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COMMENTS

SECTION - A

1. Is India's higher education system future ready?

Shantalal, a poor farmer from Orissa had only one dream i.e to send his son Arun to a good college so that he moves out of ~~this~~ the vicious cycle of poverty and could get quality education. Arun was a hardworking boy, who, inorder to realise his father's dream, left no stone unturned to get above 90% in his board exams. But as it turned out, his marks were'nt good enough" to get him admission in the technical university he was aiming for. Shattered, depressed and exhausted, he tried seeking admission in a private university, only to realise the level of corruption and money power dominating the institute. Finally, under tremendous pressure, the young boy committed suicide, leaving behind a trail of hopelessness for his poor family.

Consider another case, Vishal, a bright student from Delhi, recently got a seat in his dream institution. Belonging to a middle class family, his father had high hopes for his son to get a good placement and a decent job. After a smooth sail of three years, with a degree in hand, Vishal set out to look for a job as per his qualification. ~~However,~~ This is when the reality struck hard on him as he realised the grave scarcity of employment opportunities and how, despite having an honourable degree, he couldn't find a job.

These two instances highlight the ailments of the present system of higher education in India, where on one hand, there is a glaring demand-supply gap in access and availability of quality education and on the other hand, the education ~~see~~ is seemingly becoming

unsuitable for employment.

In this essay, we will first analyse the meaning, importance and evolution of higher education system in India, the present status and achievements of the system, the challenges ~~faced~~ being faced. finally, we would discuss the need and requirements of future readiness along with some recent steps taken and comparison with global practices to find the way forward.

INDIA'S HIGHER EDUCATION : IMPORTANCE AND EVOLUTION

Since time immemorial, India has been an important centre for specialised knowledge, domain expertise and excellence in multidimensional fields. The ancient Indian universities of Taxila and Nalanda display the gradeur and the global appeal for the Indian higher education system, attracting researchers, scholars, monks, students from across the world.

The 'guru-shishya parampara' continued even in the medieval phase with the addition of Persian culture and literature, thus adding to the richness and scope of our education system. Numerous discoveries, mathematical concepts, scientific phenomenons, inventions are credited to India due to the contributions of early scholars like Aryabhatt, Vagabhatt, Brahmagupta, Nagarjuna, Charvaka, Sushruta and many more.

The British policy of replacing the traditional systems with English education, as displayed in Lord Macaulay's minute (disregarding

our systems as barbaric and uncivilised), not only led to an avalanche on our traditional set up, but also served its purpose of universities turning into wholesale factories producing 'babus' to serve imperial interests. With enhanced focus on preparing the educated for clerical jobs and relying on 'trickle down' effect for making education accessible to the poor masses (i.e educate few and let it spread gradually among the others), the fate of Indian higher education was sealed to orient all energies towards perpetuating the British Raj.

Post Independence, national leaders like Jawaharlal Nehru, Maulana Azad (1st education minister), had a vision ~~to wor~~ towards forward looking education policy and turning higher education institutes into 'temples of modern India'. IITs, IISc and various other institutes trace their origins in this period with a clear objective to not only ~~imp~~ build, maintain and improve the system, but also make it ~~ind~~ relevant to the changing times. Both the National Education Policy of 1968 and 1986 reflected this vision along with the stress on vocational education.

HIGHER EDUCATION:- ACHIEVEMENTS AND CHALLENGES

Despite the earnest desire of the national leaders, the actual implementation is the root cause of the lacunae in the system. Though, India boasts of a massive availability of skilled manpower, not only boosting the service sector, but also in putting India as the fastest growing major economy in the world.

The number of universities, colleges, technical institutes have not only spread across the nation, ~~con~~ but are also contributing to the idea of inclusive growth by uplifting the vulnerables by the power of education.

Many of the institutions have been declared as centres of excellence with a great global reputation. The number of patents filed by researchers and students is continuously increasing (especially post IPR Policy 2016), thus reflecting the strong foundations of our higher education system.

The gender gap is also ~~cont~~ narrowing to the extent of parity in many areas, with more women not only opting for higher courses, but walking shoulder to shoulder with men in fields of research, science, management, engineering etc.
As the saying goes, "when you educate a woman, you educate a family", thereby reflecting in the improved status of women, reduction in poverty and greater freedom to make decisions along with awareness.

With the reservation, millions of downtrodden SC/STs have been able to move upwards on the otherwise, socially discriminating hierarchy of the caste system. Higher education has not also led to improved economic status, but also contributed to provide them with social and political justice as enshrined in our preamble

However, all is not as smooth as it seems to be. Major hurdles inhibiting the progress of our nation find their roots embedded in the higher education sector.

Firstly, the rural-urban divide i.e India Vs Bharat is only getting widened due to the imbalanced and skewed distribution of quality public universities and colleges in India. Not only is there intense rat race for college admissions, but also a huge demand-supply gap in the ~~no~~ number of seats.

The gross enrollment ratio in the sector is mere 15% on an average with varied ~~differ~~ intra-state ~~and~~, inter-state and gender differences.

The dichotomy of the system is further reflected in the poor quality of teaching in the universities, along with the irrevance of the curriculum to meet the dynamic needs of the industry today, leading to "educated unemployed".

Moreover, despite an overarching regulatory mechanism of UGC, there is gross mismanagement, lack of incentives and poor efficiency in the sector due to the faulty appraisal systems for the faculty and ineffective monitoring.

The autonomy of the institutes is lost in the complex web of compliance procedures, rigid bureaucratic attitude and stagnancy of creativity in the syllabi.

Mushrooming of degree producing private institutes further adds fuel to the fire. These bogus institutions not only exploit and play with the future of many, but also are a potential threat to ~~so~~ the prosperity and progress of nation as a whole.

The fiscal support for R&D is grossly insufficient (mere 0.62% of GDP) along with an ignorant attitude of the management towards the facilitation of research. ~~This~~ With a dearth of adequate resources, most of our quality talent is moving abroad (60% of NASA's scientists are Indians) leading to the 'brain drain' theory becoming true.

HIGHER EDUCATION AND FUTURE PROGRESS:- BROTHERS IN HANDS

Post 1991, there has been a dynamic shift in the economy towards a more competitive, adaptive and responsive environment, not just in economy, but also in the role of state, the society in general and the ever changing socio-cultural demands and needs to keep pace with the global trends.

The future in economy ~~is~~ lies in newly emerging fields of Artificial intelligence, high tech. services, IT sector, Internet of things – all leading to a fourth Industrial Revolution (IR 4.0).

Politically, there has been a change in the role of ~~of~~ state from being a commander of the economy to being a facilitator i.e not only giving space, but also supporting, promoting and collaborating with the private sector to achieve the socio-economic goals.

~~Social~~ Socio-culturally, the tastes, preferences and orientation of the society is changing towards greater equality, gender neutrality, independent thinking, creativity and a global attitude for tolerance.

Environmentally, the future comes with its challenges of enhanced pollution, frequent disasters, perils of global warming ~~and~~, ozone depletion and climate change. These changes have to reflect in the education system and awareness channels to address them comprehensively.

Internationally, the European countries, Baltic states ~~etc~~ and even our South East Asian neighbours like South Korea, Japan etc. are far ahead of us when it comes to R&D, ~~technology~~ technology and higher education fiscal spending.

With ~~ranks of~~ a rank of 130 in the HDI report (by UNDP) recently, there is much needed to be done in India to make a paradigm shift towards a future ready higher education sector.

HIGHER EDUCATION:- STEPS TAKEN AND WAY FORWARD

With china projected to slow down and the demographic bonus of ~~a~~ the highest number of working population available to us, there has been ~~to~~ an urgent realisation of the need to tap the energies and potential of the youth to maximum potential by reforming and redirecting the wheel of our higher education sector.

Recently, there have been a series of initiatives like revamped RUSA scheme, setting up ISRO incubation centres in tier 2,3 cities, Atal Innovation Mission, PM fellowship scheme, faculty training and incentives via VAJRA, KIRAN etc., schemes like INSPIRE, SPARC by MoHRD to boost academia-industry collaboration. Various skilling initiatives under Skill India, PMKVY, NRLM etc. are aimed to boost industry suited curriculum. Moreover, IIMs and other centres of excellence (as declared by N. Gopalaswami committee) have been given greater autonomy. To fix the over rigidity in the legal and supervisory mechanism, UGC is proposed to be replaced by a new body called HECI to set and monitor standards for universities. Numerous scholarships are being given to students, researchers and vulnerables for a holistic and integrated development of research ecosystem in India. However, despite these efforts, ~~much still~~ the vacuum still exists.

There is a need for a balanced regional growth of higher institutes along with and enhanced focus on their quality. The appraisal, selection and incentive system of the faculty needs to be modified to attract the best talent. A greater focus should be on the providing adequate flexibility to the institutes to meet in collaboration with the private industrial sector to improve the placement ratio. Despite all efforts, women and SC/ST are still under-represented in the engineering and other science institutes, which needs to be adressed by proving adequate safeguards and support.

Fiscal support and facilitation for R&D seriously lags behind the global average, which needs to be strategically tackled by attractive greater FDI and private support.

The NITI Aayog talked about transforming India into an 'AI garage', however, for this to be true, the schemes like PMKVY, Stand-up India, Start-up India etc. need to be efficently implemented with the spirit of cooperative federalism to adress the changing needs and challenges of automation of jobs.

The environmental and climate change, will not only enhance the vulnerability of India to disasters, but will also lead to loss of livelihoods, unemployment etc. These along with the challenge of loss of jobs due to implementation of Paris pact

(i.e. ~ 6 mn jobs as per ILO report) can be countered by a rethinking towards Green GDP activities and focusing on R&D in the higher education sector towards meeting them.

Thus, the future of the world ~~can~~ brings with itself a mixed bag of opportunities, challenges and a greater need to quickly respond and adapt to the dynamic shifts. The higher education sector in India should focus on not only building a resilient, intelligent and productive workforce for the economy, but also a strongly laid value system to make our nation 'the skillhub' of tomorrow.

SECTION - B

6. Intellectual Property Rights and their importance for sustainable progress.

Shyam, a young B.Tech graduate from a prestigious institute which he had got in after a tumultous journey of hardwork and economic stress, developed a new software. Instead of following the bandwagon of seeking regular placements like the rest of his classmates, he had dreams of making a mark on his own in the IT industry and proving his entrepreneurial capabilities. When he went to brief the investor on his software, despite being highly appreciated for his idea, he was turned down. Later, after few weeks, he found that the company had launched the same software via their own brand, thus cheating and stealing his ~~Ino~~ idea.

Now consider another case, a big pharma company (MNC) stole the idea of a traditional preparation of a medicine, which was being produced by a specific tribe since ages. The company not only exploited the tribes by stealing their idea, but also got the process patented under its name for 20yrs, thus getting the license to charge exorbitant prices from the consumers.

These two contrasting examples ~~reflect the~~ throw light on the need to have a robust, well defined and comprehensive system of Intellectual Property rights, not only ~~to be~~ build an ecosystem of research, but also to prevent its misuse.

In this essay, we would be analysing what Intellectual Property Rights are, their importance and relevance today, the present debate about them, the challenges posed and way forward towards a sustainable progress.

INTELLECTUAL PROPERTY RIGHTS :- BACKBONE OF INNOVATION

Intellectual Property ~~rights~~, defined as the creations of mind, are protected and safeguarded legally via a system of patents, copyrights, trademarks etc. given by the legitimate authority (which may be national or international).

Internationally, these rights are governed by the guidelines set by World Intellectual Property organisation (WIPO) and also the TRIPS under WTO - Two conventions i.e the Paris convention on industrial rights and the Berne convention on creative and artistic rights define their mandate. While in India, they are covered by several acts like Patents Act, Copyrights Act etc.

INTELLECTUAL PROPERTY RIGHTS :- IMPORTANCE

With the paradigm shift of the world economy towards the service sector, boosted by the revolution in information, communication and technology, there is an enhanced focus on the need to protect not only physical assets, but also the creative and ideological assets.

Human Capital and the role of a productive population is increasingly being realised as the game changer towards pushing a nation on a path of prosperity. Most of the developed nations of Europe like Switzerland, Sweden and also the superpower USA have been able to achieve an unprecedented economic, social and technological breakthrough, especially post World war II due to their well placed mechanisms of ~~boosting~~ creating and boosting research and intellectual creations.

Intellectual Property Rights (IPR) play a foundational role in inculcating an environment not only conducive for R&D, but also a robust academia - industry collaboration for utilising the full potential of the given innovation on a commercial scale.

IPR ~~to~~ not only give a psychological relief to the inventor or the researcher for the time, effort and resources put into the innovation, but also an assured revenue to recover the cost and further invest in improvement.

Economically, IPRs not only enhance the commercial value of the venture, but also boost the spirit of entrepreneurship and endogenous growth to realise economies of scale.

Politically also, IPRs ~~pto~~ are pivotal to reflect the state's approach towards 'ease of doing business', thus not only affecting the investors confidence and FDI inflow, but also the global standing in institutions like WTO, WIPO. A robust, clear and well laid out policy is appreciated by academia, industry and global institutions, all alike.

IPRs :- THE ONGOING DEBATE

With the developed nations, often having a hegemony over intellectual property creations and high technological comparative advantages, the IPRs have gotten stuck into the 'tug of war' between the 'North and South worlds'.

The thrust towards IPRs is often seen as a tool of manipulating the already skewed pattern of global growth to further boost those at the top, much to the ~~dis~~ dismay of the poor, underdeveloped 3rd world.

The recent disagreements in the Doha Round of WTO, the ongoing trade wars, the international disputes, breakdown of multilateralism – can all find ~~its~~ roots in the IPR issue.

IPRs :- PROMISE OR PERIL?

On one hand, IPRs promise a world conducive for research, development, material and technological progress crucial for the growth of ~~the~~ humanity. And on the other hand, lies the issues of accessibility to affordable healthcare, traditional rights and ~~knowleg~~ knowledge of the indigenous communities and the unfair advantage of the prosperous western nations to further exploit the erstwhile colonies ~~while~~ by using IPRs as a tool for neo ~~to~~ colonialism.

Almost all spheres of humanity like agriculture, medicine, industry, startups, communications etc. rely on these rights for the right incentives and productivity.

In agriculture, IPRs can play a crucial role towards building a resilient, ecofriendly and climate smart system. Similarly, they hold huge promises in the pharma sector

to provide ~~the~~ crucial life saving drugs, tackle the menace of anti microbial resistance (AMR), solving the issues of neglected HIV and other orphan drug cases.

The manufacturing sector relies on them for its safeguards, progress and surety of revenue to further boost its production capability and scale. Similar is the case for export sector, which not only economically contributes to foreign exchange earnings, but also can prove to be a crucial image setter of a nation as a 'skill hub'.

Socially also, IPRs dominantly facilitate a culture of entrepreneurship and help researchers from poor background as well to compete globally.

But despite these promising prospects, several ethical, legal and social dilemmas stand as odds in the road to realise an integrated, inclusive and rule based IPR regime.

MNCs, Big pharmas are often seen exploiting traditional rights of communities ~~and~~ by patenting their processes, seeds / plants and other knowledge as their own.

Internationally, despite the relaxation given in Doha round to the underdeveloped nations for public health, often the disputes unfavourably ~~fav~~ benefit the richer nations, at the cost of basic health-care and well being of the citizens of the poor ones.

Moreover, several legal loopholes and lacunae exists also with overlapping legislations, laxity in implementation, bureaucratic delays etc., especially in developing nations like India.

IPRs :- THE WAY TOWARDS SUSTAINABLE PROGRESS

The future towards building a robust, comprehensive and inclusive system of IPRs lies in realising the synergies of academia-industrial linkage, globally a step towards fair, rule based, ~~multilateral~~ multilateral order and the need to balance the protection needed for the intellectual property, along with the values of inclusivity, accessibility, well being and participation of all stakeholders.

The road towards a sustainable progress lies in collaboratively realising the potential of human mind along with an ethical responsibility towards the environment, people and society in general.

India's recent IPR 2016 policy reflects this notion of 'Sabka Saath, Sabka Vikas' along with the thrust to 'make in India'.

The realisation of SDGs lies in coming together to build a strong, creative, intelligent and value sensitive world.
"let no one be left behind on this path to progress".