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The Path and Direction of National Education Policy 2020 for Gifted Children in India

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Abstract

Adirai a five-year-old girl may only now be learning how to write a whole sentence. But she can faultlessly narrate the entire Kamba Ramayanam, the Tamil version of the Indian epic. She can interpret several verses in an erudite manner and can draw real-life parallels from them. The National Association for Gifted Children defines "Gifted individuals are those who demonstrate outstanding levels of aptitude or competence in one or more domains. Adirai is classified as a gifted child as she is endowed with a high degree of mental ability. India has 11.2 million gifted children. Analyzing India's National Education Policy 2020 (NEP, 2020) through the prism of gifted education, this study highlights key policy initiatives for gifted education. Early identification of gifted and talented children without any ambiguity is key to building knowledge capital. National Institute of Advanced Studies, Bangalore, has formulated a set of protocols for early identification of the gifted. Study further explores possible state level supplementary policies covering advocacy and enrichment programmes for gifted children and implementation strategies. Gifted learners are a reality in India and inclusion of this divergent population in NEP (2020) is bound to transform the Indian Educational System by 2040, as envisioned.

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Introduction

National Association for Gifted Children (NAGC) defines gifted students as students with gifts and talents to perform at higher levels compared to others of the same age, experience, and environment in one or more domains. They require modification(s) to their educational experience(s) to learn and realize their potential.

The Gifted

Research has demonstrated that gifted children have an increased cell production that also increases synaptic activity and the neurons in the brain seem to be bio-chemically more abundant and, as a result, they have more alpha wave activity and the brain patterns that could develop the process of more complex thoughts. In specific, there are children who

Have the ability to learn new material much faster and earlier than any of their peers

Have a remarkable and long memory.

Possess the capacity to deal and handle with abstract and complex concepts for their age. They are also socially & emotionally advanced as opposed to only academically advanced.

Like many natural resources these gifted children are the economic and social human resources endowed with the capability of transforming both life and livelihood of India. It is significantly important for educational policies and programs for the gifted to aim and work towards harnessing the potential of the gifted by creating an educational atmosphere to keep the gifted, challenged & engaged and channelize their energy towards creativity and lifetime achievements. The progress of the gifted should be treated as a national development role and the poor socio- economic status of parents should never be a barrier.

India Context

The population of India in the year 2020 stood at 138 crores (1.38 billion). The chart below gives the age group wise share of population.

As per the above chart, the population in the age group of 0-14 years in 2020 was approximately 26% of 138 crores. i.e., 35.88 crores. In our study, for the purposes of simplicity and in the context of NEP 2020, we consider the age group of 3 to 14 years as the student age group, although in reality NEP 2020 framework extends up to grade 12 / age 18. To meet our study requirements, we use a simple linear scale and consider a population of approximately 28 crores in the student age group of 3 to 14 years out of 35.88 crores. According to the estimates of National Association for Gifted Children (NAGC), USA, 3 to 5 % of the students are gifted. Going by the same yardstick, in India out of 28 crores (3 to 14 yrs.) @4% approximately 1.12 crore (11.2 million) students are gifted students like Adirai endowed with high degree of capability.

National Education Policy Of India 2020 (NEP 2020)

Aspiring for educational excellence, policy makers and educators in India are considering ways and means to merge and integrate the gifted education with mainstream formal education. It is the right time to analyze and understand the formulated and legislated long term "National Education Policy 2020" in the context of education of gifted children. The policy framed by former (ISRO) chief Mr. Krishnaswamy Kasturirangan. aims to transform India's education system by 2040. It is important to place on record that the implementation of this policy has been delayed due to Covid and other factors. The implementation of this national policy will have to be done by all the states of India. Every state has a significant role to play and can supplement with enhancements based on regional state level factors. It is in this context that this study analyses the path & direction of the policy for the gifted children.

Few Basics of the Policy

"It is also important to note the many precautions against taking medication prescribed for someone else with the same symptoms without consulting a physician. So, too, a program for gifted services should never be "borrowed" from another district. Rather, a quality program for gifted students in a school district must be developed based on the best and most current research and theory, given our best understanding of the unique educational, social, and emotional needs of the students in that school district. Additionally, we must follow through with an evaluation to determine whether the program has been implemented and is achieving its desired effects." Plucker, fundamentals of Gifted Education (2012)

NEP 2020 proposes structural changes in the early and higher education system and has been put forth after consultations for nearly five years with all the stakeholders. The old education policy was organized on a 10 + 2 formula, whereas the new policy is based on the 5 + 3 + 3 + 4 formula. It pans out well within the economic development and/or social justice (equality of opportunities) points of view based on which parameters the legislation and parliament is oriented. "The move from marks-focused reporting to skills-focused reporting is a welcome move. While NEP 2020 offers students the flexibility in choosing their individual curricula, certain subjects and skills should be learned by all students to become successful, innovative, and productive human beings in today's rapidly-changing world. In addition to proficiency in languages, these skills include: scientific temper and evidence-based thinking; creativity and innovativeness; sense of aesthetics and art, health and nutrition, digital literacy, ethical and moral reasoning; knowledge and practice of human and Constitutional values

NEP 2020 for the Gifted

The NEP (2020) of India has paved way, to bring into focus the importance of education designed for gifted students who are special and go beyond the realm of curriculum.

In the sections below, we focus & study few important policy features pertaining to the gifted

Building the teaching resources

Development of scientific temper skills & Inquiry based Education

Importance of Artificial Intelligence (AI) & Technology use & Integration

Olympiads & Project Based Clubs

Building the Teaching Resources

To create a proper resource base relevant to NEP 2020, National Council for Teacher Education on in consultation with National Council for Research and Training (NCERT) has formulated a new comprehensive National Educational Framework for Teacher Training, NCFTE 2021 with the objective of including necessary curriculum and pedagogical practices and to shape the framework into a feasible and relevant model. NEP 2020 envisages a four-year integrated pre-service training for teachers to be implemented before 2030. This means, by 2030, a teacher will require a minimum of B.Ed. degree of 4 years, for teaching in any institution and the B.Ed. programs shall include design to allow specialization in education of gifted students. The policy also envisages the introduction of multilingual and multi-ethnic makeup which is very crucial for nurturing giftedness in the rural pockets of India.

Development of Scientific Temper

Article 51 A of our constitution which deals with fundamental duties makes it a duty of every citizen to develop Scientific Temper. *A prepared statement issued by a group of scholars on scientific temper on behalf of the Nehru Centre, Bombay, states that "Scientific Temper means the acceptance, amongst others, the following premises*

The method of science provides a viable method of acquiring knowledge. The human problems can be understood and solved in terms of knowledge gained through the application of the method of science.

The fullest use of the method of science in everyday life and in every aspect of human endeavor is essential for ensuring human survival and progress.

That one should accept knowledge gained through the application of the method of science as the closest approximation of truth at that time and question what is incompatible with such knowledge. Scientific temper in education refers to a student's attitude of logical and rational thinking.

One of the major focuses for NEP 2020 is to change the current education system of routine learning to evidence based and hands-on learning with a path for a multi-disciplinary approach to education. It also recognizes that evidence-based learning, scientific temper and coding skills should be imparted as part of schooling. Introduction of coding from class 6 onwards is a welcome step which will strengthen scientific temper.

Inquiry Based Education

Renzulli Learning System (RLS) extends the pedagogy of the school wide Enrichment Model (SEM) to various forms of enrichment as well as to first-hand investigative and creative endeavors (Renzulli and Reis, 2009).

School wide Enrichment Model: Source: Renzulli and Reis (1997) Courtesy: Google

According to NEP 2020 - "Reduction of curriculum content to enhance essential learning and critical thinking will provide space for more holistic, inquiry-based and analysis-based learning. The mandated content will focus on key concepts, applications and problem- solving. Teaching and learning will be conducted in a more interactive manner; questions will be encouraged, and classroom sessions will regularly contain more creative, collaborative, and exploratory activities for students for deeper and more experiential learning "Inquiry-based education method adopts an investigative approach to teaching and learning where students are provided with opportunities to investigate a problem, search for possible solutions, make observations, ask questions, test out ideas, think creatively, etc. Inquiry-based science involves students applying science where they have opportunities to explore possible solutions and evaluate or assess their understandings in the light of available evidence. Literatures say, 'Being gifted in inquiry science could be considered to be as much about being 'creative' and intelligent'.

Emphasis of Artificial Intelligence in NEP 2020

It is recognized that mathematics and mathematical thinking will be very important for India's future &leadership role in fields & professions that will involve artificial intelligence (AI), machine learning and data science. School children will be exposed to crucial skills

such as digital literacy, coding and computational thinking from a young age, through the teaching of contemporary subjects such as AI and Design Thinking. Further, topics such as AI, 3-D machining, data analysis and machine learning will be integrated with the undergraduate education to prepare industry-ready professionals.

The policy also envisions the use of AI-powered solutions for the attainment of its goals of a multilingual and holistic education. The efforts of promoting multilingualism among the school students will be interlocked with efforts to enhance Natural Language Processing capabilities for India's diverse languages.

Technology Use and Integration

The vision for NEP 2020 is "Technology use and Integration" in order to give a pathway for the students to make India a digitally empowered society and knowledge economy. Further technology makes education accessible to people in remote areas of the country.

India is on the threshold of transforming itself into a digitally empowered 'information intensive society'. Education is the important lever for this transformation to happen. Gifted students are characterized by their curiosity, initiative, imagination, originality and creativity. Every gifted student has a different pace and capacity for learning. Recognizing this, NEP 2020 emphasizes on learning assisted by technology for every student to learn at his/her own pace.

Olympiads and Club Based Activities

NEP 2020 policy document, in its 4th chapter clearly states that Olympiads and competitions in various subjects will be strengthened across the country, with clear coordination and progression from school to local to state to national levels. It further states that efforts will be made to make available Olympiads in rural areas in regional languages to ensure widespread participation.

It proposes a wide base for mentoring the gifted children through project-based clubs and circles at the school and district levels. Examples include Science & Math Circles, Music Circles, Language Circles, etc. There are policy directives which discuss the challenges and issues in rural and tribal areas. The need to provide subsidized infrastructure facilities through funding to support socio-economically disadvantaged children is also envisioned.

The Road Ahead

In India, which had Nalanda and Taxishila universities as early as 5th century BC, has not made enough progress in the field of gifted education. The real challenges are at the ground level in implementing these enrichment polices and delivering them in every town & village, in the language that is understood by students, keeping the socio-economic factors in full view. In a democracy like India, the following points will cross the minds of many.

Will it prove to be creditworthy on a real time basis? Will rural India and Urban India view the policy through a common lens? In a diverse and vast country, is it possible to have one central policy for the gifted children? Will state and central governments work in synergy?

The Micro Issues

In a complex & diverse nation, how do we put a system in place to identify the gifted? At a scientific research level, National Institute of Advanced Studies, Bangalore (NIAS) has developed a student nomination behavior rating scale through 568 hours of classroom observations across different school settings to address the issue of identifying gifted learners The following three are NIAS's protocols for the identification of gifted children.

(1) NIAS General Pool (0–15 years).

(2) (a) NIAS-supported Advance Learning Centers (11–15 years).

(2) (b) NIASPRODIGY-MAIYA Fellowship Programme (NMMFP; 16–18 years).

(3) (a) NIAS-supported Advanced Learning Centers for the Urban Poor (11–15 years).

(3) (b) NIAS Mentoring Programme for Rural and Adivasi communities (11–15 years).

Key Foundational Factor

One vital factor that needs to be examined in detail is Teachers for Gifted Education. The Quality of an Educational System cannot exceed the Quality of its Teachers is the axiom we come across often. Mckinsey's (2007) report, which investigates some of the high performing systems across the globe, finds three things in common

High performing systems aim to maximize the quality of teachers by ensuring the right people for the right job.

These systems invested in time and resources to train the teachers to be better instructors, as they were aware that – to raise outcomes it was imperative to invest in improving instruction.

They build well-integrated support systems that benefit students through excellent instruction.

In India the best minds pursue engineering, medicine & management as their career choice. Very few are inspired to choose teaching as a career option. Contextually speaking, teaching is a lowly paid profession. Only the state or center run institutions pay as per policy directives. The working conditions for teachers are not good with working hours ranging from 10 to 14 hours a day during certain times of the academic year.

The terms of engagement between teachers and private schools are very arbitrary with no defined norms. The other concern is the policy of recruitment, stationing, service footing, etc. The legal and policy aspects of education sectors are totally disconnected from modern day requirements. This has created an education scenario with sub-standard quality of teachers. There is an urgent need in India to view education as a universal right.

Strengthening the Foundation

Teaching profession should have a high status, to inspire one and all and to steer students to enter different professions. Teachers should be paid very well, given incentives and have to be empowered with the right to participate in framing school goals & policies and to exercise professional judgement about what and how to teach. This will drive education to high levels that are required to clinch the best future for our gifted students and our nation. Students in rural areas aspiring to become teachers, should get special merit-based scholarships.

Employment preference should be given in their local areas upon successful completion of their B.Ed. program. Incentives should be given to teachers to take up rural postings. Such scholarships and allowances will provide job fortune to local students (especially female students) who can grow and serve as local-area role models & nurture gifted students in the language which best suits them. Teachers have to be vocationally trained on NIAS model to identify the gifted.

Possible Augmentations at State Level

States should have a supplementary policy to NEP 2020, that mandates having task forces from the village stage onwards to work with standard operating procedures to implement every policy initiative into a nut and bolt framework. Progress monitoring process should be in place and to be specific entire government apparatus should be made accountable.

The Public Private Partnership model can be considered without diluting the inclusivity and diversity features of NEP 2020. Initiatives of Azim Premji University in addressing primary education in rural pockets are very useful models to emulate across the state/nation.

Teaching pedagogy for providing gifted programs across the state needs to be planned meticulously. States should periodically study the situation, assess teacher requirements and recruit them. This exercise should go on at least for the next two decades, uninterrupted.

Every taluk headquarters, should have “Science & Technology Center” and “Vocational Center’ and provide unhindered access to all students. States should create platforms and encourage students of all schools at taluk level, to utilize the centers and compete amongst themselves.

Participation by students in such activities should get good recognition & academic credits and should help students secure admissions in higher education. Supplementary policy should promote and encourage project-based learning, problem-based learning, etc.

NEP Supplementary policy of states can have additional initiatives as under,

Encourage private bodies under a special framework to start B.Ed. institutions at taluk and village levels with gifted education as a subject specialization,

Set up Teacher Recruitment Board for hiring, training and deploying teachers at all levels.

Mandate private schools to pay their teachers as per government pay scales.

Improve Rural Infrastructure connectivity, provide uninterrupted power, enable last mile data connectivity with 4G and above bandwidth.

Results and Discussion

Gifted learners are a reality in India and inclusion of this population in NEP 2020 shall have positive far-reaching consequences. Experts & practitioners in the gifted field who work with students, emphasize on need for effective policies for social and educational support of gifted students. Early identification of gifted children is vital for the success of educational initiatives. Identification protocols developed by NIAS can be used across the country as one standard model to eliminate ambiguities in identifying the gifted. Seamlessly integrating gifted education with mainstream education and providing an enriched school environment is important to facilitate& enhance the cognitive abilities of all the students. States and Centre should work synergistically to make NEP 2020 a defining one and path-breaking. Value addition by states with regional flavors, infrastructure push and implementation strategies are paramount. Nationwide implementation of NEP 2020 in "letter and Spirit" will be key for India to achieve its 2040 educational goals. There are many gifted children like Adirai waiting to be enabled to breach achievement levels. In this sense, NEP 2020 is in the right direction to provide necessary platforms and educational support to the gifted children in India.

Fig.1

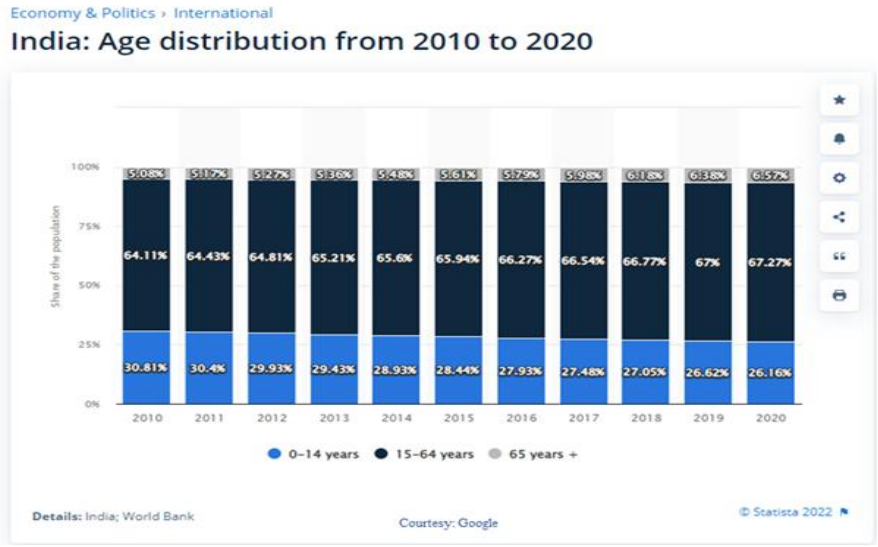


Fig.2

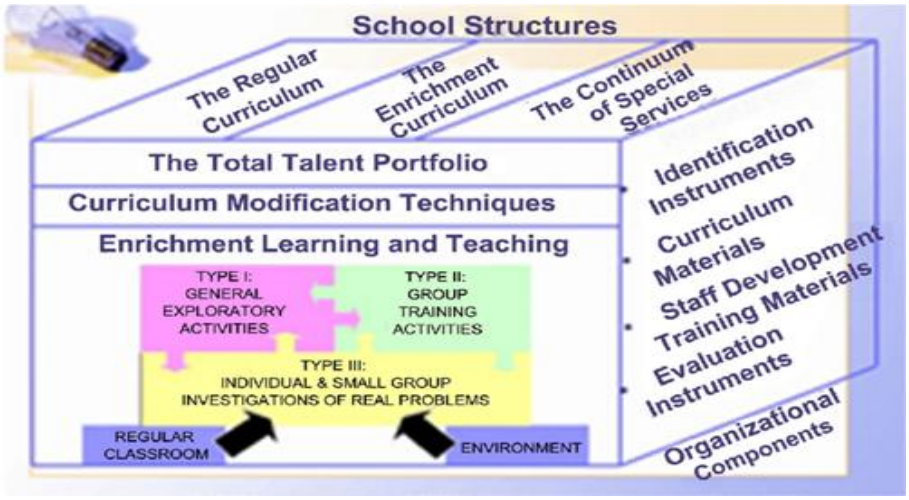


Fig.3 NEP 2020 for the Gifted – Snap Shot

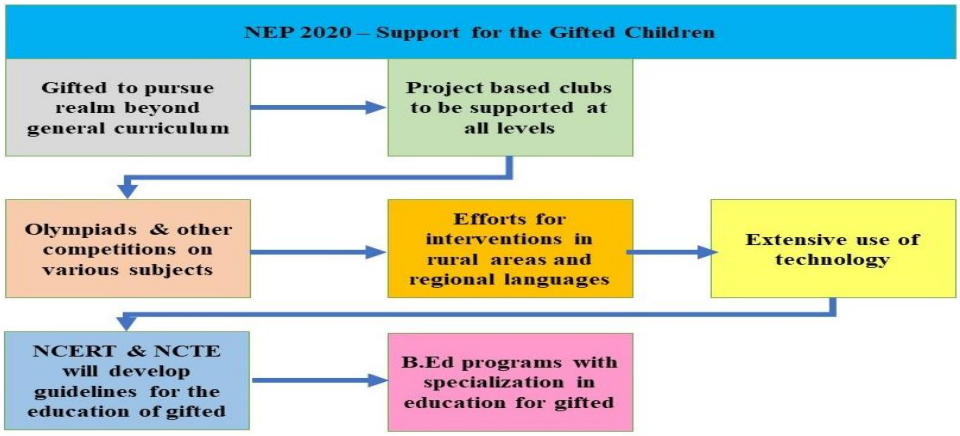
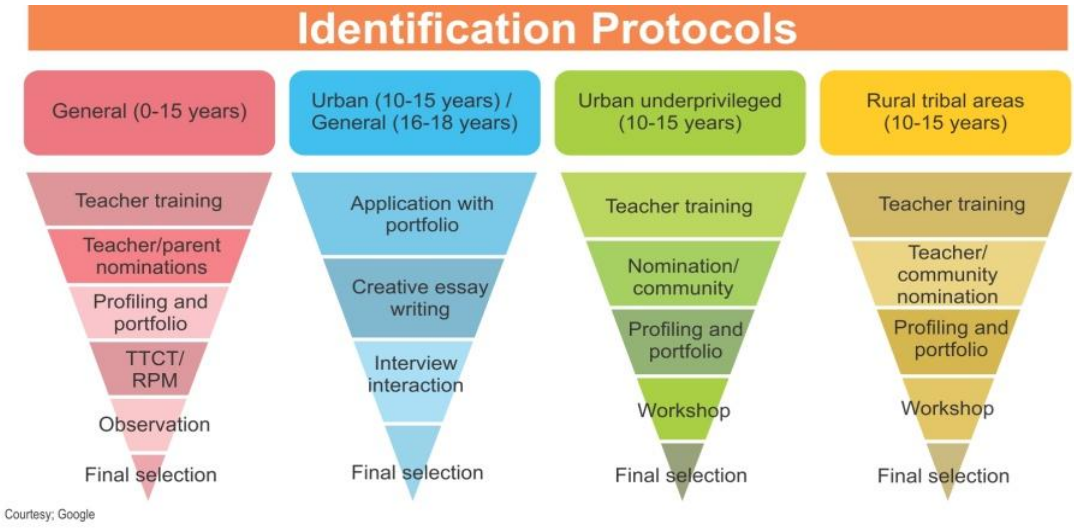


Fig.4 NIAS Identification protocol of the Gifted and talented



Implementing above protocols will eliminate ambiguity in identification of gifted learners.

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