





Report (PAC 22.21)

## प्रख्यात शिक्षाविदों द्वारा विस्तार व्याख्यान Extension Lecture of Eminent Educationists (2022-23)



# क्षेत्रीय शिक्षा संस्थान Regional Institute of Education

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद् National Council of Educational Research & Training कप्तान दुर्गा प्रसाद चौधरी मार्ग, अजमेर 305004 Capt. D.P. Chaudhary Marg, Ajmer-305004

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Report (PAC 22.21)

## Dr. Anand Kumar Arya

Head, Department of Extension Education (DEE) (Programme Coordinator)

## क्षेत्रीय शिक्षा संस्थान Regional Institute of Education

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### Introduction

The series of *Extension lectures of Eminent Educationists* is a platform for the Institute students and faculty for academic interaction with eminent educationists. In this programme the eminent educationists are invited to the Institute to enlighten to the students and the faculty of the Institute. The programme is aimed to promote academic excellence, encourage innovative thinking and research. Under the series, the renowned educators are invited to share their insights, knowledge, and expertise with the institute academic community. The lectures cover a range of topics such as the latest trends in education, curriculum design, pedagogical approaches, educational policies like NEP 2020, climate change etc.

For the year 2022-23, the extension lectures have planned to highlight the application aspects of NEP 2020. Under the theme 'Orientation for Professional Development' highlighting the application aspects of NEP 2020 have organized on following identified sub-themes:

- > Teacher education
- ➤ Pedagogical strategies (discovery strategies, learning how to learn, promoting thinking) development of non-cognitive characteristics of students,
- ➤ 360-Degree assessment preparation
- ➤ ICT integration
- > Educational research,
- Professional development,
- ➤ Indian Traditional Knowledge system
- Mental wellbeing of students as well as teacher and teacher educators.

On the above proposed sub-themes, the extension lecture of eminent educationists may be organized on virtual platform and face-to-face mode. The SCERT faculty of the state UTs of Northern Region have also invited by google meet to in the Extension Lectures organized in virtual mode.

## **Specific Objectives**

- ➤ To provide a forum to students and faculty for academic interaction with eminent educationists in the highlighting the implications of NEP-2020
- ➤ To enlighten the students and Faculty about National Education Policy 2020 and its importance in the field of Education.
- ➤ To enrich the knowledge and understanding of students on various issues of educational importance with reference to life and contributions of eminent educationists in the field of education.

## **Executive Summary**

For the year 2022-23, the theme for the Extension lectures is application aspects of NEP 2020 emphasizing "Orientation for Professional Development". Total 7 extension lectures were delivered on various themes by Eminent Educationist.

#### The lectures are

- 1. Green Schools- Responsible Education for Sustainable Future by *Virendra Rawat*, Originator of Green School & Green University on July 29, 2022
- 2. Reforms in Teacher Education in the Light of NEP, 2020 by *Prof. Divya Nagar*, former Vice Chancellor at Rajasthan Vidhyapeeth in Udaipur on August 30, 2022
- 3. Reimagining Vocational Education envisioned in NEP 2020 by *Prof. Rajesh P. Khambhayat*, Former Joint Director, PSSCIVE & NTTTR, Bhopal (September 01, 2022)
- 4. Changing Course, Transforming Education, by *Prof. R. P. Tiwari*, Vice Chancellor, Central University of Punjab (November 11, 2022)
- 5. Minority Education in the Light of NEP 2020 *Aizaz Ahmed*, District Minority Welfare Officer, Ajmer (December 12, 2022)
- 6. Mathematical aspects of NEP 2020 by *Prof. G. Ravindra*, Former Director, NCERT, (January 17, 2023)
- 7. Global science for global well-being by *Dr. Sudhir Kumar Mishra*, Distinguished Scientist & Former Director General (Brahmos), DRDO, (February 28, 2023)

# **Green Schools - Responsible Education for Sustainable Future**

Speaker : Mr. Virendra Rawat, Originator of the Green School

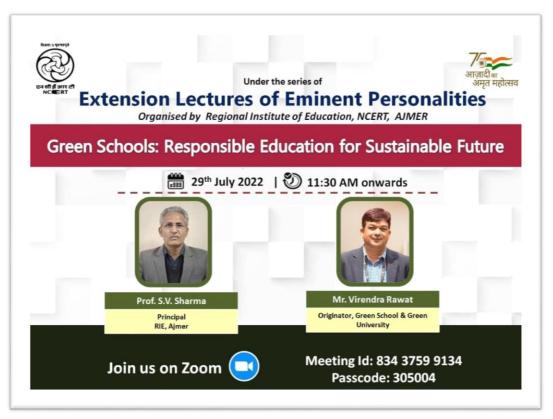
& Green University Concept

Date : Friday, July 29, 2022

Time : 11:30 AM

Venue : Seminar hall, DEE, RIE, Ajmer

Under the series of 'Extension Lecture of Eminent Educationalists', the first lecture on 'Green Schools – Responsible Education for Sustainable Future' was organized on July 29, 2022 by the Department of Extension Education, RIE Ajmer. Mr. Virendra Rawat, originator of the Green School and Green University concept was speaker of the day.



Mr. Rawat emphasized the value of incorporating environmental sensitivity in the education system of country. He discussed the current global scenario in respect to changing climatic changes wherein the climate catastrophe, shortage of resources, imbalance in nature human understanding are results of excessive exploitation of nature and its resources. The environmental disturbance in fact is the response to exploitative human activities that have continued since very long time. The speaker enumerated and discussed ways to create sensitization towards nature, develop empathy and skills to preserve the environment.



Sh. Rawat during his deliberation

The speaker highlighted the need to integrate education with nature, teaching children the value of their surroundings, promoting quality content that blends nature and Indian culture effectively. There is an urgent need to revert back to one's traditions and culture which upholds the teachings and norms to create and maintain a healthy environment. He also mentioned about a Green Mentor organization that conducts green audit, grading and approving the educational

institutes on the basis of their environmental awareness, campus greenery, use of resources and waste management. The idea of judicious use of resources can be effectively followed through various changes such as maintaining classroom temperature lesser than the outside, developing environment friendly infrastructure, use of green uniform (based on eco-friendly material), ensuring safe toilet and hygienic waste disposal.

The speaker enlisted these measures as major contributors in maintaining a healthy environment. He elaborated a concept of Green Teacher – who shall connect nature studies with every subject defining and establishing a closer contact of students with their environment. Further, there was a discussion session wherein the queries and concerns of the audience were duly addressed by the resource person; Prof. Rajesh Mishra reflected on the importance of the session and appreciated the credible efforts of Mr. Rawat in raising environmental concerns through responsible education.



Welcome by Dean of Instructions

The recorded lecture is available at institute YouTube channel named "RIE-NCERT, Ajmer Official". It may be watched by visiting the channel and link <a href="https://www.youtube.com/watch?v=3PH73VhOyVw">https://www.youtube.com/watch?v=3PH73VhOyVw</a>





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### **Reforms in Teacher Education in the Light of NEP 2020**

Speaker : **Prof. Divya Nagar**, Former Vice Chancellor,

Rajasthan Vidhyapeeth, Udaipur

Date and Day : 30.08.2022, Tuesday

Time : 10:30 AM

Venue : Room No 67, Department of Extension Education

Prof. Divya Nagar, Former Vice Chancellor, Rajasthan Vidyapeeth, Udaipur delivered an Extesnion Lecture on the topic of "Reforms in Teacher Education in the Light of NEP 2020" on August 30, 2022. To begin with the topic, Prof. Divya Nagar highlighted that NEP 2020 is significant to establish and modernize a strong educational system in order to become the superpower globally. The speaker stressed that NCERT is playing an important role in the implementation of NEP 2020. The speaker highlighted major concerns for teacher education for effective implementation of NEP 2020.



Prof. Nagar during her Extension Lecture

The Prof. Nagar emphasized the role of each and every individual associated with the education system for ensuring the practical implementation of NEP 2020. The speaker highlighted NEP 2020 vision for urgent revitalization through radical action, in order to raise standards and restore integrity, credibility, efficacy, and high quality to the teacher education system. The major concerns highlighted by the speaker were the use of local language as it develops a positive attitude and psychology among the learners. NEP 2020 believes that through the development of a strong sense and knowledge of our own cultural history and languages children can build a positive cultural identity and self-esteem. Besides with psychology, it is necessary to develop the interest especially in rural areas to overcome the agitation of English language and numeracy and scientific temperament. The speaker underlined that beyond the teaching of cutting-edge pedagogy, the teacher education, as per the New Education Policy 2020, should strive to include subjects like sociology, history, science, psychology, early childhood care and education, foundational literacy and numeracy, knowledge of India and its values/ethos/art/traditions, and more.



Furthermore, Prof. Nagar pointed out that why the knowledge of local language is necessary for the teachers. Along with it, they should be provided with short term teacher training at cluster, panchayat and village level so that they can organize vocational training

program with ease and can manage to identify and select the local craftsman unbiasedly. She also stressed on the point of inculcation of sign language among children. NEP 2020 also calls for standardization of Indian Sign Language (ISL) across the country. The speaker further questioned the practice of rote learning and bookish knowledge and advocated holistic learning, for revolutionary change in education system so that our children would be a responsible citizen of India as directed also in the policy. She also emphasized the imparting of management training for resurrection of Indian culture.

Prof. Nagar ended her lecture with the focus on biggest concern in school education that unemployment is the biggest reason for crime in India and all over the world and hence, it is important for teachers to build character of the children at the very early stage. As part of holistic education, the speaker emphasised that NEP 2020 also directs that students must be provided with opportunities for internships with local industry, businesses, artists, crafts persons, etc., as well as research internships with faculty and researchers at their own or other HEIs/research institutions, so that students may actively engage with the practical side of their learning and, as a by-product, further improve their employability.

### **Reimagining Vocational Education envisioned in NEP 2020**

Speaker: Prof. Rajesh P. Khambayat, Former Joint Director,

PSSCIVE & NTTTR, Bhopal

Day and Date: Thursday, 01.09.2022

Time : 11:30 am,

Venue : Room No 67, Department of Extension Education

On the eve of the foundation day of NCERT an Extension lecture extension lecture was delivered by Prof. Rajesh P. Khambayat, former Joint Director, PSSCIVE & NITTTR, Bhopal on the topic of 'Reimagining Vocational Education envisioned in NEP 2020'.

To begin with, the speaker congratulated the Institute on the 62<sup>nd</sup> Foundation Day of NCERT. Prof. Rajesh P. Khambayat highlighted various aspects of Vocational Education expressed in NEP 2020. Prof. Khambayat quoted the exposure of students to Vocational Education, as mandated by NEP 2020, to benefit students and help preserve and promote local knowledge and professions.



Prof. Khambayat during his interaction

Prof. Khambayat pointed out that as per the UNESCO 80% of the jobs required are of vocational skills and only 5% of students of 19 to 24 age group has received any formal type of vocational education. Today in 13,000 schools 1.3 million students is taking Vocational Education. NEP 2020 strongly advocates that school education should be linked to higher education through vocational education. By 2035, every institute will be providing vocational education along with the generic and technical education. In this regard, various projects have been started to make it possible such as NISHTA, establishment of 500 virtual E-skills labs and many more. He further added that there are multiple reasons why we are lagging behind in Vocational education and one of them is positive attitude.



While highlighting the importance of positive attitude in vocational education, the speaker had given a presentation on the topic "Developing Positive Attitude for Professional Efficiency". He started his presentation with the questions: why do people behave and why do people behave as they behave? While explaining he quoted definitions of 'Personality' and 'Attitude' given by eminent scholars. He gave two situations to the house, one is 'I can't do the work' and second is 'I don't want to do the work'. First one is reflecting the ability and second one is reflecting the internal willingness of an individual and both of them are essential for successful career. The speaker later explained the types of attitudes, factors like education, experience, and environment that shape or determine our attitude and mentioned difference between positive and negative attitude. Moreover, the speaker also listed benefits of positive attitude and consequences of negative attitude.

The speaker recommended the house to read a famous book "Grit" to inculcate passion and resilience into their performance.

Prof. Khambayat focused on barriers in changing attitude such as prior experience, insufficient information, personal ego, influence of social surroundings and fear of failure. On the other hand, the speaker also gave some steps for developing positive attitude such as changing the focus and looking for positivity, making a habit of doing something now, developing the attitude of gratitude, getting into the continuous education program, associating with people of high moral character. The speaker iterated that NEP 2020 abides to ethics and human & constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice which are critical for purpose of national pride, self-confidence, self-knowledge, cooperation, and integration. In concluding remarks, the speaker quoted Winston Churchill that 'Attitude is a little thing that makes a big difference'.



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## **Changing Course, Transforming Education**

Speaker: Prof. R.P. Tiwari, Vice Chancellor,

Central University of Punjab

Day & Date : Friday, 11.11.2022,

Time : 11:30 AM

Venue : Virtual Mode; Seminar hall, DEE, RIE, Ajmer

On the occasion of National Education Day an Extension lecture on 'Changing Course, Transforming Education' was delivered by Prof. R.P. Tiwari, Vice Chancellor, Central University of Punjab on November 11, 2022 in virtual mode. Prof Tiwari highlighted the important dynamics of education which is based on core philosophy of learning to know, learning to do, learning to be and learning to live together. The speaker enumerated the new trends in the National Education Policy 2020 that has been restructured to include equipped and accessible technology in the teaching-learning process diluting the rigid boundaries of the education system.



Prof Tiwari speaker drew attention to the present era's industrial revolution 4.0 that aims to create skilled manpower, so as to fulfil the dream of making India a five trillion-dollar economy. The speaker laid emphasis on the similar idea incorporated in the form of education 4.0 based on co-learning, co-creation and co-innovation. Flipped classrooms can also be used to make learning active and enjoyable. There is a need to provide outcome-based education that enhances the calibre of students, makes them active participants and provide adequate amount of education anywhere and anytime.



Prof. Tiwari during his interaction

The speaker also focused on personalized, self-directed and collaborative teaching. Teaching and learning, as NEP 2020 guidelines, should be conducted in a more interactive manner making classroom sessions more fun and creative collaborative by incorporating exploratory activities for students for deeper and more experiential learning. One should move from the concept of lesson plans to learning plans to creative classrooms. The speaker emphasized that students should have freedom to choose courses to develop skilled and dynamic

individuals. The speaker highlighted the fundamental principles of the NEP-2020 'flexibility', that empowers learners to choose their learning trajectories and programmes, and thereby choose their own paths in life according to their talents and interests; 'no hard separations' between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams, etc. order to eliminate harmful hierarchies among different areas of learning.



Prof. Tiwari opined that education should be driven to achieve Sustainable Development Goals (SDGs) of ensuring free, equitable, and quality primary and secondary education for all children and climate change mitigation. The speaker highlighted that NEP-2020 also foresees that by 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education which will help to realize the full potential of India 's demographic dividend. The art of explaining the content is important especially in school education system; delivering apt information with adequate knowledge.

He also highlighted the shortcomings of a stale education system that runs with a risk of being outdated if it is not enhanced, updated and equipped with the changing times. Changes will outpace the ability of existing education system, policies, mechanisms and approaches to respond adequately. Prof. Tiwari exemplified the major traits of NEP 2020, its vitality in reforming the education system of the country and its extensive approach in framing India a centre of knowledge and education.



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## Minority Education in The Light of NEP - 2020

Speakers : **Mr. Aizaz Ahmed**, Dist. Minority Welfare

Officer, Ajmer

Day & Date : Monday, 19.12.2022

Time : 11:00 AM

Venue : Seminar Hall, DEE, R.I.E., Ajmer

In pursuance of minority week, an extension lecture was delivered by Mr. Aizaz Ahmed on the topic "Minority Education in the light of NEP 2020". He highlighted the role of minorities in nation building and further pointed out that the Indian constitution has given Article 29 that talks about preservation of scripted language and culture. He posited that it is required to find out the cause behind low representation of minorities in educational institutions. He also gave an overview of NEP 2020 and discussed its distinct features that focus on minority education. He highlighted that National Education Policy 2020 acknowledges the importance of interventions to promote education of children belonging to all minority communities, and particularly those communities that are educationally underrepresented. In the same reference, he talked about quality education and the design of syllabus which promotes composite culture. He suggested that a JNV-like educational system could be established as a special education zone to encourage minority education.



He also informed about various schemes of the government that have been framed to promote the status of minority education. He exemplified on the value of Pre-Matric, Post-Matric, Merit-cum-Means scholarship and Begum Hazrat Mahal scholarship schemes designed to support girl education. He also highlighted and discussed some of the other schemes such as, Anuprati Yojana, Kalibai Scooty Yojana, etc.

## **Mathematical Aspects of NEP 2020**

Speaker: Prof. G. Ravindra, Former Director, NCERT

Day & Date : Tuesday, 17.01.2023

Time : 03:00 PM

Venue : Room No 67, Department of Extension Education

Under the Series of "Extension lecture of Eminent Educationists", an extension lecture was delivered by Prof. G. Ravindra, Former Director, NCERT on the topic of "Mathematical aspects of NEP, 2020". Prof. Ravindra introduced four important parts of Indian pedagogy- connectivity, concentration, feelings and aesthetics. Before explaining the topic, he told an anecdote about a school boy that was published in a Kannada weekly. A teacher asked students to write an essay on - "A horse". A school boy, out of 35 students, wrote the essay innovatively using a coconut tree because he had relatively more knowledge about a coconut tree than a horse. The boy was appreciated by his teacher and got full marks because his way of writing was unique, creative, and original than the other students.



Prof. Ravindra during his lecture

With this story, he emphasised the importance of connectivity and its value as highlighted in the National Education Policy 2020. Prof. Ravindra explained the concept of connectivity that can be expressed through Venn diagrams and can be used to connect countries, languages, subjects and concepts. In addition to this, he discussed an experiment conducted in Demonstration Multipurpose School, Mysore. Further, the speaker mentioned that education is a set of values that is contextual in nature. UNESCO and NCERT had identified 24 values among which the speaker pointed out a few important values - love for each other, living together and minimizing loss and maximizing profit. The speaker quoted a few incidents from the life of Arjun and Ramanujan to exemplify the value of concentration that should be complemented with an understanding of emotions. Learning is a process that should effectively bind the elements of logic and emotions to retain them as experiences and memories.



Prof. Ravindra suggested the house, to read a book "Art of Mathematics" by Jerry Kings, to understand the ordered beauty of mathematics. The speaker discussed major concerns related to NEP recommendations. According to him, incorporation of ICT in education is only possible when every student possesses a smartphone, extensive networking and electricity. The expenditure on education is also very low that can restrict the effective use of these resources. The speaker brought to light that the New Education policy 2020 has recommended for suitable infrastructure and access to resources to promote quality education and lifelong learning. A key initiative in this direction will be to make classrooms ICT-equipped.

He also showed his concern regarding holistic education which can be done through practice over preaching. According to him, NEP focuses on computer education but the use of blackboard should be incorporated in teaching-learning process to develop a balanced approach. Furthermore, he elaborated the method to measure aesthetics and index sub teaching, to enhance the process of teaching.

## Global Science for Global Well-Being

Speaker : **Dr. Sudhir Kumar Mishra**, Distinguished

Scientist & Former Director General (Brahmos),

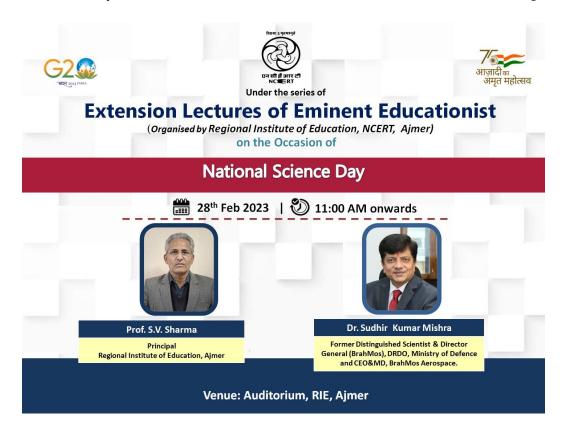
**DRDO** 

Day & Date: : 28.02.2023

Time : 03:00 PM

Venue : Seminar hall, DEE, RIE, Ajmer

As a mark of celebration of the National Science Day, an Extension lecture was delivered on the topic "Global science for Global wellbeing." Dr Sudhir Kumar Mishra, Indian engineer, Defence scientist, Director General (BrahMos) DRDO, Ministry of Defence, Govt. of India, and CEO & MD, BrahMos Aerospace.



Dr. Mishra expostulated the value of security and its various types, its internal and external domains and the emergence of new technological concepts

such as platform, sensors, weapons and human centric technology, to enable a wide and secure environment for a country and its people. Narrating the history of rocket and missile technology, he exemplified its usage across decades, such as the Tipu Sultan's Srirangpatnam war of 1792, the missile technology of the Britishers, the acquisition of this technology by USA and USSR leading to defeat of Germany and allies and the Iraq invasion of Kuwait in 1991.



Dr. Mishra during his interaction

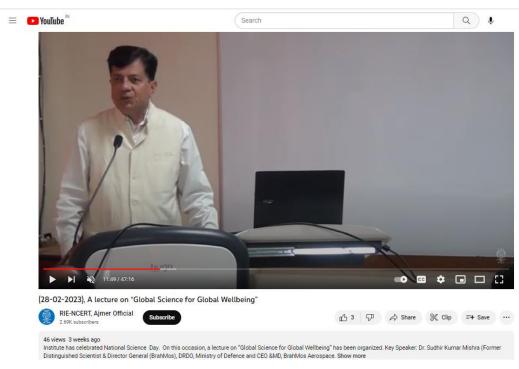
The speaker gave an audio-visual presentation elaborating the concept of how missiles work and exhibited the projectile motion and their explosion capacities etc. After that the speaker described BrahMos Aerospace, an Indo-Russian multinational aerospace and defence corporation, with core manufacturing in Cruise missiles. It was founded as a joint venture between the India's Defence Research and Development Organization and Joint stock company, Military industrial consortium of Russia signed in 1998. The company manufactures BrahMos missile with a range of 300 km. Brahmos missile can engage any type of targets; stationary, moving; in any weather condition or geographical condition and can be launched from any type of platform like ship, land, aircraft, submarine with or without warhead.

Dr. Mishra The speaker emphasized the current security threats a nation has to cope with in the presence of challenges like Unmanned Air Vehicles, Cyber Technology, Asset defence of Satellite services like banking transactions etc. Dr. Mishra further highlighted the Bio-threats from extra-terrestrial visits, digging in Antarctica or digging for Shale oil in turn exposing the earth maybe to bacteria's lying deep inside or viruses activating in earth's atmosphere from other planets. All these are the potential security threats for internal and external security domain that each country should be ready to ward off.



During the post interactive session, the questions were asked about Bioweapons and International treaties signed in this field; India's soft power potentials; India China relations; Can satellite technology be reverse engineered; India's Non signature to Nuclear non-proliferation treaty is impacting India's participation in Nuclear supplier's group; 2022 India-Pakistan missile incident; 2023 Chinese-operated high- altitude balloon spotted in North American airspace; 2021 Indian Air Force Mil Mi-17 crash carrying general Bipin Rawat. These questions were catered to by the speaker satisfactorily exhibiting his

knowledge in multidisciplinary aspects like defence, space, bio technology, defence diplomacy and international relations. The speaker ended his interactive talk by highlighting the NEP 2020 approach of integrating the humanities and arts with Science, Technology, Engineering and Mathematics (STEM) which has consistently showed positive learning outcomes, including increased creativity and innovation, critical thinking and higher-order thinking capacities, problemsolving abilities, teamwork, communication skills, more in depth learning and mastery of curricula across fields which re critical for the development of an individual self and the society as a whole.



(https://www.youtube.com/watch?v=NkM2c7ka8rQ)



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