PROGRAMME REPORT

One Day Workshop [funded by UGC-DEB]
on

"NEP 2020: Opportunities and Challenges in Chemistry"

Organized by

Department of Chemistry, School of Sciences, Netaji Subhas Open University

Date: 10th September, 2024

Time: 11.00 AM -4:00 PM

Venue – Kalyani Regional Centre, NSOU

Mode of the Seminar – Offline

Participants: Approximately 50 individuals participated in the workshop including faculty members from several colleges, Universities and faculty members of School of Sciences, NSOU

1. Introduction

The Department of Chemistry, School of Sciences, Netaji Subhas Open University, organized a one-day workshop titled *"NEP 2020: Opportunities and Challenges in Chemistry"* on 10th September,2024. The event, funded by UGC-DEB, aimed to explore the implications of the National Education Policy (NEP) 2020 for the field of chemistry education and research. NEP 2020 envisions a holistic and flexible approach to education, fostering innovation, critical thinking, and interdisciplinary learning. The workshop brought together educators, researchers, and students to discuss the potential opportunities offered by the policy and the challenges that lie ahead in adapting chemistry curricula to meet its objectives.

This report outlines the key discussions, presentations, and outcomes of the workshop, highlighting the future trajectory of chemistry education in line with NEP 2020.

2. Objectives of the Workshop

The main objectives of the workshop were –

- To explore the impact of NEP 2020 on chemistry education and research, focusing on interdisciplinary and flexible learning approaches.
- To identify the opportunities provided by NEP 2020 for enhancing skill development, innovation, and industry collaboration in the field of chemistry.
- To discuss the challenges of implementing NEP 2020 in traditional chemistry curricula and laboratories.
- To foster dialogue between educators, researchers, and students on how to adapt chemistry teaching methods to align with the goals of NEP 2020.
- To promote awareness of the importance of sustainability, research-driven education, and global competitiveness in chemistry, as envisioned by NEP 2020.

3. Organising Committee

Chief Patron:

Professor Indrajit Lahiri, Hon'ble Vice-Chancellor, NSOU

Patron:

Professor Bibhas Guha, Director, School of Sciences, NSOU

Convener

Prof. Sanjay Roy, HOD & Professor of Chemistry, School of Sciences, NSOU

Organising Secretaries

Dr. Sintu Ganai, Assistant Professor of Chemistry, School of Sciences, NSOU

Dr. Puspal Mukherjee, Assistant Professor of Chemistry, School of Sciences, NSOU

4. Registration

The registration period was scheduled from 11:00 AM – 11:30 AM. Participants attending in person registered themselves physically.



5. Inaugural Session

Dr. Puspal Mukherjee, Assistant Professor of Chemistry, NSOU and joint organising secretary of the workshop committee started the session. The program started through felicitation of the

esteemed dignitaries. Dr. Sintu Ganai, Assistant Professor of Chemistry, NSOU and joint organising secretary of the workshop committee delivered the welcome address. In his address, Dr. Ganai highlighted the importance and impact of NEP-2020 and the goal of the workshop. Dr. Bibhas Guha, Director, School of Sciences delivered the Inaugural Address & Presidential Address. He highlighted the key achievements of the university such as accreditation of NAAC with grade "A" and 2nd rank of NSOU in the Open University ranking by the NIRF. He mentioned the administrative decisions taken by the University regarding implementation of NEP -2020 from the academic year 2025-26. Then Dr. Premananda Jana, Director, Kalyani RC, NSOU delivered his address and he discussed the key points in implementing NEP-2020 in Open and Distance learning curriculum.

















6. Technical Session – I

The Technical Session – I was chaired by Prof. Sanjay Roy, HOD, Department of Chemistry, NSOU.

The first speaker of the session was **Professor Debabrata Mandal**, University of Calcutta. Prof. Mandal emphasised that NEP 2020 encourages a shift in chemistry education towards interdisciplinary learning, research-driven approaches, and practical skill development. It aims to modernize curricula, integrating cutting-edge technologies and fostering innovation to prepare students for global challenges in the field of chemistry.

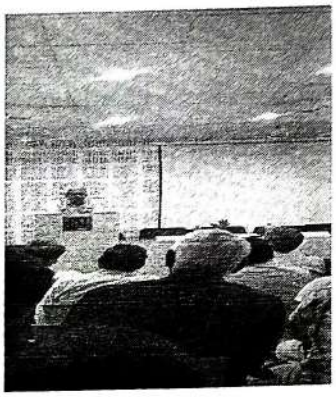
The second lecture was delivered by **Professor Bijoy Krishna Dolui**, Visva Bharati. Prof. Dolui discussed the key challenges in implementing NEP-2020 in Chemistry education. Prof. Dolui mentioned that the key challenge of NEP 2020 for chemistry education lies in integrating advanced technologies and interdisciplinary approaches into traditional curricula. Additionally, ensuring adequate infrastructure and faculty training to support research-driven learning presents a significant hurdle.

The third speaker of the session, **Prof. Asoke Prasun Chattopadhyay**, Department of Chemistry, University of Kalyani discussed the aspects of NEP-2020 in terms of national and international perspective. The fourth and last speaker of the session was **Dr. Madhura Damle**, Presidency University. Dr. Damle delivered a captivating lecture discussed the multifaceted aspect of NEP-2020. In her talk, Dr. Damle suggested subjects that can be offered in multidisciplinary category in a curriculum and discussed how the bridge the science subjects with humanities and social sciences under NEP-2020 syllabus.







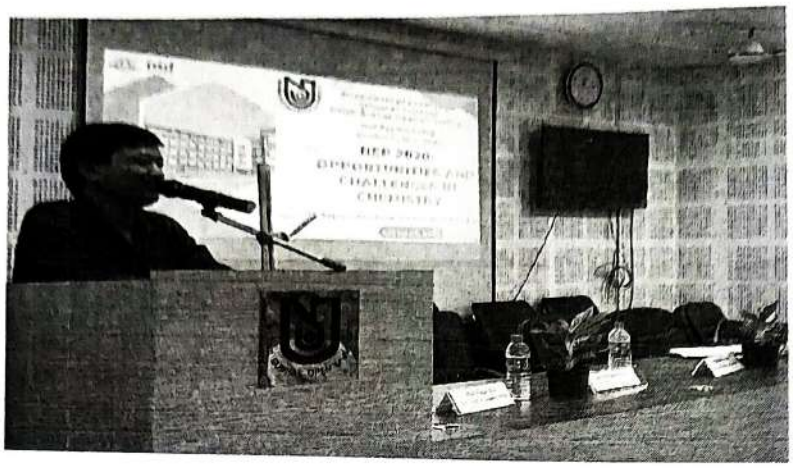






7. Technical Session – II

The Technical Session – II was chaired by Dr. Puspal Mukherjee, Assistant Professor of Chemistry, NSOU. In this session, **Prof. Sanjay Roy, HOD**, Department of Chemistry, NSOU discussed the NEP-2020 course structure for undergraduate Chemistry Honours programme of NSOU framed by the BOS of the university. He discussed, in details, the distribution of credits, the programme structure and proposed syllabus.



8. Laboratory and Library visit

After lunch, participants were guided on a visit to the university's chemistry laboratory and library. In the laboratory, attendees observed the equipment and ongoing research projects, providing insights into practical applications of chemistry aligned with NEP 2020's focus on experiential learning. The library visit showcased a rich collection of resources, including digital materials and reference books, supporting both academic study and research in chemistry. This visit reinforced the importance of hands-on experience and access to knowledge in fostering innovation and scientific inquiry.





9. Technical Session: III

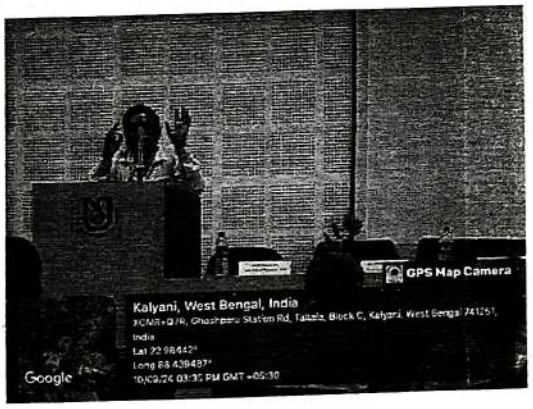
Technical Session: III was chaired by Dr. Asimesh Dutta Gupta, former Associate Professor of Chemistry, NSOU and Prof. Sanjay Roy. The first speaker of this session was **Dr. Kalachand Mahali**, University of Kalyani. Dr. Mahali highlighted the significant challenges faced by the Adivasi population in accessing and studying chemistry. The speaker emphasized issues such as limited access to quality educational resources, lack of infrastructure in rural areas, and the language barrier that hinders understanding complex scientific concepts taught in non-native languages. Furthermore, the financial constraints faced by many Adivasi families make it difficult for students to pursue higher education in fields like chemistry, which often require

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specialized materials and laboratory equipment. To address these challenges, the speaker proposed several solutions, including the development of chemistry textbooks and educational materials in regional languages, the establishment of more localized science centres equipped with basic laboratory facilities, and the provision of scholarships and financial aid to support Adivasi students.

The next speaker of the session was **Dr. Paritosh Biswas**, BOS member of UG-HCH, NSOU. Dr. Biswas first discussed in details the course structure offered by the regular universities of West Bengal and emphasised the difficulties faced by the regular universities in framing their curriculum. Then Dr. Biswas highlighted why an Open Education system can thrive under the NEP-2020 policy. As a BOS member, he discussed the course structures developed by the Department of Chemistry, NSOU for their UG course. He pointed out the major points and the advantages this syllabus offers to the learners of NSOU.

The last speaker of the session was **Dr. Kakoli Banerjee**, Associate Professor, Prabhu Jagatbandhu College. Dr. Banerjee discussed the key points in delivering quality chemistry education under NEP-2020 frame work.









10. Vote of Thanks

At the end of the workshop Dr. Puspal Mukherjee, Dept. of Chemistry, NSOU delivered the official vote of thanks. At the end of the workshop group photo session was held.



11. Suggestions & Recommendation

- **Integration of Interdisciplinary Learning**: NEP 2020 promotes an interdisciplinary approach to chemistry education, encouraging collaboration across various fields to foster innovation and problem-solving skills.
- **Development of Laboratory Facility**
- The dignitaries of the workshop suggested development of proper laboratory facilities in the Department of Chemistry for proper implementation of NEP-2020.
- **Focus on Research and Innovation**: The policy highlights the need for research-driven education in chemistry, emphasizing the importance of hands-on experience and critical thinking in scientific studies.
- **Challenges in Implementation**: Implementing NEP 2020 in chemistry curricula requires upgrading infrastructure, training faculty, and ensuring that students have access to modern laboratories and technology.

Programme Schedule

Session	*Time*	*Particulars*	*Addressed by*
Registration and Tea – 11:00 AM – 11:30 AM			
Inaugural Session	11:30 AM to 11:35 AM	**Welcome address**	**Dr. Sintu Ganai**, Dept. of Chemistry, NSOU
	11:35 AM to 11:45 AM	**Inaugural Address & Presidential Address**	**Prof. Bibhas Guha** Director School of Sciences, NSOU
	11:45 AM – 11:50 AM	**Address by Regional Director, Kalyani-RC, NSOU**	**Dr. Premananda Jana,** Director, Kalyani RC, NSOU

Compere: Dr. Puspal Mukherjee, Asst. Prof., Dept. of Chemistry			
Technical Session – I (Chairperson – Dr. Sintu Ganai)	11:50 AM – 12:10 PM	**Distinguished Lecture - 1**	**Professor Debabrata Mandal,** University of Calcutta
	12:10 PM – 12:30 PM	**Distinguished Lecture - 2**	**Professor Bijoy Krishna Dolui**, Visva Bharati
	12:30 PM – 12:50 PM	**Distinguished Lecture - 3**	**Dr. Madhura Damle** Presidency University
Technical Session: II (Chairperson – Dr. Puspal Mukherjee)	12:50 PM – 01:10 PM	**Distinguished Lecture - 4**	**Professor Jayanta Maity**, Diamond Harbour Women's University
	01:10 PM – 01:40 PM	**Distinguished Lecture - 5**	**Prof. Sanjay Roy**, HOD, Dept. of Chemistry, NSOU + **Dr. Paritosh Biswas** BOS member of UG-HCH, NSOU
Lunch Break + Visit of Academic Department, Library, Kalyani, RC 1:40 PM – 2:40 PM			
Technical Session: III (Chairperson – Dr. Asimesh Dutta Gupta + Prof. Sanjay Roy)	2:40 PM -3:00 PM	**Distinguished Lecture - 6**	**Dr. Kalachand Mahali** University of Kalyani
	3:00 PM -3:50 PM	**Panel and Group Discussion among participants and distinguished speakers and BOS Members**	
	3:50 PM - 4:00 PM	**Official Vote of Thanks, Photo session and Distribution of Certificates**	**Dr. Puspal Mukherjee**, Dept. of Chemistry, NSOU

Report Prepared By-

Dr. Puspal Mukherjee, Assistant Professor of Chemistry, School of Sciences, NSOU

Sanjay Roy 30/09/24

Prof. Sanjay Roy

HOD and Professor of Chemistry
School of Sciences, NSOU