

interesting to read. The examination of elementary as well as secondary education of Japan, and the best practices of Finnish schools and government have opened up a new door of knowledge to the readers. This book has been written mainly for students, teachers, guardians, and other stakeholders, who are actually going to benefit from the National Education Policy 2020. It emphasizes that India's future growth and genuine sustainable development can only be achieved through the proper implementation of the NEP-2020.

Based on the analysis of literature carried out obsequiously it has been panegyric that all these literature available generalizes NEP and there has been miniscule representation of deliberations on higher education. More than that what is peccadillo is regarding professional education. We are all aware that pejorative mushrooming of engineering colleges without infrastructure and peripatetic planning coupled with its commercialization led to producing engineering graduates who were not industry ready. This resulted in perspicacious desperation on the part of graduates who were faced with lack of employment avenues. In the years which followed many of the undersubscribed specializations and in some cases the engineering colleges closed down. Similar cases were also seen in the medical and other fields of education. Results would indicate that an institute - industry partnership whereby understanding the needs of industry and developing graduates as per the requirement was prevaricate. Hence there is a gap between the policy and puerile ground reality. An education system which is pusillanimous and cannot provide employment to youth or reticent in developing skills in a trainee has no purposeful role in a civilized society. In the analysis which will follow, because the scope of the subject matter is large, purposefully the deliberations have been limited to Engineering and Medical education. Commercialization of education is a *fait accompli*, but can it go *sinecure*. With a society and social attitude towards engineering and more so medical education abjuring commercialization goes unchecked. Further if infrastructure facilities are lacking or not at optimal level commercialized facilities in other countries are tapped to satisfy the individual urge or societal demand. The disparity thus caused owing to the solecism or absence of an understanding at the higher level and rationalization of demand and supply strategy leads system of education in to a roller coaster.

Madhukar Banuri and Siddesh Sharma in their article titled NEP 2020: Hits and Misses have brought in certain vital aspects such as; No clarity about the social and professional (economic) value of the open learning courses made available to children who are unable to access schooling, upskilling educators, who presently struggle even to teach the basic syllabus, to integrate these complex ideas in a secular and inclusive manner, are definitely big challenges. Teachers and schools will start teaching for the test, completely leaving aside the holistic learning objectives

envisioned in the curriculum section. These are generally related to school education.

Nilesh Nimkar brings out that when we look at learning outcomes for children, we only look at standardized tests, ignoring any indigenous knowledge, language, or problem solving strategies they might have. Martin Haus takes a note of maintaining the government educational institutions to the level of private educational institution and states that in the case of schools ASER 2018 show a big gap in learning outcomes in private and public schools, many commentators who jump to conclusions about the state of public education make a fundamental analytical mistake. Some even go on to the extent of indicating the practical difficulty due to financial considerations. It is believed by many that these NEP 2020 steps will help transform India into an active learning nation by making both school and college education more comprehensive, adaptable, and flexible. The National Education Policy is a guiding path to bring advancement in the learning landscape, by making education holistic, and further developing a solid foundation for the Atmanirbhar Bharat Mission. An educationist has even gone to the extent of stating that the National Education Policy 2020, introduced with the purpose of bringing about path-breaking reforms in the Indian education system, is a blueprint for an 'Aatmanirbhar India'. It is poised to create opportunities for multidisciplinary and holistic learning environment and make education accessible for all.

The emphasis now should be on the effective implementation of the new education policy which will provide a strong foundation for our students to transform themselves, earn competitiveness of global standards and enhance their future prospects. Ramana NV, CJI, (2022), Factories of Education devaluing Human Resources, Times of India. As per the article quoted, the CJI had made a remark that professional courses are creating obedient workforce. It was as if my views after being a faculty in Private educational Institutions across India and that my words were drawn out preemptively. Generally the newspapers and visual media are flooded with advertisement of private educational institutions offering courses in engineering and management education with commitment of campus placement of high order. The reality is most of these promises are not realistic. In the garb of campus placement high fees are drawn out from students. Reality is that in case these colleges produce industry ready professionals in engineering and management education they would be called in for jobs and all that these colleges are therefore required to undertake is providing a platform.

It is surprising to find even premier institutions claiming a high percentage of campus placements. The CJI goes on to add that the focus is on class room learning and hands-on experience is negligible, as a result of which the students are not industry ready. Some of the institutions inflict a greater damage of plagiarizing the evaluation system by compromising on the evaluation standards to reflect a high

success rate. CJI goes on to state that ‘we are mushrooming factories of education whereby devaluing the degree and human resources’. It is reflection of reality which has to be accepted and collectively worked against. Unfortunately, the NEP is silent about this aspect.

Hence it is reasonable to assume that the topic is vibrant and dynamic. Considering the above mentioned studies carried out on the subject, a descriptive research to identify the relative impact of commercialization on engineering and medical education to arrive at ways and means to obviate monopoly and obviate mushrooming of certificate factories which would defeat the purpose of universalization of education in a way resulting into money making machines under the garb of concessions provided to Trusts has been considered. Such a study would supplant immensely to the practical conduct of service providers in the entire spectrum of professional education industry. Thus, there would be a comprehensive methodology suggested to provide alternative to such a culture.

Inclusion/Exclusion Criteria. In this research, priority is to undertake the study with the aim of having a population which has attributes to make the research acceptable to professional education. Hence it has been made all-inclusive for the population who are more prone to the effect of potential threat from commercialization. These may include private service, public service as well as specialized service. However certain categories have been excluded such as personalized education or coaching or mentoring as they do not have much impact on a residual effect on commercialization of education. The aim behind excluding school education is that unnecessarily the NEP 2020 has indulged in an analysis of school education and included directions. Realistically the school education should not be within the gambit of NEP and its decision making should be left to the State government.

The education level and intellect of students are different from region to region and state to state. There is no need for CBSE, rather the transfer of credit system should work in case of students who by the nature of transferable job compel parents to move around. Another important aspect is that keeping the federalism in mind and accepting unity in diversity except for professional institutions which are under the control of central government all other cases control should be state centric with a common admission system administered by the state. The chaos which has been created by UGC promulgating an ex-post facto regulation on publications is adequate to convince on the fragility of concentration of powers in this context for an item on the concurrent list. Most of the western journal accepting research publications levy substantial amount for publishing research paper. Journals demand amounts ranging from 52000 to 3 Lakhs for research papers. So, in effect the 2019 UGC letter has not encouraged research but increased demand of the western journals which has been taken off from Indian publishers. Further compounding the tragedy is outsourcing the preparation of acceptable journals to a

university. So rather than creating a comprehensive scheme for higher education NEP 2020 has interfered with the sanctity of the role of States in school education system. Futility of a person sitting in New Delhi and making schemes for school education in Tamil Nadu needs no further explanation. Rather it would have been appropriate to concentrate on the pitfalls of higher education. It won't be wrong to say that NEP is not far away from the Macaulay's Charter Act and education system which started the commercialization.

IV. DATA ANALYSIS

In this review being conducted the aspects which are included is over all concept, engineering education in brief and medical education in detail. Let us begin with the commercialization. Macaulay's system brought in elements of commercialization, and this was the philosophy followed in western nations. So, it was a concept which believed that knowledge could be bought. Over the earlier years this was practically seen when affluent families would sponsor their children for education in England. They became the benchmark for educated Indians and definitely status symbol. Some of these people contributed and took dominant part in the nation's freedom struggle, but the elite few who adopted a wait and watch policy became the ‘brown sahib's’ and the self-proclaimed rulers. The dominant amongst them mushroomed to educate their children abroad to occupy coveted position. Soon after independence a change of protocol was anticipated but a democracy having teething problem and weak economy could not venture into adventurism. This resulted in a state where continued dependency of western education system and their colleges carried on. The affluent would maintain a status symbol by educating their children in the West. Such behaviour was soon exploited and almost 40 years back the state of affairs was so bad that for admission to ordinary educational institutions a premium was paid. It is now rampant in schools as well wherein a kindergarten admission is accompanied by a premium. It is assumed that private institutions charge exorbitant rates for educational courses without providing basic infrastructure. While on a train journey few years back I met an engineering student from a private institution who revealed that qualified teachers are not available. So here the tragedy is twofold, time and economic loss as well as loss of self-confidence. Loss of self-confidence occurs when after struggling for four years and securing a grade the youth finds a world of employment which is not ready to accept the qualification secured.

In the analysis carried out on the topic “NEP 2020: Have we practically missed out key issues?” it is intended to cover certain basic issues. These are;

1. Commercialization of Education
2. Industry-institute collaboration in technical education
3. Medical Education

Considering school education and basic undergraduate education has been one of the basic flaws in the NEP 2020

report made public. As we all know, until 1976 education was on the state list with some provisions in the centre. By the 42nd amendment education was brought in to the concurrent list with the centre having overriding authority. Centre has exclusive rights in legislating on issues list in entry 65, 66, 67. Fair enough to some extent because these are generally related to higher education. However, the NEP 2020 has taken on school education and undergraduate education in greater details, an aspect which is not keeping in with the federal structure of the government and varying degree of literacy rate in the country. School education should be conducive to the local structure and State government is the appropriate authority to decide. Curriculum planning and pedagogy to some extent varies as per the region based on the preferences, aspiration and needs of a particular society. In addition, a vast and diverse country like India literacy rate and educational competence of students are different. Hence to make a program which is common to a literate and less literate group would not fit into the scheme of things. School education and undergraduate education are best when left to the state government because they are the best to understand the pulse of the people. A person sitting in Chennai can visualize better the requirement of students of Tamil Nadu rather than a person sitting in New Delhi. Hence NEP 2020 could have utilized their efforts in a better manner on matters relating to higher education.

A. Commercialization of Education

Macaulay's education brought in the concept of commercialization of education and after that Indian education system has been continuing to invest on this trend. Engineering and business management educations are the worst hit in this matter. Large number of engineering colleges mushroomed a decade back. This definitely would have been an ideal situation provided these colleges had adequate infrastructure. Many of these colleges after having been granted sanction commenced intake of students without having basic facilities to sustain technical education. They lacked classrooms, laboratories, and faculty. The building construction commenced along with intake of students. Laboratories were nonexistent and research facilities were void. Most of the faculty was paid around twenty thousand rupees a month which was almost the same as a daily wage carpenter received. As money became sole criteria and aspiring parents looked avenue in children becoming engineers it was practically business and not education. Such a situation was exploited by private higher education institutions by attaching premium to engineering admission.

A decade back an admission in Mechanical engineering discipline had a premium of 4.5 lakhs in colleges. This was excluding the fees for education, which was another large sum. Under such circumstances graduate engineers who were not industry ready flooded the employment market. This resulted in large scale underemployment which resulted in disillusionment. Young minds and families were

destroyed and under such a state of compulsion graduate engineers were forced to take on unsuitable job. It is not that inspections were not carried out by centrally constituted bodies, but possibly they turned a blind eye to such a chaotic situation. To edge out competition these colleges resorted to interfere with the examination system to bring out better results. NEP 2020 could have addressed this growing menace but chose to further liberalize commercialization. It is surprising that they chose not to, either because they were ignorant or for other reasons. The NEP should aim at stopping educational institutions which have turned into Certificate factories thriving and depleting the quality of education. The accreditation system should be more methodical in its assessment. These inspections should be undertaken with just about a week's notice. The present system of accreditation encourages quick fix solutions mushrooming and existence of certificate factories.

B. Industry-Institute Collaboration in Technical Education

Mushrooming of engineering colleges with private participation was a good step executed in a poor manner. As narrated before, poor infrastructure, less qualified faculty and other factors led to their doom. Rather than making them temples of knowledge these engineering, and business schools were transformed in to money making machines and certificate factories. There was no coordination at the ministry of higher education with CII to understand the needs of the industry. Hence rather than making it professional services these educational institutions were converted into service factories. As a result, a situation came up wherein industry was not able to absorb graduate engineers. This had two major impacts, which were; poor quality, industry readiness of the engineering graduates and mismatch between demand and supply. Therefore, what was needed in NEP 2020 under such a scenario was to evolve a comprehensive plan wherein year to year requirement of industry both in quantity and skill level was understood which is then translated into admission.

Ten years back mechanical engineering was the most sought after specialization which has become IT now. The transition could have been smoother in case the industry and higher education worked together where industry requirement for each academic year is identified and implemented. This feature in quality and OBE (outcome bound education) was something that was needed and required to be implemented. However, as aims were not clear these two ran in divergent direction and the NEP failed to address this issue. It would take a mammoth effort to convince the educationist who framed NEP 2020 that they were direction less. There can be no reason to blame the government, because there was a need to change the education system, but the experts or advisors failed to realize the needs of the country and came up with a policy which can be called 'old wine in new bottle'. With impetus given for privatization and autonomy the technical education will be in dire straits after few years unless central agencies check this bull whip effect by scrupulous accreditation systems.

C. Medical Education

We all realize that medical education is something which has a large gap between demand and supply. It is not that youth are not keen on taking on medical education but there is lack of infrastructure. The gap is widening every year and as a result keen students and anxious parents resort to sending their children to central Asian, European or for that matter American countries. Result is a brain drain and large outflow of foreign exchange. Barring the medical education provided in few countries the remaining cases do not get approval even in this country or even if they get it the percentage of success is just around 10%. Then there are cases of political uncertainty like the Ukraine situation or Covid. Thousands of students, even in the final year of medical education, are left with no visible future. NEP 2020 could have addressed this issue by way of a graduate response of increasing infrastructure for medical education after taking lessons from the anomalies of engineering education.

In 2022 a total of 90000 MBBS seats and 30000 BDS seats are offered throughout India by 600 medical colleges and 300 dental colleges. As there is no glaring disparity in BDS seats as compared to MBBS, demand analysis is being restricted to MBBS seats. There has been an increase of 5000 MBBS seats and 41 medical colleges during the current academic year. Is it adequate? This year alone 18 lakh students appeared for NEET exam. Considering the pattern from previous year 56.5 % of the students qualify i.e., 10 lakh students.

Availability for the year is approximately 1.3 lakhs including BDS. Doctor to population ratio is 1:850 in India whereas in Europe, US and Latin America it is 1:350-500. Hence the demand and supply gap exists, which is why students pay hefty sums and move abroad for education. The problem can be better managed in two concrete steps. Every year the number of qualified candidates should be limited to seats available +10% and as against the present increase of 5% medical seats every year adopt an inclusive approach whereby existing medical colleges increase 5% seats every year and establish new medical colleges to increase 10% of medical seats annually. It is not a difficult task. This would slowly provide the much needed medical support to the population and prevent students seeking admission for medical education which does not have universal recognition. Approximately 41000 students returned from Ukraine and China this year, which implies that with an annual growth rate of 15% in four years' time 14000 seats would be added and taking in to consideration other factors this demand can be met in 3-5 years' time. That would be a satisfying situation.

V. FINDINGS OF THE STUDY

By including schools education NEP has become a generic coverage and lacks concreteness. 42nd amendment in 1976 brought out the change of education from state list to

concurrent list. Was it a step in the correct direction? Probably not, because school education and undergraduate education is better dealt at regional level than by a centralized structure. The requirement of each region with respect to another one is quite different hence it would have been better to retain the control at state level.

On the one hand NEP has gone forward with centralized education system but retained regionalist touch by accepting professional education region language. What is the purpose of professional education in regional language? Is it to develop regional language or technical education? The second question is whether we have developed enough for a leap of this nature. This is pertinent from the point of making available literature on these topics in regional language.

Commercialization in education cannot be ruled out because it is a practice which has been existence since many years and ardently followed in the western world. The evil effect of commercialization is absence of merit. Due to commercialization of engineering and management education in India transparency in evaluation process has taken a back seat. Institutions are in a competition to attract candidates for admission which makes them indulge in the practice of overzealous approach towards results. As higher pass percentage and grade are the yard sticks considered for evaluation of an educational institution, more often than not there is a tendency to inflate the scores obtained by student and at times aid in adopting malpractices in examination. Privatization of technical education was probably adopted to provide more avenues to students which would in the long run produce high caliber students. This thought process has received a jolt when commercialization became the sole aim of privatization and educational institutions started turning out to be certificate factory. This in the long run has resulted in inferior population skimming through under the weight of money power, which in turn lowers the education standard.

Medical education in India needs a boost because of the demand supply gap and doctor to population ratio being one of the highest. The available 1.2 lakhs seats per year are far less than the number of candidates who are certified to be eligible for medical education as identified by the NEET examination. In fact, only one out ten candidates declared fit by NEET gets an opportunity to pursue medical education in India, which makes them look for avenues outside the country. In this search they land up heavy amount and many times are duped by touts.

Overall, such an experience is not desirable in a democratic country. Moreover, the country has the capability to invest in medical education and private players have the money to undertake such a venture. The need is to have enforcing agencies which can maintain quality by periodic inspection. A marginal yearly increase in the intake of students by the medical colleges and increasing private participation to establish new medical colleges can gradually remove this void.

VI. CONCLUSION

42nd amendment to the constitution in 1976 had taken Indian education to the period of 1835 Charter Act wherein centre consolidated the power in decisions related to educational system. The pitfalls were obvious and regionalist aspirations were vocal. This system relied more on bookish knowledge with very less importance to hands on training. As a result, education system produced candidates who are not industry ready. NEP 2020 was thought to obviate this anomaly amongst many other things. On analysis it is apparent that the aim was correct but somehow while deliberating the objective of the exercise was forgotten. As a result, rather than leaving the school and undergraduate system to the regions and States dwelled more on these aspects giving less attention to professional courses. This needs to be corrected.

During the analysis deliberations were carried out on the aspect of commercialization, technical education and medical education. The attempt was to evolve a scheme wherein the impetus is given to object oriented education with emphasis on hands on training. The need of the hour is to make students industry ready, for which industry-institute collaboration is a must. Starting from the lowest level,

which is the institute to the ministry level appropriate affiliation of industry people with educationists is recommended. There is a greater need to encourage private players in medical education.

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