

## National Education Policy

We realized that there are some flaws in the Education Policy of 1986, under which the child is gaining knowledge, but this knowledge is not able to create employment opportunities in the future. Therefore, to remove these shortcomings, there was a need to bring a new National Education Policy 2020.

The new National Education Policy 2020 is the first such education policy of the 21st century, which aims to fulfill the upcoming requirement for the development of our country. The policy proposes aspirational goals for 21st century education, within which the education system is to be reformed and restructured in all aspects, including the description of its rules while maintaining India's tradition and its cultural values.

The National Education Policy lays emphasis on the development of the creative potential inherent in each individual. The policy is based on the principle that education should not only lead to the development of cognitive abilities related to literacy, higher order reasoning and problem solving, but also to the overall social and emotional development of the individual.

In June 2017, for the formulation of the New Education Policy, Dr. K. A Committee was formed under the chairmanship of Kasturi Rangan. This committee presented the 'Draft of National Education Policy' in May 2019. The 'National Education Policy (NEP), 2020' will be the third education policy of independent India after the year 1968 and the year 1986. Under NEP-2020, a target of investment equal to 6% of the country's GDP has been set on the education sector with the cooperation of the central and state governments.

## Understanding Neural Networks in AI

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Neural networks are like virtual brains for computers. They learn by example, recognizing patterns and making decisions. Just like we learn from experience, they process vast amounts of data to solve complex tasks, such as identifying objects in images or understanding human speech. Each "neuron" in the network connects to others, forming layers that transform and analyze the data. With continuous learning and feedback, they get better at their tasks. Neural networks power many AI applications, from voice assistants to self-driving cars, making our lives easier and revolutionizing technology with their remarkable ability to mimic our brains.

There are several types of neural networks used in artificial intelligence, each designed to address specific types of problems and tasks. Some common types include:

**Feedforward Neural Networks:** This is the simplest type of neural network, where data flows only in one direction, from the input layer to the output layer. They are primarily used for tasks like pattern recognition, classification, and regression.

**Convolutional Neural Networks (CNNs):** CNNs are designed to process and analyze visual data, such as images and videos. They use convolutional layers to automatically detect and learn features from the input, making them highly effective in tasks like image classification, object detection, and image segmentation.

**Recurrent Neural Networks (RNNs):** RNNs are equipped to handle sequential data by introducing feedback loops that allow information to persist. This makes them well-suited for tasks involving time-series data, natural language processing, and speech recognition.

**Long Short-Term Memory Networks (LSTMs):** LSTMs are a specialized type of RNN that address the vanishing gradient problem, making them more effective in capturing long-range dependencies in sequential data. They are often used for tasks where context over long periods is crucial, such as machine translation and sentiment analysis.

**Generative Adversarial Networks (GANs):** GANs consist of two neural networks, a generator, and a discriminator, competing against each other. The generator generates synthetic data, and the discriminator tries to differentiate between real and fake data. GANs have been employed for image and video synthesis, creating realistic images, and even generating art.

**Autoencoders:** Autoencoders are neural networks that aim to recreate the input data at the output layer, compressing the information into a lower-dimensional representation in the hidden layer. They are used for tasks like dimensionality reduction, anomaly detection, and image denoising.

**Transformer Networks:** Transformer networks have gained popularity in natural language processing tasks. They use self-attention mechanisms to process sequences of data, allowing them to efficiently capture dependencies between words in sentences and have been pivotal in machine translation, language generation, and text summarization.

These are just a few examples of neural network types, and the field of artificial intelligence continuously evolves with the development of new architectures and techniques. Each type of network has its strengths and weaknesses, and choosing the right one depends on the specific problem domain and data characteristics.

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With around 330 million hectares of the geographical area, India ranks seventh largest landmass globally. The systems and types of land use have been conditioned by multiple factors such as climatic conditions, temperature, air, precipitation so on and so fourth. And of these, the climatic conditions are primarily expressed in terms of precipitation, rainfall received in various parts of the Country. Rainfall in India is unequally distributed in spaces. The mean annual rainfall ranges from less than 10 mm in parts of Rajasthan desert to more than 4000 mm in the western Ghats. The intra-annual distribution of precipitations is also uncertain and seasonally skewed. The bulk of rainfalls is received during the South- West monsoons (mid June to September). However, during this season there are periodic spells or drought which are frequent in the arid and semi-arid areas (zones of the country covering the states of Rajasthan, Gujarat and partly some portions of MadhyaPardesh located in the central India. Consequently, the Crop yield of rainfed sorghum- Millet of the arid and semi-arid areas of India are subjected to periodic fluctuations.

The spatial difference in the availability of precipitation reflect the relative differences in the amount of per unit area runoffs from the various rivers of India both in inter and intra annual terms. The central water commission (1988), places the average annual natural runoff available to India at 1880 million cubic meters. The water storage structures created or under construction are able to store only 13.5% of the mean annual runoff, in so far as ground water resources are concerned.

The estimates are that the replenishable ground water resources in India excluding North-east is 420 BCM per year of which 35.7 BCM per year is utilizable for irrigation against actual utilisation of only 106 BCM per year. The unusual distribution of precipitation and water resources have conditioned agricultural cropping system and other systems of farming, though irrigation has successfully transformed the water starved areas of Punjab, Haryana and western parts of Uttar Pradesh into the food bowls of India. However, there are sufficient indications that the agricultural front has stopped expanding. This is quite evident from the fact of net areas having increased from 119 million hac in 1950-51 to 140 million hac and stabilized at that level. In any case, an expanding agricultural front was not essentially and environmentally conducive, since extension of cultivation to marginal lands had produced in its wake of the problems of soil and water erosion. And when this fact is related to the agricultural area subject to double or multiple cropping; the area of agricultural land sown more than once increased from 25,52,4000 hac 1971 to 36,77,000 hac in 1986-87, resultantly increase in food grains production by 42 million tones in the period 1970-71 to 1985-86. As a consequence, it can very conveniently be concluded that agricultural production in India has had been on intensive margin i.e. modern technologies of production initiated during green revolution of late

# Preserving Natural Resources

1960's. But spatial width of the intensive agricultural operation is narrow since the green revolution has been evident mainly in the northern western portions of India and portions of Andhra Pradesh and Tamil Naidu in South India.

India is as well endowed with large areas of non-agriculture production. And these areas are having expanse and diversified forest cover ranging from temperate vegetation in the sub-Himalayan and Himalayan region of moist-ever green forests in the North-east, the western coast and the Andaman and Nicobar islands. The forest cover of our country as per survey of India's latest report (2015), reveals that we continued to have 21% of forest despite population explosion, increased biotic pressure occurring from grazing, encroachments and diversification of forest areas for multidisciplinary purposes. As a result, therefore, there have been a marginal increase of 1% forest cover. The overall situation is that the total green cover now stand for 697888 sq kms (21.23%) of the geographical area and upto 5871 sq kms (10.92%) from 92,027 sq kms as had earlier from existing during the year 2011 survey report. As such there has been a marginal increase of just 31 sq kms in very dense forests, whereas moderately dense forest went down to 1991 sq kms and open forests accounts for 7831 sq kms.

As per Anmol Kumar, the Director General, Survey of India, the carbon stocks of the country have increased by 4.07% whereas regeneration capacity is around 48% of the total forest area.

Broadly speaking, the forests of India have been divided into 16 major groups comprising into 221 types. Tropical deciduous forests form the major percentage of forests cover in India (37% of total forest cover) followed by tropical dry deciduous forest (29.6%). The tropical wet evergreen forests comprise only 8% of total forest cover. Of the total area around 63.91 million hac & dense forests (crown dense Cover) account for only 38.50 m. hac. There is no tree cover over 11.27 M. Hac forests are under stocked. About 52.8% of forests don't have adequate regeneration. The per capita forest area has astonishingly decreased drastically.

Apart from natural forests, manmade forests area also increased on account of afforestation programmes initiated by government of India as well various state governments under various schemes. The lands so afforested have substantially been increased. Despite this progress in afforestation, the target of 33% land area under forest cover as laid down in the National Forest Policy 1988, will be a remote goal at the moment.

The reasons are the tendency towards deforestation and diversion of forest land towards non-forestry activities by the multi-disciplinary departments of all hues. And apart from meeting up fuelwood and fodder requirements, the increasing incidents of authorized as well as unauthorized felling.

In so far as forest conservation measures are concerned, these are not well in place, whereas the trend of deforestation is more severe compared to that which had been over the years.

With rising consciousness and the apprehensions involved allow-

# Impact of smartphone and Internet addiction

MOHAMMAD HANIEF

While a smartphone, tablet, or computer can be a hugely productive tool, compulsive use of these devices can interfere with work, school, and relationships. When you spend more time on social media or playing games than you do interacting with real people, or you can't stop yourself from repeatedly checking texts, emails, or apps—even when it has negative consequences in your life—it may be time to reassess your technology use.

Smartphone addiction, sometimes colloquially known as "nomophobia" (fear of being without a mobile phone), is often fueled by an internet overuse problem or internet addiction disorder. After all, it's rarely the phone or tablet itself that creates the compulsion, but rather the games, apps, and online worlds it connects us to.

Addiction to social networking, dating apps, texting, and messaging can extend to the point where virtual, online friends become more important than real-life relationships. We've all seen the couples sitting together in a restaurant ignoring each other and engaging with their smartphones instead. While the internet can be a great place to meet new people, reconnect with old friends, or even start romantic relationships, online relationships are not a healthy substitute for real-life interactions. Online friendships can be appealing as they tend to exist in a bubble, not subject to the same demands or stresses as messy, real-world relationships. Compulsive use of dating apps can change your focus to short-term hookups instead of developing long-term relationships.

Compulsive web surfing, watching videos, playing games, or checking news feeds can lead to lower productivity at work or school and isolate you for hours at a time. Compulsive use of the internet and smartphone apps can cause you to neglect other aspects of your life, from real-world relationships to hobbies and social pursuits. Online compulsions, such as gaming, gambling, stock trading, online shopping, or bidding on auction sites like eBay can often lead to financial and job-related problems. While gambling addiction has been a well-documented problem for years, the availability of internet gambling has made gambling far more accessible. Compulsive stock trading or online shopping can be just as financially and socially damaging. eBay addicts may wake up at strange hours in order to be online for the last remaining minutes of an auction. You may purchase things you don't need and can't afford just to experience the excitement of placing the winning bid. While you can experience impulse-control problems with a laptop or desktop computer, the size and convenience of smartphones and tablets means that we can take them just about anywhere and gratify our compulsions at any time. In fact, most of us are rarely

ever more than five feet from our smartphones. Like the use of drugs and alcohol, they can trigger the release of the brain chemical dopamine and alter your mood. You can also rapidly build up tolerance so that it takes more and more time in front of these screens to derive the same pleasurable reward. Heavy smartphone use can often be symptomatic of other underlying problems, such as stress, anxiety, depression, or loneliness. At the same time, it can also exacerbate these problems. If you use your smartphone as a "security blanket" to relieve feelings of anxiety, loneliness, or awkwardness in social situations, for example, you'll succeed only in cutting yourself off further from people around you. Staring at your phone will deny you the face-to-face interactions that can help to meaningfully connect you to others, alleviate anxiety, and boost your mood. In other words, the remedy you're choosing for your anxiety (engaging with your smartphone), is actually making your anxiety worse. Smartphone or internet addiction can also negatively impact your life by increasing loneliness and depression. While it may seem that losing yourself online will temporarily make feelings such as loneliness, depression, and boredom evaporate into thin air; it can actually make you feel even worse. A 2014 study found a correlation between high social media usage and depression and anxiety. Users, especially teens, tend to compare themselves unfavorably with their peers on social media, promoting feelings of loneliness and depression. One researcher found that the mere presence of a phone in a work place tends to make people more anxious and perform poorly on given tasks. The heavier a person's phone use, the greater the anxiety they experienced. Using a smartphone for work often means work bleeds into your home and personal life. You feel the pressure to always be on, never out of touch from work. This need to continually check and respond to email can contribute to higher stress levels and even burnout. The constant stream of messages and information from a smartphone can overwhelm the brain and make it impossible to focus attention on any one thing for more than a few minutes without feeling compelled to move on to something else. The persistent buzz, ping or beep of your smartphone can distract you from important tasks, slow your work, and interrupt those quiet moments that are so crucial to creativity and problem solving. Instead of ever being alone with our thoughts, we're now always online and connected. Excessive smartphone use can disrupt your sleep, which can have a serious impact on your overall mental health. It can impact your memory, affect your ability to think clearly, and reduce your cognitive and learning skills.

A UK study found that people who spend a lot of time on social

media are more likely to display negative personality traits such as narcissism. Snapping endless selfies, posting all your thoughts or details about your life can create an unhealthy self-centeredness, distancing you from real-life relationships and making it harder to cope with stress. There are a number of steps you can take to get your smartphone and internet use under control. While you can initiate many of these measures yourself, an addiction is hard to beat on your own, especially when temptation is always within easy reach. It can be all too easy to slip back into old patterns of usage. Look for outside support, whether it's from family, friends, or a professional therapist. To help you identify your problem areas, keep a log of when and how much you use your smartphone for non-work or non-essential activities. There are specific apps that can help with this, enabling you to track the time you spend on your phone. Are there times of day that you use your phone more? Are there other things you could be doing instead? The more you understand your smartphone use, the easier it will be to curb your habits and regain control of your time. Human beings are social creatures. We're not meant to be isolated or to rely on technology for human interaction. Socially interacting with another person face-to-face-making eye contact, responding to body language-can make you feel calm, safe, and understood, and quickly put the brakes on stress. Interacting through text, email or messaging bypasses these nonverbal cues so won't have the same effect on your emotional well-being. Besides, online friends can't hug you when a crisis hits, visit you when you're sick, or celebrate a happy occasion with you. Perhaps tweeting, texting or blogging is your way of coping with stress or anger. Or maybe you have trouble relating to others and find it easier to communicate with people online. Building skills in these areas will help you weather the stresses and strains of daily life without relying on your smartphone. If you need more help to curb your smartphone or internet use, there are now specialist treatment centers that offer digital detox programs to help you disconnect from digital media. Individual and group therapy can also give you a tremendous boost in controlling your technology use. Any parent who's tried to drag a child or teen away from a smartphone or tablet knows how challenging it can be to separate kids from social media, messaging apps, or online games and videos. Youngsters lack the maturity to curb their smartphone use on their own, but simply confiscating the device can often backfire, creating anxiety and withdrawal symptoms in your child.

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The rapid rate of economic growth in India means that there are at any given time, a large number of development projects in planning and implementation of environmental boosting. There is, therefore, a dire need to build trained human power for environmental implementation assessment (EIA), especially among independent institution and within the government.

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# Education Stage of LKG and UKG: Significance and Effects

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LKG (Lower Kindergarten) and UKG (Upper Kindergarten) are two levels of education that precede formal schooling and are typically designed for children between the ages of 3 to 6 years. These levels are part of the early childhood education system and play a crucial role in a child's overall development. LKG (Lower Kindergarten) which largely include: a. Age Group: Children usually enter LKG around the age of 3 or 4 years. b. Curriculum: The LKG curriculum focuses on introducing basic concepts and skills in a playful and interactive manner. It includes activities that promote socialization, language development, pre-writing and pre-reading skills, early math concepts, and creativity. c. Learning Approach: Learning in LKG is mainly through play-based activities, storytelling, rhymes, art, and exploration. The emphasis is on creating a fun and engaging environment that fosters a love for learning. d. Social Development: Children learn to interact with their peers, share, and follow simple instructions. Social and emotional development is a key aspect of LKG education. In the context, the UKG (Upper Kindergarten) defined it as: a. Age Group: Children typically move on to UKG after completing LKG, at around 4 or 5 years of age. b. Curriculum: The UKG curriculum builds upon the foundation laid in LKG and focuses on further developing language and numeracy skills. Children are exposed to more structured learning activities and begin to refine their reading, writing, and basic math abilities. c. Learning Approach: While play-based activities are still present, UKG introduces a slightly more structured approach to learning. Teachers may use workbooks and more formal lessons, though the focus remains on keeping the learning process enjoyable. d. Readiness for Formal Schooling: The primary aim of UKG is to prepare children for the transition to formal schooling, typically starting with Grade 1 or Reception class. e. Both LKG and UKG education emphasize holistic development, which includes cognitive, language, social, emotional, and physical aspects of a child's growth. The learning environment remains supportive and nurturing, with teachers and caregivers facilitating children's progress at their individual pace.

Purpose of LKG/UKG education The purpose of LKG (Lower Kindergarten) and UKG (Upper Kindergarten) education is to provide a strong foundation for a child's overall development and to prepare them for

formal schooling. These early childhood education levels serve several important purposes: a. Holistic Development: LKG and UKG education focus on the holistic development of children, encompassing their cognitive, social, emotional, language, and physical skills. The curriculum is designed to stimulate various areas of a child's growth, helping them become well-rounded individuals. b. Early Learning: LKG and UKG introduce children to basic concepts in a playful and age-appropriate manner. They lay the groundwork for future academic learning by fostering curiosity, exploration, and a love for learning. c. Language Development: During these early years, children's language skills develop rapidly. LKG and UKG education provide a language-rich environment, encouraging vocabulary expansion, communication, and an introduction to reading and writing. d. Socialization: LKG and UKG offer children opportunities to interact with their peers, encouraging the development of social skills such as sharing, cooperating, and resolving conflicts. Learning to work and play in a group setting is an essential life skill. e. Preparation for Formal Schooling: The structured and playful learning experiences in LKG and UKG help children transition smoothly into formal schooling. They become familiar with classroom routines, basic academic concepts, and following instructions from teachers. f. Confidence Building: As children achieve small milestones and develop new skills, they gain confidence in their abilities. LKG and UKG education create a positive and supportive environment that boosts children's self-esteem. g. Play-Based Learning: Play is a crucial aspect of LKG and UKG education. It is the primary mode through which children learn, explore, and make sense of the world around them. Play-based learning enhances engagement and helps in better retention of information. h. Parent Involvement: Early childhood education often involves parents in the learning process. It strengthens the parent-child bond, allows parents to understand their child's progress, and enables them to support their child's development at home.

Prospects of LKG/UKG The prospects of LKG (Lower Kindergarten) and UKG (Upper Kindergarten) education are promising and have a significant impact on a child's future development and academic journey. The key prospects of LKG and UKG education include: a. Smooth Transition to Formal Schooling: LKG and UKG education prepare children for the tran-

sition to formal schooling, typically starting with Grade 1 or Reception class. Children who have attended LKG and UKG are generally more accustomed to the school environment, classroom routines, and academic expectations, making the transition smoother and less stressful. b. Strong Academic Foundation: The early exposure to basic concepts and language-rich environments in LKG and UKG lays a solid foundation for future academic learning. Children who have received quality early childhood education are more likely to excel academically in the later stages of education. c. Enhanced Social Skills: LKG and UKG education promote socialization and help children develop essential social skills, such as communication, cooperation, empathy, and conflict resolution. These social skills are vital for building positive relationships and navigating social interactions throughout life. d. Language and Communication Development: LKG and UKG education play a crucial role in language development. Children learn new vocabulary, improve communication, and develop the skills necessary for reading and writing. Strong language skills are essential for effective communication and academic success. e. Emotional Intelligence and Well-being: Early childhood education focuses on emotional development, helping children recognize and manage their emotions. Children who develop emotional intelligence are better equipped to handle stress, build resilience, and maintain better mental well-being. f. Parental Involvement and Support: LKG and UKG education often involve parents in the learning process, encouraging parental engagement and support. This collaboration strengthens the parent-child bond and promotes a positive home learning environment. g. Identification of Learning Needs: Early childhood educators can observe and identify any learning difficulties or special needs in children during LKG and UKG. Early identification allows for timely interventions and support, ensuring that children receive the assistance they need to thrive academically and emotionally. h. Long-Term Impact on Success: Research shows that quality early childhood education has a long-term positive impact on a child's academic success, career opportunities, and overall well-being. In summary, LKG and UKG education offer a range of prospects that contribute to a child's overall growth, educational journey, and future success. The experiences and skills gained during these early years lay the foundation for a fulfilling and prosperous life.

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