

The Course and Guidance Of India's 2020 National Education Policy For Talented Children

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Abstract

Adirai a five-year-old girl 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 in the United States defines giftedness as “Gifted individuals are those who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in top 10% or rarer) in one or more domains”. General intellectual ability is measured by tests of general aptitude or intelligence with scores ranging in the 95-98 percentile or two standard deviations above the norm. In terms of an intelligence quotient (IQ), the gifted are those individuals having an IQ of 130 or higher.

Adirai is a gifted child as she is endowed with a high degree of mental ability. India has 14.3 million gifted children. These gifted children are potential economic and social resources endowed with high capability of transforming the livelihood of India if channelized and educated constructively. Analyzing India's National Education Policy 2020 through the prism of gifted, this study highlights India's view and policy initiatives on gifted education and covers the importance of early identification of gifted children using protocols developed by National Institute of Advanced Studies, India. Integration of gifted education with main stream education, developing scientific temper skills & other skills are part of this study. This study further explores possible state level supplementary policies covering advocacy and enrichment programs and implementation strategies to leverage the pool of Gifted learners in India. Inclusion of this divergent population in the policy is bound to transform the Indian Educational System by 2040 as envisioned.

Research paper

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Introduction

National Association for Gifted Children (NAGC), USA, defines gifted students as students with gifts and talents perform, or have the capability 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. Student with gifts and talents

The Gifted

Research has demonstrated that gifted children have an increased cell production that also increases synaptic activity. This results in an increased thought process. The neurons in the brain of the gifted child seem to be bio-chemically more abundant and, as a result, the brain patterns that develop are able to process more complex thoughts. They seem to have more prefrontal cortex activity in the brain, which leads to insightful and intuitive thinking. Gifted children have more alpha wave activity in the brain. In specific they are children who

- Have the ability to learn new material much faster and earlier (in age) 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
- Have a passionate interest and are consumed by something,
- 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 nation. 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

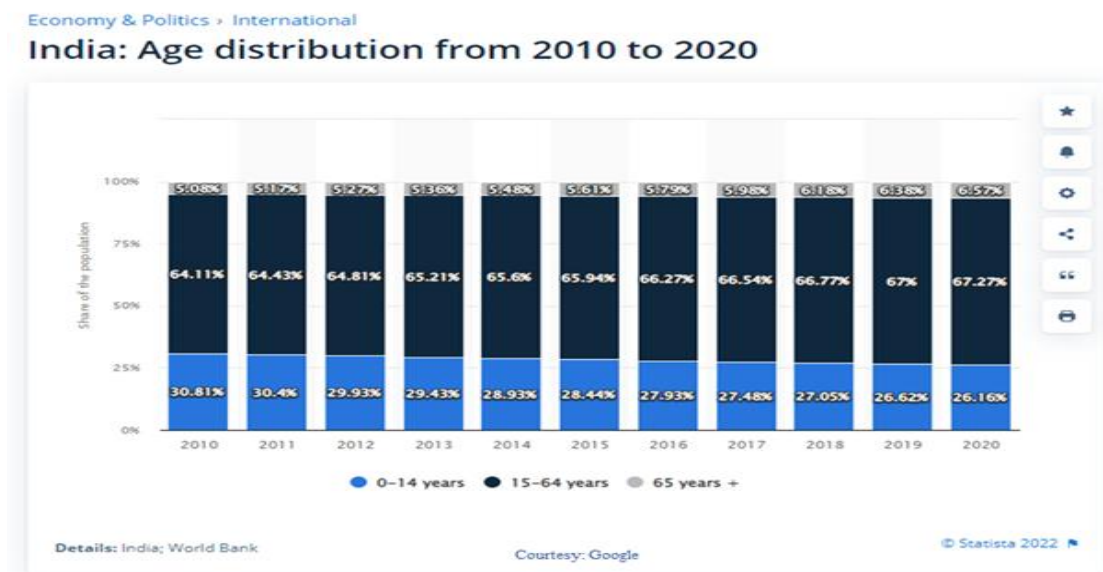
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achievements. The progress of the gifted should be treated as a national development role and the poor socio- economic status of parents should never be a barrier.

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., billion. 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 35.8 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 35.8 crores (3 to 14 yrs) @4% approximately 1.43crore i.e., 14.3 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 draft NEP 2020 was submitted in 2019 by a panel led by former Indian Space Research Organisation (ISRO) chief Mr Krishnaswamy Kasturirangan. The Draft New Education Policy 2019, was later released by Ministry of Human Resource Development, followed by a number of public consultations. Finally, NEP 2020 was approved by the Union Cabinet of India on 29 July 2020. The policy 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. This study analyses the path & direction of the policy for the gifted children and explores the possible augmentation steps states can take up for achieving the national goal.

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)

This National Education Policy 2020 aims to address the many growing developmental imperatives of India. This Policy proposes revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the aspirational goals of 21st century education, while remaining consistent with India's traditions and value systems.

NEP 2020 proposes breakthrough 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 (e.g., innovation, earning power) 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 good, successful, innovative, adaptable, 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; oral and written communication; health and nutrition, digital literacy, coding and computational thinking; 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. This policy is an important milestone that for the first time there has been an attempt to recognize the needs of gifted children and make few policy provisions to identify innate talents of students who are special and go beyond the realm of curriculum.

In the following sections, we focus and study few important policy features pertaining to the gifted

- Building the teaching resources
- Development of scientific temper skills
- Importance of Artificial Intelligence(AI) to improve educational process
- Inquiry based Education
- 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 has formulated a new comprehensive national educational framework for teacher training, NCFTE 2021 in consultation with National Council for Research and Training (NCERT) 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 to cater to regional languages which is very crucial for nurturing giftedness in the rural pockets of India from which lot of promise is emerging. This construct of gifted education is powerful and aims to alter and augment the roadmap of education in India and this aptly fits into the “Make in India” tagline.

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; (as per clause [h]). *A prepared statement issued by a group of scholars on scientific temper on behalf of the Nehru Centre, Bombay, in July 1981 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 from ethics to politics and economics is essential for ensuring human survival and progress; and
- 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; and that one should from time to time re-examine the basic foundations of contemporary knowledge.” Therefore, scientific temper in education refers to a student’s attitude of logical and rational thinking.

Dr. K. Kasturirangan , Chairman of NEP committee, states, creating scientific temper is as important as creating a vibrant society. One of the major focuses for NEP is to change the current education system of routine learning to evidence based and hands-on learning. NEP 2020 recognizes and sets a path for a multi-disciplinary approach to education, NEP emphasizes on schools to have more experiment-based classes and hands-on learning. 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. The framework of NEP enables learning of science & technology and mathematics in the sphere of scientific temper and this will be the key for the government's clarion call of AtmaNirbhar Bharat (Self-reliant India).

Emphasis of Artificial Intelligence in NEP 2020

It is recognized that mathematics and mathematical thinking will be very important for India's future and India's leadership role in the numerous upcoming fields and professions that will involve artificial intelligence(AI), machine learning and data science. The importance of AI education in today's era has come out quite strongly in NEP 2020. 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.

"These are all part of developing 21st-century skills because education embeds these kinds of things to qualify the youngster with respect to what is needed in the 21st century which is communication, creativity, problem-solving and things of that type,"

Dr Kasturirangan, Chairman of the NEP drafting committee.

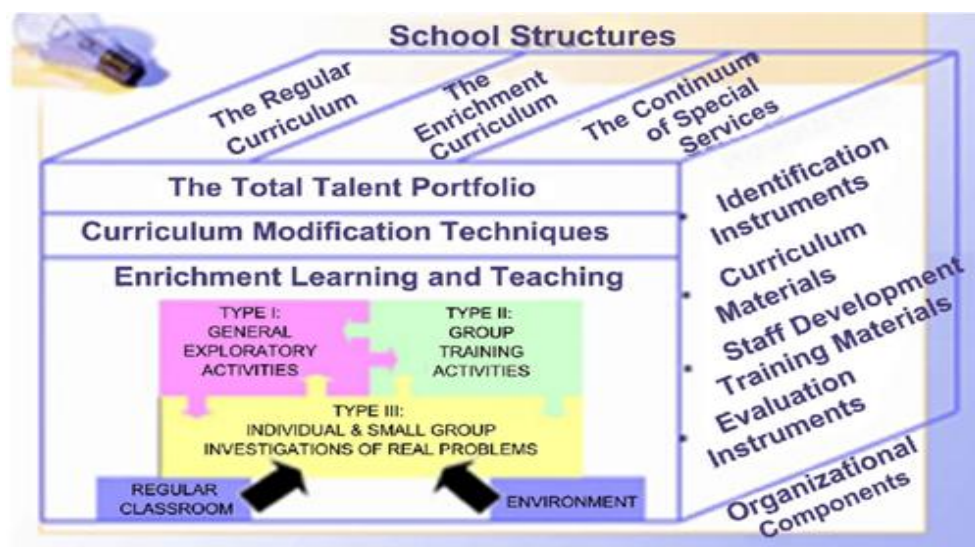
- The policy also envisions the use of AI-powered solutions for the attainment of its goals of a multilingual and holistic education. The efforts of promoting multilingualism among the school students will be interlocked with efforts to enhance Natural Language Processing capabilities for India's diverse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

- Additionally, AI will be used to track and record the life skills training of a child, with the aim to prepare a holistic report card.

Inquiry based education

“The Renaissance “ is viewed as a unique period in the history of European cultural, scientific, artistic, political and economic “rebirth” after the “dark” middle ages. It is treated as the bridge between the middle ages and modern era. In fact, it was a unique time when science and other different fields of inquiry jelled together seamlessly. For example:

The Italian polymath, Leonardo Da Vinci assimilated scientific principles like anatomy into his arts work due to which he could recreate the human body with extraordinary precision. He laid the foundation for modern medicine. 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&Reis(2009). NEP 2020 envisions the compelling need of using this innovative pedagogy and transforming teaching-learning process by accelerating integration of technology and conventional pedagogy on the lines of this program.



Schoolwide Enrichment Model : Source : Renzulli & Reis(1997) Courtesy: Google

According to NEP - “Reduction of curriculum content to enhance essential learning and critical thinking will provide space for more holistic, inquiry-based, discovery-based, discussion-based, and analysis-based learning. The mandated content will focus on key

concepts, ideas, 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, and think creatively and use their intuition. In this sense, inquiry-based science involves students applying science where they have opportunities to explore possible solutions, develop explanations for the phenomena under investigation, elaborate on concepts and processes, and evaluate or assess their understandings in the light of available evidence.

The underlying philosophy of inquiry science is constant training and research, thus enabling the researcher pursuit of independent thinking. The futuristic trends of gifted and talented student’s inquiry-based Science Education becomes substantial part given the current technology and pace of change. Literatures say, ‘Being gifted in inquiry science could be considered to be as much about being ‘creative’ as intelligent’.

Technology Use & 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, the integration of ICT makes education accessible to people in remote areas of the country.

The absence of technology makes us dysfunctional and irrelevant in the current context. The online knowledge/data explosion, the perpetual flux of information is a valuable tool of wisdom for gifted learners whose ability to learn liberally requires abundance of knowledge exploration. The prospect of benefiting from the boundless knowledge of information is finite since in raw form it is only data which may confuse gifted students. In such conditions only the traditional method of learning blended with technology enabled learning are reliable as highlighted in NEP2020.

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. The connection between technology and education is bidirectional. India must be well applauded

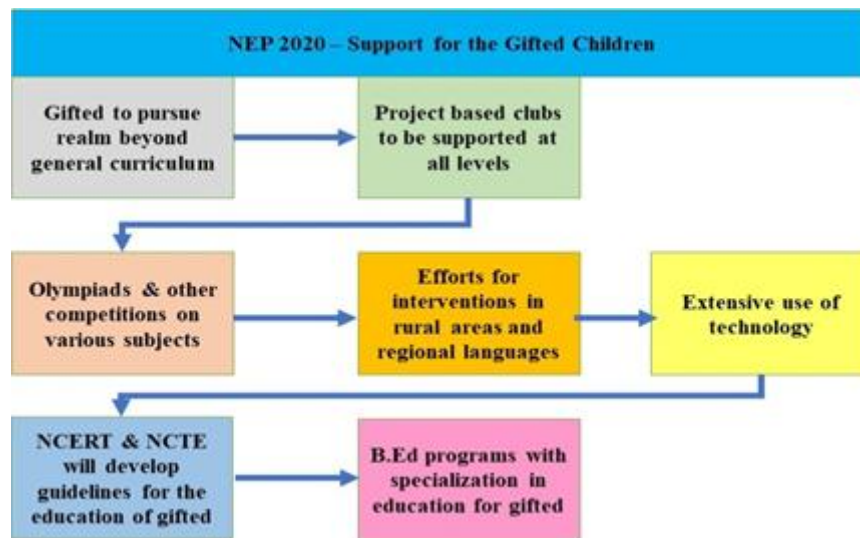
for adopting and steering the education system by adopting the extensive use of technology in teaching and learning, removing language barriers, increasing access, as well as in education planning and management'. NEP 2020 with its emphasis on ICT, is a very important tool for gifted students characterized by what they do and love for learning with their curiosity, initiative, imagination, originality, creativity and dedication. Every gifted student has a different pace and capacity for learning. Online learning, Chat- Based Collaboration Platforms, Competency-based education gives provision for every student to learn at their own pace., development of digital content in the form of presentations or videos, and animated sketches, are all important parts of NEP 2020.

Olympiads & 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, with necessary funding to ensure that all students may participate at all levels for which they qualify. The policy document further states that efforts will be made to make available Olympiads in rural areas and in regional languages to ensure widespread participation. Public and private universities would be encouraged to use results from Regional, National, and International Olympiads, as well as results from work in regional and national topic-based programmes, as part of the criteria for admissions into their undergraduate programmes.

The policy document proposes a wide base for mentoring the gifted children through project-based clubs and circles at the school and district levels. Examples include Science Circles, Math Circles, Music Circles, Chess Circles, Poetry Circles, Language Circles, Drama Circles, Debate Circles, etc. There are also some 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 in the programme is also envisioned.

NEP 2020 for the gifted – Snap Shot



Discussions

Gifted learners are a reality in India and inclusion of this divergent population in New Education Policy (NEP 2020) shall have very positive far-reaching consequences. The study and experience of various researchers in the gifted field and practitioners who work with gifted students, presuppose an urgent need for effective state policies for the social and educational support of the gifted students. Early identification of the gifted children is extremely vital and key for success of educational initiatives. The identification protocols developed by National Institute of Advanced Studies, Bangalore, India, can be used across the country as one standard formula / 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 and enhance the cognitive abilities of all the students. Advocacy programs that nurture the gifted students are essential to build India's knowledge capital. States have a very significant role to play in the implementation of NEP2020. States and Centre should work synergistically to make the policy a defining one and path-breaking. Value addition by states with their add-on supplementary policies with regional flavors, infrastructure push and implementation strategies are paramount. Nationwide

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implementation of NEP 2020 comprehensively in “letter and Spirit” will be key for India to achieve its 2040 educational goals. In the construct of gifted and sports, the story of our own Neeraj Chopra, the 2021 Tokyo Olympics Gold medal winner in men's javelin throw is a very important case study that showcases what the gifted can achieve with proper support and guidance & training. There are many gifted Adirai(s) & Neeraj Chopra(s) in many areas waiting to be supported and enabled to breach achievement levels. In this sense, NEP 2020 is in the right direction to provide necessary platforms, opportunities and educational support to the gifted children in India.

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