss the course content to make it sustainable with the future economy and environment situation of the country. Perhaps every five years, NEP–2020 may need to be reviewed.

Is our education system preparing young minds for a fast-changing future, or is the model becoming outdated? It is important to know how the economic winds are blowing domestically, in the region, and in the world and adapt to the change.

CONCLUSION

Education and learning need be life-long. There should be organizations, structure and funding directed towards that goal. Education must impart comprehensive survival skills, not just information and knowledge. Training programs may be routed through employers, private training providers and institutes of higher learning.

Quite frankly, nobody knows how the future is going to show up. One looks at existing trends, predictions and identify weak signals to forecast the future. We are heading to a world where humans may also be competing with machines. Imagine a world where robots are colleagues. We better be on good terms!

In such a world, humans must work hard to find a place for their intelligence. Also, the diffusion and penetration of technology in the society must be slow, careful and context based. We need to prepare for job losses in future due to AI and increasingly looking at employment generating models for ensuring the survival.

It has been predicted that repetitive and non-emotional jobs will be lost more than creative and non-repetitive ones. In the former category there are jobs like security guards, radiologists, drivers, hematologists etc. In the latter category, there may be psychologists, psychiatrists, teachers, social workers and so on.

India needs massive foresight and forecasting studies to prepare for the future education and employment market. In future, leaders need to network extensively, be aware of the changing global situations and make students future ready.

Finally, to make the NEP-2020 and its future upgrades effective, it's time we successfully implement the new education policy and practice what we preach.

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