Extension Lecture Series

NCERT

2021-22

Program
Coordinators

Prof. S.K. Dash
Dr. Kalinga Ketak

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NCERT

Regional Institute of Education, Bhubaneswar

(National council of Educational Research and Training)

Bhubaneswar, Odisha-751022

PREFACE

Regional Institute of Education, Bhubaneswar has been organizing Extension Lecture Series Programme since the last few years. The Extension Lecture Series programme has been visualized to develop professionalism amongst faculty and staff by providing them with an opportunity to interact with eminent educationists, educational administrators and experts from other fields of knowledge. At the same time, the objective was to enable students to know the past, present and future of different developments taking place in various subjects, disciplines and professions over time.

Six experts from different fields of knowledge have been invited to deliver lectures on different themes. This report compiles all these lectures for benefit of all readers, For the successful completion of the programme, I record my gratitude to the Principal, Prof. P.C Agarwal for his unstinted support and guidance. I express my gratitude as well to the Head, Department of Extension Education, Prof. L. Behera for his support and encouragement.

Programme Coordinator
Prof. S.K. Dash
Dr. Kalinga Ketaki

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शिक्षा का भारतीयकरण

By Shri Mukul Kanitkar

Shri Mukul Kanitkar is the Akhil Bharatiya Joint Organizing Secretary of Bharatiya Shikshan Mandal, an organization dedicated to evolve indigenous model of education. He has conducted innumerable workshops on personality development, and research for National Resurgence in IIT Delhi, IIT Roorkee, Jawahar Lal Nehru University, Delhi University, MS University Vadodara etc. He trained and motivated 29,973 School students to perform Mass Suryanamaskar at Gwalior in 2005 to create a world record duly entered in the Guinness World Records.

Shri Kanitkar called for a complete rejection of the Macaulay system of education in the 75th year of independence, saying it imposed a foreign language as the medium of instruction in the country and restricted education to the elite.

What we mean by Indianizing education?

Many people have started observing that the education that they received in school or college did not help to strengthen their bond with India. Infact many people feel distanced. Education has failed to create an appreciation for traditional and indigenous practices, so much so that anything traditional is being viewed as superstition. Those who want to strengthen their roots feel a dearth of formal channels in mainstream educational institutions.

We are a part of a rich culture and if education alienates us from the same, there is something seriously wrong. When we say we need to Indianize education, we mean that we need to create and offer content that is representative of the Indian ethos, mindset, practices and heritage. That way, the solutions that

we evolve for problems in our society will be more suitable to our land. We won't be outsiders to our own people. Education that leads to a better bonding with the motherland is a need of the hour.

Centuries of colonial rule taught us to show ourselves as a low caste. We were taught to despise our culture, traditional knowledge. It slowed down our growth as a nation. The introduction of a foreign language as the medium of instruction limited education. A small section of the society is depriving a large population of the right to education. We should feel proud of our heritage, our culture, our ancestors, the Vice President said. We must go back to our roots. We must abandon our colonial mindset and teach our children to be proud of our Indian identity. We should learn Indian languages as much as possible. We should love our mother tongue. We must learn Sanskrit to know our scriptures, which is a treasure trove of knowledge. Encouraging the youth to propagate their mother tongue, he said, "I am looking forward to the day when all gazette notifications will be issued in the mother tongue of the respective state." Your mother tongue is like your sight, whereas a foreign language is your knowledge, like your glasses. He said that Indianization of the education system is central to India's new education policy, which lays great emphasis on promotion of mother tongues. He said that foreign dignitaries visiting India, despite knowing English, speak in their mother tongue as they are proud of their language. He said, India has strong relations with almost all the South Asian countries which have common roots. The Indus Valley Civilization extends from Afghanistan to the Gangetic plains. Our policy of never attacking any country first is respected all over the world. This is the country of warriors like Emperor Ashoka the Great, who chose non-violence and peace over violence.

India's External Affairs Minister Subrahmanyam Jaishankar has written about ignoring India's heritage at the international level in his book India's Strategy in a Changing World - If there are obstacles in understanding India's vision today, it is mostly ignoring its thought processes. stemmed from doing. It is therefore not surprising that most of the Western class has historically rejected our society. It is worth noting that the Mahabharata is not even mentioned in the

Standard American Introduction to the Indian System of Strategic Thinking, although that epic deeply affects the common Indian mind. Imagine, would it have been possible to introduce Western strategic systems like this and ignore Homer's 'Iliad' and Machiavelli's 'The Prince' or the 'Three Kingdoms' in the context of China? If this is the case with India, so far this shortcoming is less due to oral tradition than our limited global importance. It needs research and revision, as greater multi-cultural acceptance is also a hallmark of a multipolar world, although at present, where India and the world are collectively facing many situations, there is a similarity between them and this is what they are. It is a fact, which has rarely been said till now. The Mahabharata is unquestionably the liveliest authentic passage of Indian thought on statecraft. It is not a collection of remedial theories on state art like 'Arthashastra', but gives a live account of real-life situations and the alternatives involved in them.

As an epic, it surpasses the works of other civilizations not only in its extent but also in its richness and complexity. Paying attention to the importance of duty and the purity of responsibilities, this epic is also a narration of human weaknesses. State-of-the-art dilemmas permeate the entire plot, including taking risks, believing, and giving up or making sacrifices. Perhaps the most notable section is the Bhagavad Gita, which defines the effort required to implement policies, but many other elements of eternal politics, such as well-planned compromises, the use of eccentric players, the initiative to change power, and the surety of balance of power, are also present. That narrative reflects the archaic form of our contemporary concerns, particularly of taking advantage of external circumstances to counter bilateral imbalances. The archaicism of strategic competition and betting on the system co-exists with more contemporary concepts of controlling thought and emphasizing the power of knowledge.

Due to the indifference towards the Indian culture of the people who came to power after independence, we have been moving away from our heritage, the need of the hour is to bring positive changes in our education system, including

Indian thought style, Indian traditions and history and culture. Give importance to this so that our future generations can be connected with Indian culture and history. Unless we give importance to our language and lifestyle and thought, Indian thought history will not get importance at the world level. Indianization of education is very important, the society and the government need to take it seriously and consider it.

Communal harmony: Need of the hour

By Dr. Pawan Kumar Agrawal

Dr. Pawan Kumar Agrawal was born on 2nd January, 1964 at Junagarh, Odisha. He did his graduation in Agriculture from the Odisha University of Agriculture and Technology, Bhubaneswar. He obtained his M. Sc (Ag) (Plant Breeding) and Ph. D. (Plant Breeding) degrees from Punjab Agricultural University, Ludhiana. He did his post-doctoral studies at the prestigious John Innes Centre, Norwich, England. He was awarded with Sardar Iqbal Singh gold medal for his meritorious performance during the M. Sc. (Plant Breeding). He was also bestowed with the 'AB Joshi Award', the highest award by IARI, New Delhi. He is a fellow of National Academy of Agricultural Sciences, India.

Dr P.K. Agrawal joined the Indian Council of Agricultural Research as an ARS Scientist and was placed at the National Rice Research Institute, Cuttack. His interest of research is conventional and molecular breeding in rice, maize and finger millet. He has visited and worked in many foreign laboratories. He was a visiting scientist to International Rice Research Institute, the Philippines in 1997 where he worked on marker-assisted selection in rice. During his stay in England as a post-doctoral fellow, he reported a novel biolistic system for multiple gene transformation called 'Clean DNA Transformation'. He has mapped many genes in maize for amino acid modifiers, Fe and Zn content in kernels. He was also a visiting scientist to WARDA, Ivory Coast, Africa.

During his research career of more than 26 years, Dr P. K. Agrawal has many scientific contributions. He has developed more than 25 crop varieties in maize, rice and other crops. Vivek QPM 9 is the first MAS derived QPM maize.

Similarly, CR 839, a basmati line satisfies the new plant-type named 'Limited Tillering Plant Type' which was conceived and developed by him. He is also one of the pioneers in starting work on DNA-marker assisted breeding work in India. He has pyramided many agronomically useful genes in maize, rice and wheat for quality traits and biotic stresses.

He has guided three Ph. D. students and more than fifteen M. Sc. students for their project work and has more than 150 publications including internationally and nationally reputed journals, book chapters and popular articles. He has also authored more than seven books which are widely read globally.

Dr P. K. Agrawal joined ICAR Headquarters in May 2014 as Assistant Director General and Director, National Agricultural Science Fund, ICAR. He joined as Vice Chancellor of Odisha University of Agriculture and Technology, Bhubaneswar on 14th May 2019.

INDIA is a country of multi-ethnic culture where people belonging to different religious, racial, cultural and lingual identities live together harmoniously. However, in the present time, various untoward incidents are affecting the communal harmony in different parts of the country. Communalism is the most serious threat to our sovereign, secular, socialist and democratic polity. The number of communal incidents is increasing day by day, which is not a good sign for our democracy. India is known for communal harmony which has to be maintained. Communal harmony is the hallmark of democracy in a country governed by the rule of law. Rule of law pervades over the entire field of administration and every organ of the state is regulated and governed by the Rule of law. It is an eternal value of constitutionalism and inherent attribute of democracy and good governance has to be maintained.

India is a great example of unity in diversity and it is multi-cultural, multi-ethnic and multi-lingual country. The preamble of our Constitution states India is Secular country. It gives its citizens the freedom to practice any religion of their own choice. People belonging to different culture and religions, shares common platform to understand each other's cultural and religious beliefs which in turn fosters the feeling of mutual trust and harmony.

The separatist tendencies like aggressive communalism, religious bigotry, linguism, regionalism and casteism endangers the unity of the country. The foremost danger to National Integration is rapid communalization which promotes communal violence. The worst affected states by communal violence are U.P, Bihar, Gujarat and Delhi. Communal violence has turned marginalized families into poor and many children become destitute. Why Communal harmony is always preferred over other threats is British used this as a tool to enslave India in 19th century i.e., Bengal Participation-1905. Our Independence is achieved after achieving communal harmony. Gandhiji always gave importance on this and wrote

a book called "The way to communal harmony". During India-Pakistan partition wide range of communal violence took place. In post-independence era also, India faced many communal clashes like Gujarat riot and Ram Jhanma bhoomi- Babri Masjid. Communal violence is a biggest threat to internal security; communal polarization creates an atmosphere of fear, anxiety and uncertainty among people.

Since antiquity, all religions, cultures and societies have provided for living in harmony. It is actually the fundamental law of creation and continues to govern our life. Etymologically, harmony means 'joint'. It is understood as 'binding together and being in concord with one another and the cosmos and in the context of communities of different thoughts and belief – be it social, economic, political and ecological'. It simply means living with unity and mutual reciprocity, beyond class, caste, creed, religion and gender barriers. Violence erupts whenever the communal harmony is disturbed. No human being enjoys disharmony or violence. Communal harmony now is the fundamental need of every country's fabric. Communal harmony means that people of different religions, castes, creeds, sex and different background live together in the society with love and peace amongst them. Communal harmony strives to create goodwill and harmony among various communities. The aim is to foster an ethic of coexistence rooted in or inspired by religious and cultural values. In the context of religious harmony, a refreshing reference may be made here to a letter said to have been addressed to Emperor Aurangzeb by Chhatrapati Shivaji, where he is reported to have said: "Hinduism and Islam are both beautiful manifestations of the Divine spirit. The call for the prayers is given in the mosque; the bell rings to the divine glory in the temples. Anyone bearing fanaticism and religious hatred must be acting against the commands of Gods." As we know man was created as one, by God without any caste, creed or religion. All religions preach us to live in harmony, peace and togetherness and spread out the message of love and brotherhood and not hatred. They inculcate in us resilience, tolerance and forbearance for all religions and faiths, even sacrifices when needed. The time has now come for all mankind to

live on earth in harmony as a single family. Living in harmony is no longer simply an ethical principle rather it is a way of life. Gandhi had faith in the Vedantic doctrine of Unitism, which says all 'men are part of one universal existence. All men are essentially one member of one family. So, an individual who wants to realize his true self must regard the good of all as his own good and dedicate himself to the service of all. But sensual pleasures and personal possessions act as blinds to shut off the lights of reason and in his ignorance and selfishness, man loses light of the great truth of unity.' He said: 'I am essentially a man inclined to compromise because I am never sure that I am right. God is truth, reality and the law of harmony that pervades the whole Universe'. He further said: 'If love or non-violence be not the law of our being, the whole of my argument falls to pieces. Love or Ahimsa is (after truth) the most significant term in Gandhian philosophy. Positive meaning of love includes affection, sympathy, mercy, generosity, service and self- sacrifice. Nonviolence is not a negative state of harmlessness, but is a positive state of love.' Mahatma Gandhi also said, 'Let us forget all thoughts of I am a Hindu, you a Muslim or I am a Gujarati, you a Madrasi, let us think, I and mine in a common Indian nationality, we shall be free only when a large number of our people are determined to swim or sink together.' He believed in, tolerance and acceptance of all religions within the Indian national framework. Maulana Wahiduddin Khan wrote in his book that "No wisdom is needed to engage in violence. Any foolish person can do so. But establishing and maintaining peace do require a high level of sagacity and planning. One who knows how to tackle problems with wise planning will always choose to refrain from stopping to violence". Sitaram Yechury opines that "India is a country of multi-religions. India's diversity - linguistic, religious, ethnic, cultural, etc. is incomparably faster than in any other country in the world. Officially it has been recorded that there are 1618 languages in India; 6400 castes; six major religions..." As Gandhiji rightly said, 'The whole geographical India is one country. The whole people make one nation. Let us unite all races and religious communities together. We believe in one world family, spiritual unity, and

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unitism. Our history is history of experiments with truth, through love and service of man. Start from the small scale and move over to the bigger one.' Communal harmony is paramount in any country that has multiple religions and communities. We must strive hard to train and educate people in harmonious cohabitation. Where it is necessary, we may introduce some laws and regulations also. But all that should promote harmony. Ratan Tata said that "India is known for communal harmony; we work together live together for centuries. And I am sure we continue to do that." Indians have been living together since ages and want to live together amicably, but unfortunately sometimes communal disharmony is created by certain unsocial elements. But it is our duty to maintain peace and harmony in the society. We have to inculcate in us a feeling of brotherhood. We can achieve strength through peaceful coexistence practicing love and affection for all.

National Education Day-2021
Education after Independence in India

By Prof. Prakash Chandra Agarwal

Over the course of 7 decades after Independence, the education system of India has evolved gradually yet phenomenally. From a literacy rate of 18% in 1951, we have moved up to 73% as of 2011. Currently, the education system in India is the strongest and largest in the world hosting more than 315 million students.

The modern education system was introduced to India in 1830 during the British rule by Lord Thomas Babington, who brought English language syllabus to the country. The syllabus was then limited to common subjects like language, science and math. Classroom teaching became prominent and the relation between a teacher and student evolved. In the following years, the education system started getting influenced by various institutions. During the late nineteenth century, the Theosophical Society of India and Rama Krishna Mission started to merge the western ideals of education with the Indian roots to inspire the students and make them accepted universally. Intellectuals of various nationalities came together and helped shape the education system.

After the implementation of plans, efforts were made to spread education. Government decided to provide free and compulsory education to all children up to the age of 14. But this aim could not be achieved yet. In First Five Year Plan 7.9% of total plan outlay was allocated for education. In Second and Third Plan, the allocations were 5.8% and 6.9% of the total plan outlay. In Ninth Plan only 3.5% of the total outlay was allocated for education.

To streamline the education, the Govt. implemented the recommendations of Kothari Commission under 'National Policy on Education' in 1968. The main recommendations were universal primary education. Introduction of new pattern of education, three language formula, introduction of regional language in higher education, development of agricultural and industrial education and adult education.

To combat the changing socio-economic needs of the country, Govt. of India announced a new National Policy on Education in 1986. Universalisation of primary education, vocationalisation of secondary education and specialisation of higher education were the main features of this policy.

National Council of Educational Research and Training (NCERT) at National level and State Council of Educational Research and Training (SCERT) at State level were established to maintain the standard of education. University Grants Commission (UGC) was instituted to determine the standard of higher education.

1. Expansion of General Education:

During the period of planning there has been expansion of general education. In 1951, the percentage of literacy was 19.3. In 2001 the literacy percentage increased to 65.4%. The enrolment ratio of children in the age group of 6-11 was 43% in 1951 and in it became 100% in 2001.

Primary education – been free and compulsory. Midday meal has been started in schools since 1995 to check drop-out rate. The number of primary schools has risen by three times from 2.10 lakh (1950-51) to 6.40 lakhs (2001-02). There were only 27 universities in 1950-51 which increased to 254 in 2000-01.

2. Development of Technical Education:

Besides general education, technical education plays important role in

human capital formation. The Govt. has established several Industrial Training Institutes, Polytechnics, Engineering colleges and Medical and Dental colleges, Management institutes etc.

Spread of Higher Education

Higher education, once the prerogative of elite, is now easily accessible to a large segment of society. The government established different education commissions in order to address educational challenges and recommend comprehensive policies for education and also for the improvement of the education system in India.

Commissions and Reforms

Central Advisory Board of India decided to set up two commissions, one to deal with university education and the other to deal with secondary education.

i) University education commission (1948)

The first and foremost commission to be appointed in independent India was the University education commission of 1948, under the chairmanship of Dr. S. Radhakrishnan, to report on the status of Indian university education, and suggest improvements and extensions that would be desirable to suit the then and future requirements of the nation. The commission also aimed at creating universities which would provide knowledge and wisdom for an inclusive development of the personality of students. This report proposed the reconstruction of education system in tune with the vision of Indian Constitution.

ii) Mudaliar Commission (1952-53)

The recommendations of Mudaliar commission occupy a very significant place in the development of secondary education in Independent India. It emphasized the need of training Indians in the democratic way of life. Some reforms were introduced in the educational system of the country based on the reports and recommendations, for example, the introduction of Higher Secondary scheme along with Three Year Degree Course and the opening of more and more vocational and technical schools and colleges. Education became the responsibility of both state and central governments.

Kothari Commission(1964-1966)

The Mudaliar commission was followed by the appointment of the Indian education commission under the chairmanship of D.S Kothari, popularly known as Kothari commission; it was entrusted with the tasks of dealing with all aspects and sectors of education and to advise the government on the evolution of national system of education.

National Education Policy (1968):

It is in accordance with the recommendations of this commission the National education policy of 1968 was formulated. The most important development in improving the education sector came with National education policy in 1968. It drew out the prospects of education to all sections of the society to accomplish the goal of harmony and integration. It was well promoted use of regional languages in secondary schools for an effective teacher-student relationship. The prominence was given to Hindi as a medium of instruction in schools.

It was viewed that education had the power to work as a popular instrument of social, economic and political change. Educational objectives were rather related to long term national aspirations. Further, Government set up commissions to review the development of the education in modern period particularly since independence and came to the conclusion that Indian education needs a drastic reconstruction, almost a revolution, to realise the constitutional goals and to meet the various problems facing the country.

Draft National Policy on education in 1979, proposed the development of educational system that helped people not only to enhance their knowledge but also academic skills. A paradigm shift was taking place in the methodology of government.

The core focus was drawn on building awareness for morals and ethics among students so they could develop a good personality and become worthy citizens. It was suggested that a good educational system that reinforces the constitutional values must be implemented. National Policy of Education (1986) National Policy of Education, 1986 stressed on the provisions for fellowships of the poor, imparting adult education, reorientation of the whole system to promote gender equality, recruiting teachers from oppressed groups, the physically and mentally handicapped and for the areas which need special attention and also developing new schools and colleges.

All these policy initiatives after Independence led to appreciable results in all areas such as Enrolments, Increase in Expenditure on Education, Growth in Literacy Rate and Universalization of Education etc.

Enrolment

It is notable that the country now has comprises more than 1.5 million schools with over 260 million students enrolled and about 751 universities

and 35,539 colleges as opposed to a pathetic situation in 1947, when we had only 19 universities and 400 colleges. India of 1947 constituted only 5000 secondary schools.

Growth in Enrolment:

It is also worth mentioning that the number of primary schools increased by more than 230 per cent between 1951 and 1980. The percentage of the primary school-age population attending classes, the number of middle and high schools and teachers registered the steepest rates of growth in 1980. In 1981 there were 664700 schools against 230700 in 1951, it indicated the increase of 65% in the total number of schools within the 30 years, and after 20 years (2011) it levitated to 1396331.In the matter of Upper-Primary in 1981 there were 118600 schools against 13600 in 1951, India achieved the absolute increase of 105000 (88%) schools within 30 years and in 2011 the total number of same schools sprang up to 447600 with an absolute increase of 329000 schools.

Expenditure

Expenditure on education has seen multiple increases since Independence. As per the official data released by the HRD Ministry, expenditure on education by education and other departments was mere Rs. 64.46 crore in the year 1951-52, a meager 0.64 % of the GDP which increased to a total of over Rs. 4,65000 crores in 2013-14 which was 4.13 % of the GDP.

Growth in Literacy Rate

India reached the highest growth rate of 15.52% in literacy in 1991 due to the implementation of New Education Policy 1986, which provided

maximum possibilities to get cent percent literacy in the country. About 360,000 students enrolled in colleges and universities in the year of 1951-52; the number had considerably climbed to nearly 4 million by 1990-91. Enrolment has continued to rise steadily. The education sector in India is composed to witness foremost growth in the years to come as India will have world's largest Tertiary-age population and second-largest graduate talent pipeline globally by the end of 2020.

Universalization

After an array of committees and commission set up, Indian education system was on its way to a greater transformation, with a focus on quality enhancement. It intended to develop moral values among students and bringing education closer to life. But what was essential was a gallant and firm effort on the part of all concerned-rulers, administrators, teachers, students, and society to make education more meaningful and purposeful. However, in the absence of such strength, education in India fell short to serve as a catalyst of human social development. It also highlighted effective universalization of elementary education, eradication of illiteracy and skill development in the 15-35 age group, nationalization of education and preparation of the manpower needed for the developmental needs, improvement in quality at all levels and scientific and technological research. The implementation of the policy was to be reviewed after every five years.

Sarva Shiksha Abhiyan (2001)

The Government launched the Sarva Shiksha Abhiyan in 2001 to ensure education for the children from 6 to 14 years. Prior to that, it had launched an effective initiative - Sponsored District Education Programme, which

augmented the number of schools across the country. In a bid to attract children to schools, especially in the rural areas, the government also started implementing the mid-day meals program in 1995. Then, the Planning Commission of India stressed on the Universalization of Elementary Education (UEE) to make education system beneficial to the nation. The provision of proper infrastructure and number of trained staff was ascertained and publicized by states in 2008, through the local Panchayat.

The central government ran and espoused about 1,000 central schools for children of central government employees in the era after independence. Similarly, some of the other path breaking initiatives taken by government in 2017 include the Union Budget 2017-18 which has pegged an outlay of Rs 79,685.95 crore (US$ 11.952 billion) for the education sector for the financial year 2017-18, up from Rs 72,394 crore (US$ 10.859 billion) in 2016-17-a 9.9 per cent rise.

Recent Initiative

The Government has now allocated around Rs17,000 crore (US$ 2.55 billion) towards skilling, employment generation, and providing livelihood to millions of youths, in order to boost the Skill India Mission. Also, this is little more than 8 per cent increase in education sector budget allocation compared to the last budget. However, looking at the implementation of the 7th Pay Commission with an increased salary burden, the education budget may come out as the same like last year. This year, the finance minister has allocated 3.711 per cent to education sector compared to 3.653 per cent of the last budget.

It has also approved an all-time record of over 4,000 post-graduation (PG) medical seats to be added in various medical colleges and hospitals

for the academic session 2017-18. It has as well approved the proposal to open 50 new Kendriya Vidyalayas (KVs) under Civil/ Defence sector in the country requiring an investment of Rs 1,160 crore (US$ 180.11 million). Moreover, The Government of India and the World Bank have signed a US$ 201.50 million International Development Association (IDA) credit agreement for the Third Technical Education Quality Improvement Programme (TEQIP III), aimed at improving the efficiency, quality, and equity of engineering education across several focus states. Certainly, the Sarva Siksha Abhiyan (SSA), the District Primary Education Programme (DPEP), the Mid-Day Meal Scheme (MDMS), the Teacher Education Scheme (TES) and the Kasturba Gandhi Balika Vidyalaya Scheme (KGBVS) have worked well in the country and they are still working well in many States. The number of children attracted to primary school education has grown by leaps and bounds, although the number of dropouts on the way is still high. These schemes have met, no doubt, the massive needs of millions of children requiring primary education. Primary education is now available to children in villages within 1 to 2 kms. Quoting from a Planning Commission document, "the number of habitations that had a primary school within a distance of one kilometer was 10.71 lakh (87 percent) and the number of habitations that had an upper primary school within a distance of 3 km was 9.61 lakh (78 percent)." There are only one lakh habitations yet to be covered for primary (Standards 1-5, Age 6-11 years) and upper primary schools (Standards 6-8; Age 7-14 years) according to the same document.

RTE

The Right of Children to Free and Compulsory Education Act or Right to Education Act (RTE), is an Act of the Parliament of India enacted on 4 August 2009, which describes the modalities of the importance of free and

compulsory education for children between 6 and 14 in India under Article 21a of the Indian Constitution. India became one of 135 countries to make education a fundamental right of every child when the Act came into force on 1 April 2010. The Act makes education a fundamental right of every child between the ages of 6 and 14 and specifies minimum norms in elementary schools. It requires all private schools to reserve 25% of seats to children (to be reimbursed by the state as part of the public-private partnership plan).

Roadmap ahead

Various other government initiatives are being proposed and adopted to boost the growth of distance education market, besides focusing on new education techniques, such as E-learning and M-learning.

The education sector has seen a host of reforms and improved financial outlays in recent years that could possibly transform the nation into a knowledge haven. With human resource increasingly gaining significance in the overall development of the country, development of education infrastructure is expected to remain the key focus in the current decade. In this scenario, infrastructure investment in the education sector is likely to see a considerable increase in the current decade.

There are close to 650 districts in India and each district has approximately 2 million population equivalents to the total population of some countries in the West. In fact, some states of India have populations exceeding the combined populations of countries like Sweden, Switzerland, Norway, Belgium and the Netherlands. Therefore, our planning and priorities of education should be totally different from those of the Western countries. But it is important that India is trying its best to provide the growing number of children the infrastructure essential for pre-primary

ideas that have transformed and reshaped 20th-century mathematics. These ideas continue to shape the mathematics of the 21st century.

Here is some information about Ramanujan's life:

Srinivasa Ramanujan was born on December 22, 1887 at Erode, Tamil Nadu in a Tamil Brahmin Iyengar family.

Ramanujan studied at the Government College in Kumbakonam in 1903. In college, he failed exams due to his negligence for non-mathematical subjects.

In 1912, Ramanujan started working as a clerk in the Madras Port Trust.

Ramanujan joined Trinity College a few months before World War 1 began. In 1916, he received a Bachelor of Science (BSc) degree. He was elected to the London Mathematical Society in 1917.

Ramanujan returned to India in 1919. A year later, he breathed his last at the age of 32.

The 2015 movie 'The Man Who Knew Infinity was released based on Srinivasa Ramanujan's biography

What is the Importance of Mathematics in Our Daily Lives?

Mathematics is a study of measurements, numbers, and space, which is one of the first sciences that humans work to develop because of its great importance and benefit.

The origin of the word "mathematics" is in Greek, which means tendencies to learn, and there are many branches of mathematics in science, that are related to numbers, including geometric forms, algebra, and others.

National Mathematics Day: Birth Anniversary of Srinivas Ramanujan

By Prof. Trilochan Biswal

India observes the National Mathematics Day every year on 22 December since 2012. The day is celebrated to commemorate the birth anniversary of Mathematician Srinivasa Ramanujan. This year nation celebrates his 134th birth anniversary of Ramanujan. The main objective behind the celebration of National Mathematics Day is to make people aware of the development of mathematics and its importance in the growth of humanity.

History of National Mathematics Day:

The day was announced on 26 February 2012 by the then Prime Minister Manmohan Singh to mark the 125th anniversary of the birth of the Indian mathematical genius Srinivasa Ramanujan (22 Dec 1887- 26 Apr 1920). 2012 was also observed as National Mathematics Year. Ramanujan had a wealth of

Mathematics in Our Everyday Life

Mathematics is the pillar of organized life for the present day. Without numbers and mathematical evidence, we cannot resolve any issues in our daily lives. There are times, measurements, rates, wages, tenders, discounts, claims, supplies, jobs, stocks, contracts, taxes, money exchange, consumption, etc., and in the absence of these sports data, we have to face confusion and chaos.

Thus, mathematics has become the companion of man and his helper since the beginning of human existence on earth. When man first wanted to answer questions such as "How many?" he invented math. Then algebra was invented to facilitate calculations, measurements, analysis, and engineering.

The science of trigonometry emerged when humans wanted to locate high mountains and stars. Therefore, the knowledge of this article arose and developed when humans felt the need and mathematics are necessary for the long planning of life and also the daily planning of any individual.

Mathematics plays a vital role in all aspects of life, whether in everyday matters such as time tracking, driving, cooking, or jobs such as accounting, finance, banking, engineering, and software. These functions require a strong mathematical background, and scientific experiments by scientists need mathematical techniques. They are a language to describe scientists' work and achievements.

As for mathematical inventions, they are numerous throughout the ages. Some of them were tangible, such as counting and measuring devices. Some of them are not as tangible as methods of thinking and solving. The symbols that express numbers are also one of the most important mathematical inventions.

Mathematics helps in analytical thinking. While solving maths problems, data are collected, disassembled, and then interconnected to solve them.

- Mathematics helps to develop the ability to think.
- It helps explain how things work.
- It helps to develop wisdom.
- It increases the speed of intuition.
- It helps to make the child smarter.
- Money can be collected in mathematics when used as a profession.
- It is important in a constantly evolving world.
- It provides the child with an opportunity to get to the world.

Can prayers be organized without the use of numbers, and what is left of the time for the next prayer?

And much more, whatever you try, you cannot get rid of the use of this important science.

The importance of mathematics is that it is a method based on research and analysis, to reach the desired results, and is used for calculation and presentation of data; not only the use of this science in a particular field but the use of all areas of life and different sciences.

Mathematics is one of the most important sciences that cannot be dispensed with, and the individual's need for mathematics is no less than the need of society. When studying an individual or a person of mathematics, this will develop his thinking and scientific tendencies. Mathematics also works to express the most accurate and objective things, and it helps us to manage time and plan things, economics and others.

Mathematics is an innate approach to research and analysis to reach a solution to mathematical problems.

Mathematics is a basic subject taught at all stages. It cannot be dispensed with. Some of the important roles of mathematics in society are:

The importance of mathematics in scientific studies: The conduct of studies and scientific research requires many skills in sports, which help in the development of studies and progress, for example, the study of physics or chemistry depends heavily on mathematics, including mathematical skills and mathematical matters, and lies the role of mathematics in the accuracy of conducting social research through the statistics branch.

The importance of mathematics in the development of social values: It helps mathematics in the development and refinement of personality, through organization and accuracy, research and investigation and study, and helps to detect.

Although the importance of Mathematics can never be denied, a general fear of dealing with math exists in students across the world.

Having said that, most people, nowadays grapple with the calculations, as they find them too tough to handle. To ease their life, there exists a comprehensive platform like Meracalculator, Khanacademy and mathisfun. Moving from specific to general, it has a host of calculators dealing with physics, chemistry, general arithmetic's, and many more.

So, students of various disciplines can use this website to solve their math's-related problems without any hassle.

Mathematical rapprochement is necessary for any process, so if anyone wants to reach the height of his life, he should not fail to believe in the role of mathematics in his life, starting with the ordinary citizen. Every day has a daily interest in mathematics. Mathematics is deeply related to the natural phenomenon, the way to solve many secrets of nature.

Mathematics is necessary to understand the other branches of knowledge. All depend on mathematics in one way or another. There is no science, art, or specialty except mathematics was the key to it. The discipline and mastery of any other science or art are very much related to the size of mathematics.

I think it is impossible to limit the uses of mathematics in everyday life so we will suffice with some of them:

Can you use any entertainment game without using numbers?

Can you practice any sport without using numbers to learn if you are a winner or a loser?

Can you do your work without using numbers? If you are a teacher, collect your students' marks or a doctor, estimate the amount of medicine for the patient or an engineer, estimate the amount of raw material to be added to complete the work, or even a leader in a battle.

Can you enter the store without using the numbers?

Character Building and Holistic Personality Development

By Shri Atul Kothari

Atul Kothari is an educationist from India. Presently, he is the national co-convener of Shiksha Bachao Andolan Samiti and co-secretary of Shiksha Sanskriti Utthan Nyas. He has been the General Secretary of Akhil Bharatiya Vidyarthi Parishad. In the last 10 years, through the Save Education Movement, he also made a significant contribution in removing the distortions, discrepancies in the curriculum, text books of the country. Due to their efforts, till now the decisions of 11 courts have come in favor of the Save Education Movement. Atul Kothari has published more than 50 research papers related to education.

Atul Kothari is also associated with Urvarshi, the quarterly national research journal, Founder, Education Health Trust, etc. He is the editor of the magazine "Shiksha Utthan" through which he strives for the upliftment of Indian languages in education and education.

The importance of mathematics in cultural development: Like other sciences, mathematics influences civilization's development.

Cultural development depends on the achievements of scientists and innovators, especially athletes. No one neglects the role of Arab and Muslim scientists in the development of civilizations.

A great mathematician, Muhammad ibn Musa al-Khwarizmi who created the theory of algebra and laws of arithmetic that helped develop modern science and technology.

Mathematics is a fundamental part of human thought and logic, and integral to attempts at understanding the world and ourselves. Mathematics provides an effective way of building mental discipline and encourages logical reasoning and mental rigor. In addition, mathematical knowledge plays a crucial role in understanding the contents of other school subjects such as science, social studies, and even music and art.

instill positive values and character traits. This also differs according to culture and the age of the students. There are, however, certain general principles that character education advocates agree upon. The **11 Principles of Character Education** as outlined by Character.org provides a helpful summary of this idea.

- Educators promote core ethical and performance values to instill good character in students.
- A comprehensive definition of character, which includes thoughts, emotions, and actions.
- Educators use an intentional, proactive, and comprehensive approach to character development.
- To support this process, schools create caring and supportive communities.
- Educators encourage students to develop morally and provide opportunities to grow morally.
- Schools create a challenging academic environment to helps students develop character.
- Educators foster self-motivation in students.
- Educators and all school staff are part of an ethical learning community and adhere to the same values that they teach.
- Schools foster leadership values.
- Schools engage parents and other members of the community as partners in character building efforts.
- Schools regularly assess their culture, their staff and their overall success at fostering character development.

As you can see from this list, character education involves a comprehensive approach that includes a robust academic curriculum, a dedicated staff, and a partnership with parents and the wider community. This is a more challenging approach to education than one that focuses primarily on academics. Building character is a more complicated and wider-reaching goal. It's an approach to

He is one of the founders of the Save Education Movement in the country in the year 2004. Initially, he was a member of the Central Steering Committee of the Shiksha Bachao Andolan Committee. Since 2006, he is the national co-convener of the Shiksha Bachao Andolan Samiti. He has played an important role in giving a permanent shape to the temporary movement of 'Shiksha Bachao Andolan Samiti'. Through all these institutions and forums, he has been raising the subject of Indian languages continuously.

Education isn't only about learning subjects such as math, English, and science. A more comprehensive definition of education addresses the emotions, personality, and character as well. Parents today are looking for schools that help their kids become healthy, balanced, and civic-minded adults. This is why character education is so important. It provides a holistic approach to learning and development. Let's explore how **character education** helps kids learn and develop crucial values.

What is Character Education?

The most basic definition of **character education** is an approach to education that incorporates values, ethics, emotional maturity and a sense of civics. To many, this sounds simple, straightforward and even self-evident. However, modern education has mostly developed in another direction, one that focuses entirely on students' academic and, to a lesser extent, physical development (e.g. physical education, sports). In the modern world, however, parents and educators increasingly recognize the need for a new yet traditional approach to education, one that emphasizes character as well as intellectual development.

Components of Character Education

There's no precise formula for a curriculum that incorporates character education. As with any approach to learning, there are different theories on how to

It's true that children, by the time they start out in school, have already developed many personality traits. These are far from set in stone, however. As kids interact with their peer and teachers, they have many opportunities to learn valuable lessons. Educators who ignore character-building are overlooking a crucial opportunity to help students grow into responsible adults.

A child who spends six or more hours at school every day learns many lessons that have nothing to do with academics. He or she learns to play, share, socialize, and resolve conflicts. Too often, children learn these lessons haphazardly or according to the personal preferences of a teacher or staff member who is nearby. Character education systematizes these lessons, allowing students to develop a moral compass.

The goal of character education isn't to supplant parents' influence but to support it. Under this model, educators work closely with parents and the rest of the community as partners in character development.

Character Education: The Future of Education?

The principles of character education are certainly not new. In many ways, they are consistent with more traditional ideas about education. At the same time, modern educators who embrace this model aren't trying to recapture the past. They are, rather, seeking to create an environment that helps students face the challenges of living in a complex and fast-changing world.

Parents, as well as students, enjoy the **benefits of character education**. In a society where influences such as the media and internet constantly barrage children with messages, it's more important than ever to provide guidance and balance, both at home and in the classroom. It's unrealistic to expect parents on their own to watch and guide children all day long.

Many parents recognize the need to raise their children in a community that fosters important values. Traditional influences, such as neighbors, religious

education, however, with the potential to yield outstanding results. Rather than simply teaching students information, it seeks to help them develop into ethical, responsible citizens.

The Role of Educators in Character Building

There are several common **objections to character education**, based on some natural but misguided beliefs about the proper role of schools in developing character. People often assume that parents rather than educators are responsible for fostering values in children. While parents certainly have an immense role to play in this regard, they can't carry this responsibility alone.

Children, once they reach school age, spend a great deal of time apart from their parents. It's true that children, by the time they start out in school, have already developed many personality traits. These are far from set in stone, however. As **kids interact with their peer and teachers**, they have many opportunities to learn valuable lessons.

cutting of vegetables, making a clay model, typing on a computer keyboard, medical surgery, driving, writing, etc.

Intellectual capability and cognitive ability development include:

- Development of the abilities to learn from information and experience – this involves learning from data and information; learning from doing an activity, etc.

- Development of abstract thinking abilities – understanding and thinking about concepts, ideas, principles, and objects which are non-verbal or not physically present.

- Development of comprehension abilities – ability to understand and comprehend written and verbal information.

- Development of logical and analytical thinking abilities – analyzing reasons behind events and situations, understanding the causes behind an event or situation, etc.

- Development of critical thinking abilities – examining concepts, ideas, problems, and issues, etc.

- Development of creative thinking abilities – thinking of newer ways to solve problems; visualization; thinking of new ideas; etc.

- Development of problem-solving abilities – solving problems utilizing various concepts, solutions, etc.

Emotional ability development includes:

- Development of intra-personal abilities – this involves self-understanding (understanding of one's strengths and weaknesses, one's capabilities, etc.) and self-belief.

- Development of interpersonal abilities – abilities to understand others; what others are communicating, building relationships, etc.

institutions, and local community organizations are harder to find today. People spend long hours working, move frequently, change jobs, and are increasingly fragmented in their own social circles. Schools provide one of the few stable influences on children's' lives. Character education is a model that provides students with core values along with academic instruction. This type of education is essential for raising the next generation.

Holistic development essentially means the development of intellectual, mental, physical, emotional, and social abilities in a child so that he or she is capable of facing the demands and challenges of everyday life. These abilities are vitally important for success in professional fields of work.

Every child is unique. He or she has unique personality traits, interests, preferences, values, attitudes, strengths, and weaknesses. The educational curriculum must be able to help every child find his or her unique place in the world in alignment with the uniqueness that he or she has. In order to achieve this, the holistic development of a child is of utmost importance.

What is holistic development?

Holistic development is a comprehensive approach in learning which aims to develop multiple facets or abilities of a human brain. Conventional educational and learning systems aim at the development of intellectual capabilities only. But holistic growth aims at the development of physical capabilities, intellectual abilities, cognitive or mental abilities, emotional abilities, and social skills.

Physical capability development includes:

- Development of gross motor skills – such as walking, running, climbing, etc. Gross motor skills involve the movement of the whole body.

- Development of psychomotor abilities – these refer to a very wide range of fine motor movements that occurs in response to conscious learning from five senses – mostly from sight, touch, and hearing. For example – painting,

and primary education.

Despite all such problems, Indian education scenario embracing all sectors is one of great and gigantic expansion and it is certainly on the upward swing. The steps taken by various agencies such as the UGC, the AICTE, the IMC, etc., and the various educational bodies such as NCERT, SCERT, CBSE and the private professional bodies and management associations will certainly bear fruit in the long run and make India a Knowledge Society and an attractive educational destination for today's globalized world. Let us conclude this article with the observation made by the UNESCO three decades ago: 'Education is the planned process of inducing those attitudes and transmitting those skills that are essential for local, regional and national development. Social change with economic and political change is most essential to all countries, especially developing countries that are yet to bring about fundamental changes for the fulfillment of the basic needs of all sections of their people.' Let us hope that the commendable overall development made by India in all sectors of education during the past 65 years will be augmented further in the years to come. Let us wish that we go farther and farther only to augment developments in the years to come. The ripening of education is a continuum that pleats its past history into a breathing stream, rolling through the present into the future for 70 years of independence.

- Development of self-regulation abilities – abilities to control and regulate one's emotions and feelings.

- Development of empathy – the ability to understand and share others' feelings and emotions.

- Development of social competencies – this involves abilities to interact and communicate with others, working in a team, coordination, and cooperation with others, etc.

Social skill development includes:

Studies have shown that through playful learning experiences, students can acquire broad, dynamic, and interconnected skills rapidly and effectively.

The aim of teachers and counselors in holistic growth is to chart out every child's individual capability and compare their abilities to the norms of a child their age. A comparative analysis and its results along with relevant readings are used to explain how the traits of the child and aspects of his/her environment may interact to influence his/her growth and development.

Holistic development of students seeks to address many factors such as the physical, emotional, spiritual, relational and intellectual aspects. The importance of the holistic approach lies in the fact that it is the children who learn different skills in a stage-wise manner, including walking, running, talking, fine motor skills, etc.
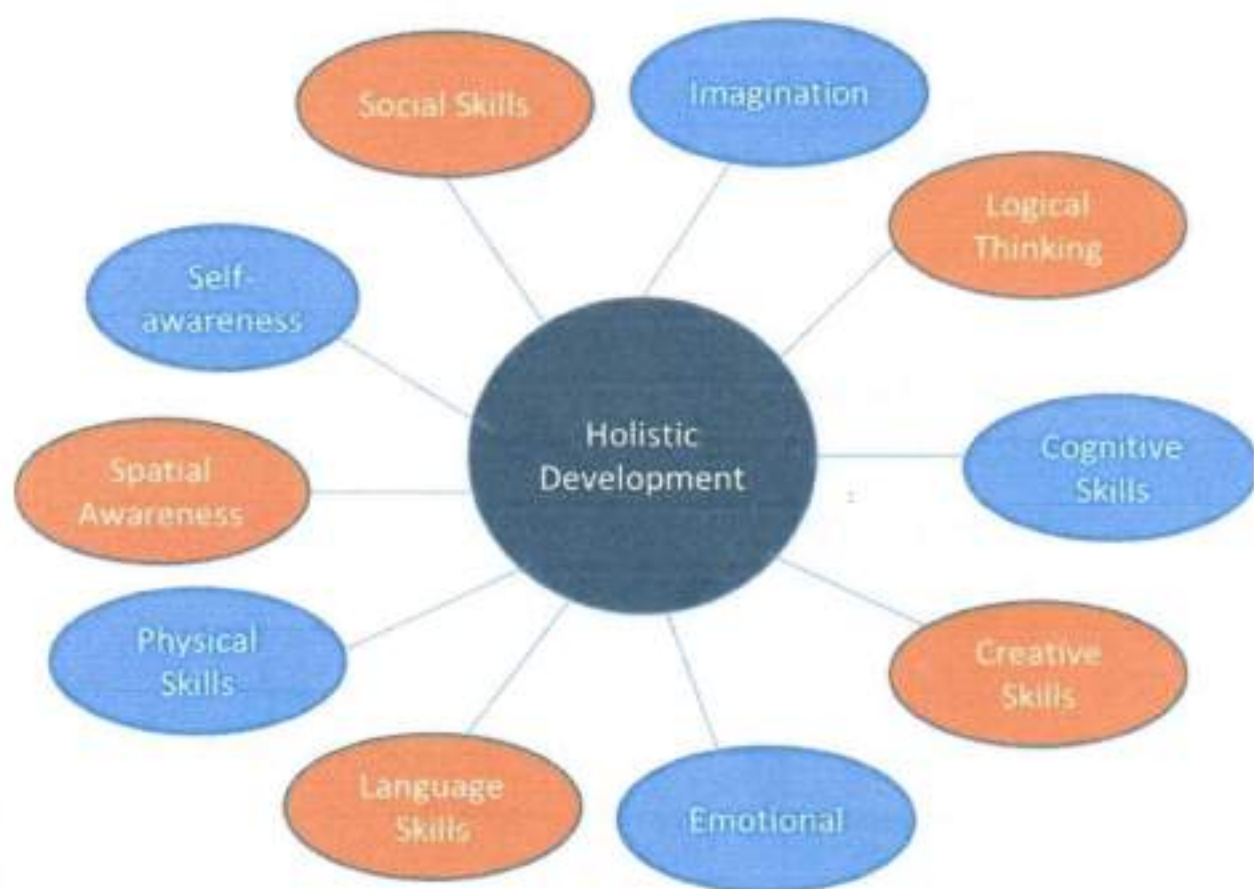
Figure 1: Holistic Development – at a glance

Why holistic development?

Nowadays, most companies or organizations not only consider a student's overall academic performance but also consider the holistic development of students when they recruit for various jobs. This makes the holistic development of students in schools and colleges very important.

Gone are the days when parents used to spend their entire day with their children. With the way technology is advancing and education methods changing, the parents are now interested in making their children more engaged and involved in almost all facets of learning. Holistic development meaning has attained a lot of importance in parenting.

Right from the very beginning, a child is exposed to a variety of sports and activities that enable him/her to learn new things. This has resulted in a complete change in the way students are taught in schools as well. With the advent of new-

age technologies and teaching methods, the overall holistic development of a child in pre-schools has become a necessity. For the same reasons, the holistic development of students at primary and secondary schools has also become crucial.

Key elements of holistic development

When we talk about the holistic development of a child, we need to understand that it is the overall development that matters. Thus, holistic growth seeks to target child personality development in the following ways:

Cognitive

Cognitive development relates to the brain and its development, i.e., the child's intelligence. An average brain develops up to 90% of its potential by the age of 5, so children entering preschool are already nearing full development in terms of cranial capacity.

It is a well-known fact that young minds are quicker at absorbing information and noticing as well as adopting certain activities and behaviors. With proper guidance, these fresh minds can master much more. **Cognitive development involves thinking, problem-solving, and understanding of concepts** and is one of the vital elements of holistic development. It is a very important factor in the holistic development of a child.

Language

Language and speech are integral parts of an upbringing process. Speaking well and articulating are necessary skills in today's world. Below the age of 5, children capture linguistic abilities fast and bloom well. Since the brain develops rapidly, it is necessary to stimulate sight, sounds, and speech patterns. Children start with small words in their mother tongue and slowly move on to complex sentences. Gradually, the shift is made towards other languages, commonly English or a third

language, and is the second most crucial element in the holistic development of the child.
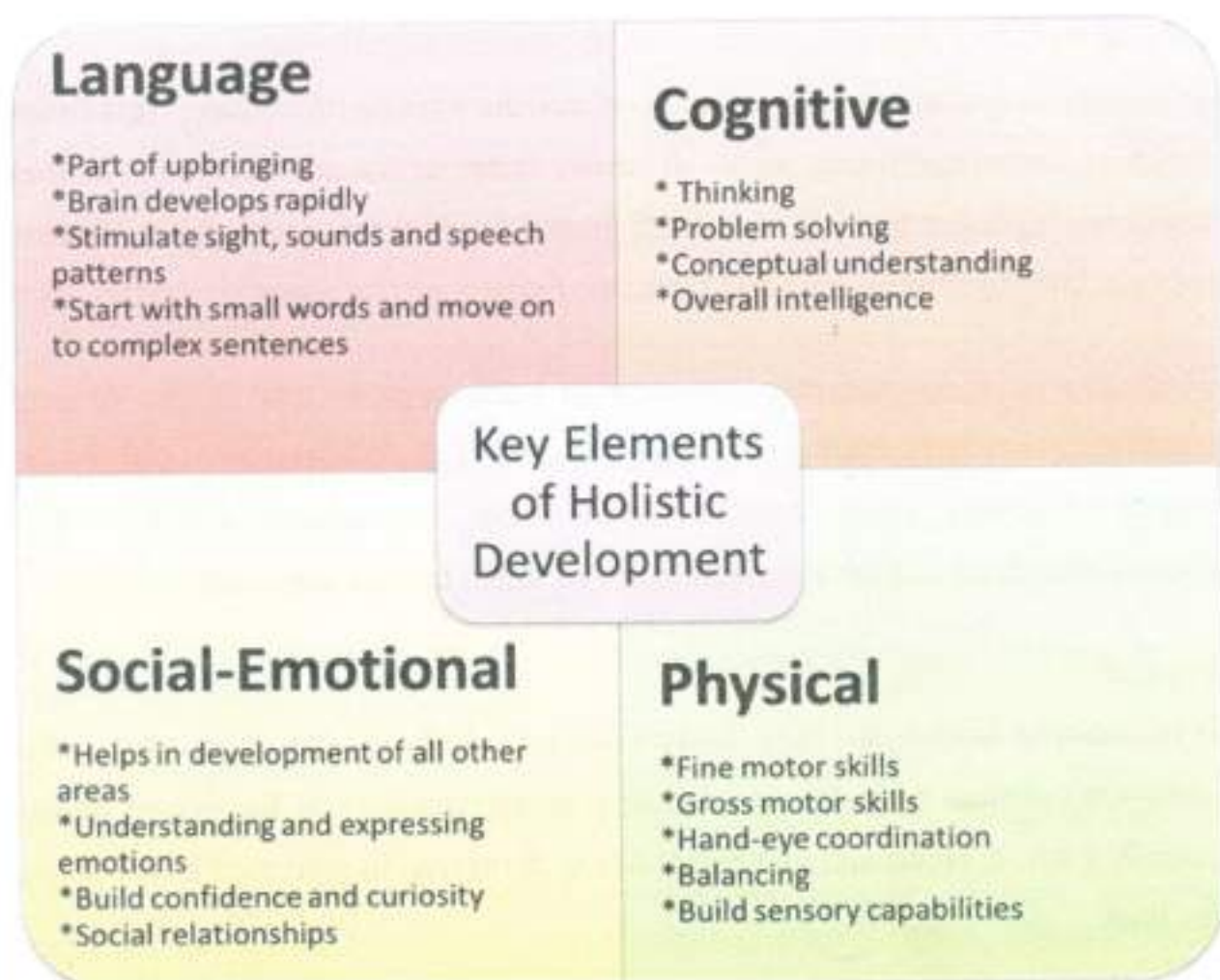
Language

*Part of upbringing
*Brain develops rapidly
*Stimulate sight, sounds and speech patterns
*Start with small words and move on to complex sentences

Cognitive

* Thinking
*Problem solving
*Conceptual understanding
*Overall intelligence

Key Elements of Holistic Development

Social-Emotional

*Helps in development of all other areas
*Understanding and expressing emotions
*Build confidence and curiosity
*Social relationships

Physical

*Fine motor skills
*Gross motor skills
*Hand-eye coordination
*Balancing
*Build sensory capabilities

Figure 2: Key elements of holistic development

Social-Emotional

Bringing up the social and emotional sides of the brain requires students to go through experiences that allow provisions for positive relationships while exercising control of emotions. Trust and security are fundamental parts of this, without which a child may grow up to be unhinged.

A child in his/her developmental years is most vulnerable and requires attention and affection. Security found with trusted adults leads to attachments and a strong foundation for future emotional links as they learn to be confident and secure in

their abilities and sense of self. Therefore, as the third most important element of holistic development, it is necessary that teachers and parents maintain a secure and friendly environment for a child to ensure holistic growth.

Jobs in the education sector these days require the training of the caregivers so that they can encourage young minds in self-restraint or control over their rampant emotions and understanding of feelings inside. As the brain develops, children are overwhelmed by various new and fluctuating emotions like anger and sadness.

There is a need for assistance in order to teach them to take charge of these emotions. Anger management, dealing with sensitivity, depression, ego, etc. are aspects of healthy social-emotional development. This ensures a child is more open to other forms of development involved in the holistic approach.

Physical

It is common knowledge that children are little balls of unbridled energy. This energy is essential to make the necessary neural connections for overall holistic growth. Thus, exercise and movement of any form lead to increased blood flow in the body.

With increasing blood flow to the brain, the child becomes capable of acquiring new information and concepts. It is the development of gross and fine motor skills that enables a child to be healthy and fit. Not only that, children learn to be more aware of their sensory understandings and recognize their implications to implement well in the future.

In conclusion

What children require today in schools is not just academic lessons. A **schooling system that helps a child understand his or her self, emotions, and mental duress** while teaching him or her **how to build up healthy and**

functional relationships as well as **develop resilience and team spirit is the true form of education.**

Such a system boosts the morale of a student so that they can go on to achieve greater heights in their careers while becoming upstanding citizens of the society who contribute to the growth and development of the country. Hence, the holistic development of students is very important right from the beginning of school-going years.

School leaders and teachers must ensure that the school curriculum is integrated with various co-curricular activities to ensure the holistic development of students. School leaders and teachers may take expert advice from career counselors as they understand the skills required for future success in work life.

The Big Picture: Census- Challenges & Importance

By Prof. Dilip Kumar Dey

1. At present, working as Professor& Head, Dept. of Statistics; & Director(International Relation Division), Indira Gandhi National Tribal University, Amarkantak, MP, India.

2. Worked as Director at Scholar's Institute of Technology & Management, Guwahati.

3. Worked as faculty for 'Master of Official Statistics' at "Eastern Africa Statistical Training Centre (EASTC)", Dar Es Salaam, Tanzania to teach officials from 18 African countries such as Tanzania, Nigeria, Ethiopia, Gambia, Swaziland, Somalia, Ghana, Lesotho etc. So far I taught 4 batches covering 8 modules and guided more than 30 students for research work from different countries of Africa.

4. Taught on Sampling Theory to Senior Faculty of 'Sirupsi College', Bhutan sponsored by UNFPA during 24-31 August 2003. 5. Visiting faculty to ISI, Kolkata; School of Planning & Architectures (Deemed University), New Delhi & IIPS, Mumbai

The decennial Census of India has been conducted 15 times, as of 2011. While it has been undertaken every 10 years, beginning in 1872 under British Viceroy Lord Mayo, the first complete census was taken in 1881. Post 1949, it has been conducted by the Registrar General and Census Commissioner of India under the Ministry of Home Affairs, Government of India.

The importance of the census lies in its being an integrated picture of society in a given time within numerous, multiple and continuous changes, which cannot be defined through other data collecting methods. The census provides a suitable database for comparisons and projections of demographic data as well as social and economic characteristics of society.

A comprehensive census is different from other statistical methods in the following ways:

1. It provides comprehensive and detailed data on the whole population in addition to demographic, social and economic characteristics by the lowest administrative or geographical level and related rates and indicators (population growth rates, age and gender composition, educational features, Qatari and non-Qatari workforce).

2. It provides necessary data enabling the assessment of the population status in Qatar during the inter-census period as well as monitoring demographic, social and economic changes taking place during the same period in various administrative divisions.

3. It provides data on expatriates' number, distribution and characteristics in Qatar, especially the immigrant workforce, with a high degree of precision, instead of dependence on estimates.

4. It provides a database on which are built population projections and workforce projections.

5. It provides a database needed to study specific social phenomena.

6. To provide basic data for all sectors in the country (education, health, population, etc.) with a view to contributing to the formulation, monitoring and evaluation of plans related to the provision of services needed by the Qatari society.

7. To provide necessary frameworks for deriving samples for field research to be undertaken in the future.

8. To provide data on housing units as well as their facilities and features related to living conditions, basic data needed to work out a clearly-defined housing policy aimed at ensuring prosperity for citizens, as well as indicators on houses conditions and extent of their relationship with public services.

9. To provide a comprehensive and modern framework for buildings, houses and households by various administrative divisions. Such framework is necessary to design and use samples for conducting various household surveys. This will be positively reflected on the accurate measurement of the various phenomena to be investigated such as fertility, mortality and migration, which are used as the basis for calculating population growth rates and estimates of the post-census population.

10. To provide an accurate picture of the status and features of houses for the purpose of assisting in drawing up housing and construction plan for the future.

11. To provide data on the features of buildings of the public sector and private sector and status of their occupation so as to define various needs in the future.

12. To define the conditions of economic and social enterprises in the public and private sectors in terms of the legal status, economic activity and workforce size by gender and nationality.

Historical Background

The earliest literature 'Rig Veda' reveals that some kind of population count was maintained during 800-600 BC.

Kautilya's Arthasastra (written around 321-296 BC) laid stress on Census taking as a measure of State policy for purpose of taxation.

During the regime of Mughal king Akbar, the administrative report 'Ain-e-Akbari' included comprehensive data pertaining to population, industry, wealth and many other characteristics.

The first Census was conducted in India in 1872 (although non-synchronously in different parts) during the reign of Governor-General Lord Mayo. The first complete synchronous Census was conducted in 1881.

With a history of more than 130 years, it has proved to be a reliable exercise that is conducted every 10 years.

Census-2021 is the 16th such exercise since inception and 8th since independence.

How is the Census Conducted?

The primary tool of Census operations is the questionnaire that is developed over the years, taking into account the changing needs of the country.

It is a list of questions that helps the government collect all the necessary details required about citizens. The questions enhance the credibility & quality of data if various dimensions of socio-economic issues are well incorporated in the questionnaire.

The name of person, relationship with the head, sex, date of birth and age, current marital status, religion, mother tongue, literacy status inter alia are some of the fundamental questions which are asked by the enumerators (a person employed in taking a Census of the population).

The Census-2021 exercise would be conducted in two rounds:

Household Schedule: The first round will be conducted in 2020, wherein the enumerators would go on a house-to-house basis to record amenities in each household.

The second round– 'Headcount' would be carried out in early 2021 approximately 6 months after the first round.

Census Act, 1948

Although the population Census of India is a major administrative function, the Census Organisation was set up on an ad-hoc basis for each Census till the Census of 1951.

The Census Act, enacted in 1948, then provided for the permanent scheme of conducting population Census with duties and responsibilities of Census Officers.

The Act makes it obligatory on the part of every citizen to answer the Census question truthfully and also penalises for giving false information.

One of the most important provisions of the Census Act 1948 is that it makes provisions for the maintenance of secrecy of the information collected at the Census of each individual. All information collected under the Census is confidential and is not shared with any agency- Government or private.

Authority Involved

The Government of India in May 1949 decided to initiate steps for developing the systematic collection of statistics on the size of the population, its growth, etc.

For this purpose, it established an organisation viz. Office of the Registrar General and Census Commissioner under Ministry of Home Affairs (which is responsible for conducting the decennial Census).

Later, this office was also entrusted with the responsibility of implementation of Registration of Births and Deaths Act, 1969 in the country.

Importance of Census

Comprehensive Source of Data: Census is a data collection exercise. It gathers knowledge about the demographic dividend of the nation which is vital for many purposes.

Various surveys like health survey, education survey, agriculture survey etc. are based on this comprehensive data.

Decision-making: Census is significant for any country for evidence-based decision making.

The data collected through the Census is used for administration, governance, planning and policy-making as well as management and evaluation of various programmes run or to be introduced by the Government, NGOs, researchers, commercial and private enterprises, etc.

Policy-making: Census is responsible for taking the collected information "from a dwelling unit to the delivery unit". It will boost coherence policy making and scientific planning, resulting in optimisation of resources.

To scholars and researchers in demography, economics, anthropology, and many other disciplines, the Indian Census has been a fascinating source of data.

The collected data from the Census is available to grassroots administrative authorities of a particular region in order to take appropriate developmental tasks.

It helps in effective targeting and better delivery of government programmes to the most downtrodden sections of the society.

Demarcation: Census data is also used for the demarcation of constituencies and allocation of representation to the Parliament, State Legislative Assemblies and local bodies.

Giving Grants: Finance Commission gives grants to the states on the basis of population figures available from the Census data.

How is Census-2021 different from Earlier Ones?

Digital Data: It is for the first time the data is collected digitally via mobile applications (installed on enumerator's phone) with a provision of working in offline mode. This would help in reducing the delay and having the results almost immediately, unlike earlier cases where it used to take multiple years for the data to be analyzed and the reports published.

The data collected by enumerator on his/her phone will be registered with the Census authorities. In case of lack of network availability/connectivity, he/she will also have an option to collect the same information on paper and then make data entries onto the application (in offline mode).

No document will be required by the citizens to be shown as proof, and self-declaration will suffice the same.

Census Monitoring & Management Portal will act as a single source for all officers/ officials involved in Census activities to provide multi-language support.

No Caste Data: The latest Census (as per the existing plan) will not collect caste data. While the Socio-Economic Caste Census (SECC) was conducted alongside Census 2011, the outcome of the caste Census is yet to be made public.

Transgender Head: It is for the first time that information of households headed by a person from the transgender community and members living in the family will be collected. Earlier there was a column for male and female only.

Associated Challenges

Errors: There are two types of error during statistical exercise: Content error, and Coverage error which needs to be minimised.

People should not be considered as a mere headcount but as citizens having certain basic rights. Therefore, accurate data collection with minimal exclusion should be focused upon.

Furnishing of false information: Due to fear of losing intended benefits of various schemes (or fear of losing citizenship this time) and lack of education, people fabricate and tend to provide false information. For example, people had apprehensions about the data collection of children not going to school and many-a-times they did not answer the survey questions.

In this regard, the Kerala CM urged the people to acknowledge true information and take the Census exercise seriously.

Associated Costs: Huge expenditure (thousands of crores) is incurred by the government in conducting this exercise.

Security: The move towards digital mode of collecting the data is a step forward to speed up the process of analysis. However, the security of the data being collected (especially on the application) and adequate backup mechanism for such data has to be looked into.

The mistrust and fear of misuse of data need to be minimized and mitigated.

Abuse of Data: The availability of data with regional authorities has the potential for abuse of such data, as the concerned authority has access to everything about a particular family (ownership, caste, financial aspects, occupation, lifestyle, etc.).

Lack of community participation and inadequate training of enumerators to collect the precise and accurate data acts as a big challenge in conducting the Census exercise.

Remedial Measures

Capacity-Building: Proper training of enumerators (data collectors) and organizers should be organised.

Also, enumerators should be well paid to keep them motivated, as they are the focal point of data collection and ensuring data accuracy. As any disgruntled/aggrieved enumerator can hamper the quality of data.

A conducive safe and secure environment should be provided to the interviewers.

Strengthening the Data Quality: This can be done by minimising the coverage error and content error (through increased list of questions in the survey). It will help in changing the discourse of the government's programme implementation.

Organizing Campaigns: Launching of massive publicity campaigns in order to make people aware about the importance of Census in their life should be organized.

Relevant community political & religious leaders, college students (conducting flash mobs) should be involved in order to spread awareness and educate people.

Also, the government needs to create a mass media campaign through print & electronic media (through advertisements) in order to allay the fears and doubts haunting the minds of the people.

Census in India is the largest single source of a variety of statistical information on different characteristics of the people of India. It is a sacred democratic exercise. To follow an integrated approach should be the aim of all involved stakeholders in order to conduct this exercise in a hassle-free manner.

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