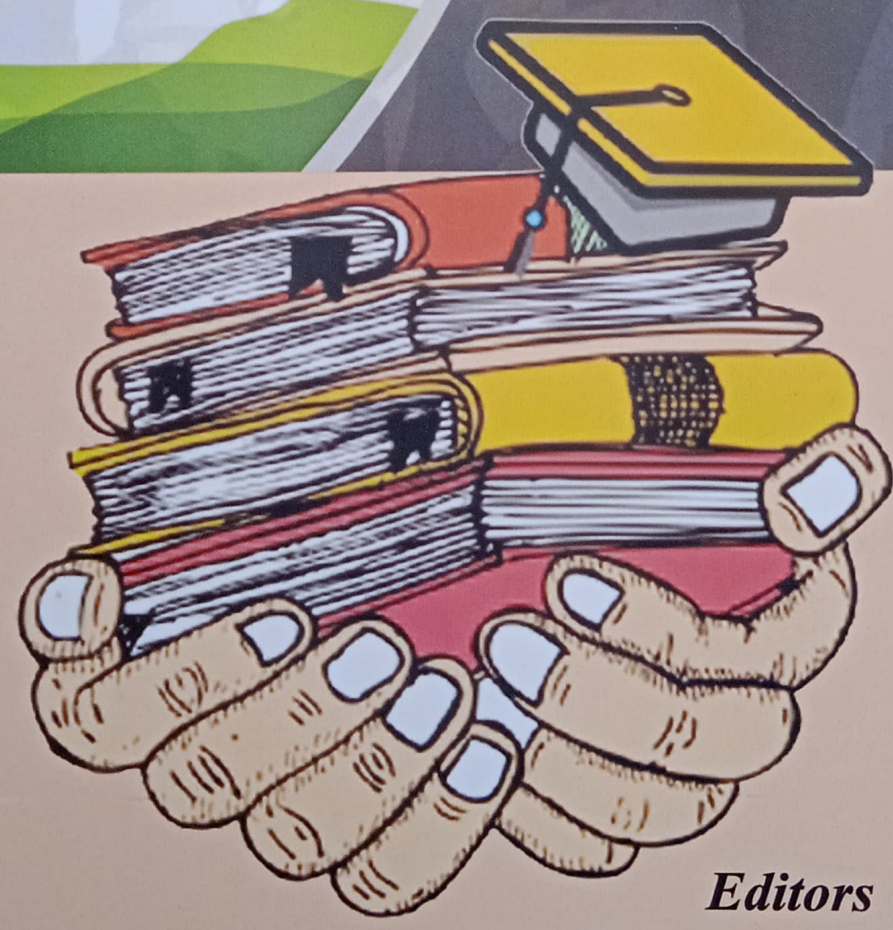




NATIONAL EDUCATION POLICY 2020

A REVOLUTION
IN EDUCATION



Editors

Dr. Praveen Kumar
Dr. Ajay Kumar
Dr. Rajni Sharma

National Education Policy 2020: A Revolution in Education

Editors

Dr. Praveen Kumar
Dr. Ajay Kumar
Dr. Rajni Sharma



SWARAJ PRAKASHAN

SWARAJ PRAKASHAN

4648/1, 21, Ansari Road, Daryaganj, New Delhi-110002

Telephone: 011-23289915

E-mail: swaraj_prakashan@yahoo.co.in

Branch

288, E.W.S. Shastripuram,

Agra-282007 (U.P.)

Copyright © Editors

Price: ₹795

First Edition: 2025

ISBN: 978-81-978247-8-4

Published by the SWARAJ PRAKASHAN

4648/1, 21, Ansari Road, Daryaganj, New Delhi-110002

Printed at om offset, Shahdara, Delhi-110093

Contents

- Preface* 5
1. National Education Policy (NEP) 2020:
Bringing Reforms in the Indian Education System 11
Dr. Kotra Balayogi
2. Education: Preparing for 21st Century 21
Dr. Shailesh Kumar Yadav
Sana Amreen
3. National Education Policy 2020
an Educational Revolution 34
Nandkumar Digamberrao Balure
Prof. (Dr.) Saraswati Ghosh
4. A Theoretical Analysis of India's National Education
Policy 2020 43
Thiruppathi KTM
5. NEP 2020 Challenges to Teachers Education: A Study 57
Dr. Rajni Sharma
Ms. Seema Sharma
6. National Education Policy 2020 for the Transformation of
Teacher Education 66
Ruchi Patva
7. The National Education Policy 2020 and IQAC's
Contribution to Improving the Quality of Teachers in
Higher Education 79
Mrs. Bhagyashri Kulkarni

8. A Review of National Education Policy 2020 and its Impact on Higher Education in India 86
Dr. Priyanka Gaur
9. National Education Policy 2020 and National Research Foundation 101
Jige Sandipan Babasaheb
10. The Role of Multidisciplinary Education in Preparing Students for the Future 112
Dr. Anil Kumar Pandey
Pragya Deepak Kumar
11. NEP 2020 and Technology Aided Classroom: A Design Plan for Future 126
Moromi Gohain
12. Transformative Paradigms: Navigating the Landscape of Online and Digital Education in the Context of National Education Policy 2020 141
Prabhat Kuamr
13. Online, Digital Education & National Education Policy 2020 157
Dr. Rajesh Kumar Sharma
14. Empowering Environmental Education in the context of NEP 2020 164
Dr. Dola Chakravorty
15. Evaluation Pattern Involved in National Education Policy 2020 178
Dr. Jeevan Jyoti
- Contributer's Details* 185

NEP 2020 and Technology Aided Classroom: A Design Plan for Future

Moromi Gohain

"Technology gives the quietest student a voice"

—Jerry Blumengarten

Introduction

As we exist in the present era of modernization, our daily activities have been crippled without the use of technology. Technology and society has become inseparable. It has played a crucial part in contributing a change to the core in many aspects. One such aspect which it has brought about a huge impact is in the field of education. Technology has huge potentials to bring a transcendental change and has progressively contributed in the field of education. No doubt with the remarkable implementation of National Education Policy of 2020 after a lapse of 34 years of the introduction of the previous National Education Policy of 1986, it has brought a revolution in the entire education system of the country.

To bring upliftment and strengthen the education system is the felt need of the hour. And with the integration of technology it has the capability to bring a massive transformation in the society and bridge the gap brought about by digital divide. With

these perspectives the NEP of 2020 provides a great emphasis on the use of technology in education. It addresses the integration of technology in education to cope with the rapid and disruptive changes that is taking place in our society in this present challenging era. Chapter 23 of NEP 2020 talks of "Technology Use and Integration". It aims to transform the entire nation into a digitally empowered society and knowledge economy. It also focuses on making a technology enabled classroom learning to provide quality education, access to educational opportunities, equity and promote learning for all.

What is a Technology Aided Classroom?

Technology has been playing a crux role in the transformation of educational process. A technology aided classroom means a classroom equipped with all the necessary educational tools to be utilized in the teaching and learning process. It includes technological facilities such as computers, projectors, interactive white boards, smart boards, internet facilities, gamified learning, digital field trip, augmented reality, digital content, podcast, radio etc. All these educational technologies in the classroom makes classroom teaching and learning more interactive and engaging. The integration of technology in a classroom learning not only adds standard and upgrade the education process but also improves the quality of education.

Technology intervention in the classroom learning prompts effective means of teaching and learning transaction. It acts as a powerful instrument in providing education by assisting the students to understand better with maximum utilization of resources. A technology aided learning environment involves adequate provisions of required technology facilities which are effectively utilized for instructional facilitation both in the classroom and the workshop (Yusuf, 2005). With the exponential growth and access to wide varieties of various educational tools and internet connectivity it has brought a paradigm shift in the

process of disseminating knowledge. Nevertheless, it has also played a crucial role in the effective management of online classroom learning activities. It has simplified the learning process and provides a wide range of opportunities to participate in the learning process.

Integrating Technology in Education

Modern advance technology has completely reshaped the education system. In the 21st century, the entire world is going through a rapid change in the field of science and technology such as the rise of big data, machine learning and artificial intelligence. The 21st century learning require skills essential for success so classroom that focus on learning through technology ensure that a child is prepared to meet the challenges in the coming future. The integration of technology in education has transformed the classroom teaching and learning to a great extent. It has provided access to the learners to a wide range of learning opportunities and resources with equity by removing all barriers. The use of technology has been highly recommended in NEP 2020. It also envisioned setting up of an autonomous body National Educational Technology Forum (NETF) which will serve as a vehicle for integrating technology into different aspects of school education and higher education.

The Digital India Campaign is contributing to transform the entire nation into a digitally empowered society and knowledge economy while Educational technology plays an important role in improving the educational processes and outcomes. NEP 2020 also supports the recommendation of the use of technology to promote interdisciplinary research and innovations and to improve the quality of teaching and learning, assessment, planning and management in the educational field. It also emphasizes on creating Academic Bank of Credit, digital infrastructure, educational digital content, virtual labs, Artificial Intelligence, three modes of teaching in HEIs and enhance

teacher's preparation and professional growth. Further, the latest policy also supported the appropriate use of technology at all levels of education and to bring progress in the field of education sector.

Integration of technology in education	Enhance teaching and learning & improve evaluation process
	Teacher preparation & professional development
	Access to educational opportunities with equity
	Access to Divyang students
	Removing language & digital barriers
	Streamline educational management & administration

Fig 1.1: Significance of Integration of Technology in Education

Technology Aided Classroom: A Design Plan for Future

In the present era of modernization technology occupies a predominant place in bringing a massive change. With the spurt in technology it has brought about a huge impact in the education sector. It has in fact brought a paradigm shift in the entire education system. We need technology in every classroom and in every students and teachers hand because it is the pen and paper of our time and it is the lens through which we experience much of our world (David Warlick). With the introduction of the National Educational Policy 2020 it has highly recommended on the integration and use of technology in education and has brought Digital India Campaign as well. NEP 2020 has stated about the set up of technological infrastructure to be upgraded and set up across the country and aims to spread digital literacy

especially among the teacher educators and the need for ensuring technological online safety.

The integration of technology in the classroom teaching and learning has made the classroom more student centric, encouraging individualized and active learning practice. A classroom equipped with all the appropriate use of digital learning tools has changed the learning environment. It has provided boost to the student's learning experience; engage both the student and the teacher. The teacher acts as a guide while the student takes the responsibility in seeking knowledge through various sources. Also, the incorporation of technology in classroom learning has also fostered the practice of inclusivity. It has aptly prompted to provide quality education to every group of learners. However, integrating technology in education and converting a normal classroom into a technology aided classroom well equipped with all the necessary facilities has greatly contributed in the field of learning and bring a change for a better future. Other factors which is contributing for better future is discussed below.

- **Wide access to information and resources:** A technology aided classroom has provided access to wide range of information and resources to the students as per their requirements. The use of technology has opened a new horizon in the education process. Undoubtedly with the integration of technology it has increased various educational opportunities to the learners with equity and has enhance the learning process as well. With the introduction of digital learning platforms and the rise of internet usage it has allowed the student to explore vast knowledge, conduct research study and get access to wide varieties of educational materials. It has also simplified the learning process by making complex concepts more clear, justifiable and understandable for the students having different

learning styles. Some concrete examples of technology providing access to vast information and resources to the learners are :

-Digital libraries: Digital libraries also called as an online database provides students to get access to various academic resources and research materials, e-books, scholarly articles, journals and various multimedia contents.

-Online educational platforms and LMS: Various online educational platforms and Learning Management System (LMS) serves as a central point for the teachers to share resources and materials related to the topic of knowledge for the benefit of the students.

-Open Educational Resource (OER): Open Educational Resources are educational materials which are freely made available to the students. The learner can access to the OER platforms and find various videos lectures, textbooks, lesson plan, and other important educational information related to curriculum providing insightful knowledge to the students.

- **Promote inclusive learning:** The use of technology in education has foster the promotion of inclusive learning. It has provided beneficial to all the groups of learners belonging from diverse background and instilling in them a sense of belongingness of one community. A well equipped technology aided classroom provides assistances to the children by overcoming all barriers and make them to learn and grow together with the normal ones in the mainstream education. The Global Education Monitoring Report stressed on the use of Educational Technology to be made widely available so that it will ensure benefit not only to the privilege learners but also to the disabilities. Technology has brought huge relief to all the group of learners and has

made education no longer confined only to the normal ones, every child irrespective of their differences can now get access to learning. Technology aided classroom welcomes all groups of learners and bridge the gap by addressing their needs.

- **Connects classroom learning with reality:** The intervention of technology in the classroom learning has greatly benefited to the students. It has enhance the student's learning activities by removing all the barriers and providing a means to connect curriculum with the real world via video conferencing, virtual reality, augmented reality, social networking site (SNS) and various other educational online platforms. Connecting classroom learning with the outside world has developed in student's mind to have a wider perspective on various topics of issue. Nevertheless, it has also lead to the progress of their academic achievements.
- **Empowering Digital India:** The New Education Policy of 2020 lays special emphasis on technology use and integration. It gives significance on Digital India Campaign to help transform the entire nation into a digitally empowered society and knowledge economy and education to play a crucial role in bringing this transformation. NEP 2020 encourages educational institutions to go digital and make the curriculum more flexible, holistic and multi disciplinary. It acknowledges the need for creating an open, evolvable and interoperable public digital infrastructure in the education sector. Multiple platforms and point solutions can use this infrastructure to improve to India's device penetration.
- **Preparing a student for life:** The 21st century era is an era of competition and challenges so one needs to be well equipped with adequate knowledge and skills to

meet and overcome the challenges of life. However, with the integration of technology it has modernized the education system. It has contributed in the student to be equipped with all the necessary skills and techniques adequate enough to meet the challenges and overcome the hurdles in the present challenging world. By incorporating technology in classroom learning, it has made the student develop their skills needed to succeed in this present technology driven world.

- **Promoting global awareness and cultural exchange:** Technology is integrated in the life of many students and has made them feel more encouraging, confident and provide opportunities to participate equally. With the advancement of technology in the field of learning it has made various interactive programs and software available where a students can express their thoughts, share knowledge, respond queries and get engage in interactive discussions. Technology use in the classroom learning has made enabled the student to get connect with the peers, experts and teachers from across the globe through video conferencing, virtual exchange programmes, online collaboration programmes etc. it has develop in student a sense of promoting global awareness and a curiosity to learn and explore about different cultures.
- **Stay updated:** The present era is a technological era where one needs to be constantly aware and stay updated with the current technological innovations and advancements in order to face the challenges of life with ease. With the spurt in the usage of internet it has a crucial part in keeping the student up to date with the current happenings of the world. Platforms such as YouTube, Facebook, Instagram, Twitter (X), WhatsApp acts as a major platforms in keeping updated. Hence,

technology helps the student to stay updated about the current happenings and improve their knowledge of different field of interest. It also makes them more efficient about the use and benefit of technologies and develops skills in them that can be utilized in the future.

- **Boost creativity and productivity:** A well equipped technology aided classroom not only provides a fun and engaging learning experience but also boost their creativity level and increase productivity. As technology has open several new doors to learning one can acquire skills through various programs which are made available online and freely accessible from anywhere, anytime in their respective interest field of studies and improve their creativity level. Students can now make use of technology to create multiple project designs, multimedia presentation, quality research paper, innovative and high quality presentation which are highly essential and valued in many industries contributing to productivity.

A Move Towards Change

There was a time when the role of technology in a classroom was confined only to teaching of methodologies and educating the students. But now, as time progresses technology has been extricably linked to education and its influence in education has become inevitable. The introduction of technology and making a normal classroom into a technology aided classroom has proven beneficial and reshaped the means of imparting instruction to the child.

With the introduction of online education programmes, digital certificate programmes, hybrid mode of learning set up, availability of digital content, increasing usage of internet etc it has brought a massive difference in providing and acquiring quality education. Students now no longer have to undergo the

old traditional method of learning they can now get access to vast sea of knowledge through various means of educational technology tools employed in the learning process. It has made easier for the teachers too to share their ideas, contents, knowledge and subject knowledge expertise through various medium which are develop with the help of technology. Some of the important factors which have effectively made contribution towards a change are:

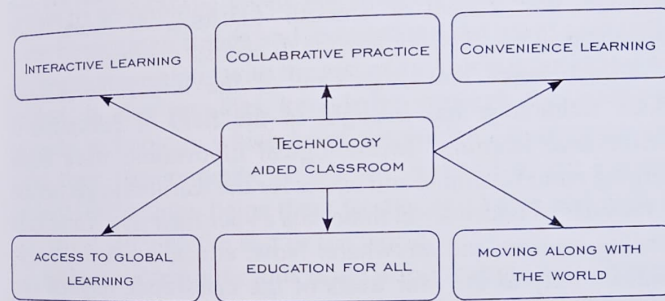


Fig 1.2: Technology aided classroom indicating factors which contribute towards a change.

Interactive learning: Unlike the old traditional school and system of learning, learning now at present with the help of the advancement of educational technology tools engaged in the classroom it has made classroom learning more interactive. Integrating technology such as virtual reality, augmented reality, internet, gamified learning and various digital learning platforms etc has made the learning process to be more interactive between the teacher and the students. However, by implementing educational technology in the classroom the teacher engages the students in the learning activities which infuse collaboration and also leads to constructive learning environment.

Collaborative practice: The integration of technology in

the classroom learning also promotes collaborative learning among the students. It imbues in students a spirit of togetherness and allows them to work together with collaboration. In the classroom the students learn how to collaborate and make progress in projects, works, assignments, sharing of ideas and knowledge, develop critical thinking skills and problem solving ability. Software programs like Google doc, Google slides, Google sheets, Google calendar, zoom, Google meet etc have provided the student a smooth platform to work with collaboration by allowing anyone to access, comment or edit.

Convenience learning: One of the important changes which technology has brought in the field of education is convenience learning. Technological innovations have made learning more favorable and easier for the learners to get access to varieties of educational materials as per their needs and gain benefits anytime and anywhere. Now, education is no longer confined only to the four walls of the classroom, anyone can learn from anywhere and at anytime. In one way it can be said that technology has made the learners to learn in a more customized manner according to their own convenience.

Access to global learning: Unlike in olden days where traditional method of teaching was practice and learning was confined only to a specific extent now at present with the evolution of new educational technology tools employed in the classroom learning one can get connected with the outside world. Technology has changed the way student learn and communicate with each other. It has brought innovative platforms for the students to share knowledge, ideas, exchange contents, connects with educators and experts from across the globe.

Education for all: There was a time when education was confined only to a selected group of individuals and to the inferior and the Divyang or any child belonging from the down-trodden category was often deprived of access to

education. But now with the advent of latest educational tools and emphasis given by NEP 2020 education has been made accessible to all. The availability of different educational tools has provided opportunities to the learners belonging from diverse learners to be included in the mainstream of education along with the normal ones without any barrier.

Moving along with the world: Technology has a great potential to bring change in every aspects of life. A classroom driven by technology keeps the students updated with all the latest happenings, trends and innovations and paves path to the student to move along with the rest of the world without lagging behind. It also provides knowledge through the means of advance technology which helps the students to progress and meet their requirements as per the demand in the existing society. Technology helps them to stay up to date and walk in the step along with the rest of the world.

Enhance creativity and innovation techniques: Through the advancement of new educational technology it has provided the students to make optimum use of the available resources to foster their creativity and come up with new innovative ideas and techniques, a class driven by technology allows the student to utilize maximum resources to create multimedia presentation, project designs, new techniques in research field, express and share their new creative thoughts, innovative ideas and knowledge.

NEP 2020 and Technology: Promoting Quality Education

The National Education Policy of 2020 approved by the Union Cabinet of India on July 29, 2020 provides an overview of the future of Indian education system. It aims to build futuristic and self-reliant nation. One of the major vision and focus of the New Education Policy 2020 is to integrate technology in education to provide vast educational opportunities by developing various digital infrastructure and capacity. The

integration of technology in education aims to prepare the student to contribute in transforming the nation a thriving knowledge society by delivering high quality education to every individual.

The introduction of various educational tools has made education possible to reach to the mass audience. It has greatly empowered in providing quality education for the upliftment of the society and nation. Technology learning activities in education such as online teaching practices through various available platforms has made education possible to a greater outreach. The high demands of internet usage, recorded lectures videos, online tutoring, online assessment learning, organizing webinars, flipped classroom, blended learning and learning apps etc has greatly help in providing quality learning to the learners. Technological application in education engages the student to involve in higher order thinking, develop communication and discussion and reflect on the gist of the content, it also enhances digital competency (Schindler et al, 2017). With the rapid growth and extensive use of technology the process of education is changing. It has made the learners more creative, skilled and responsible and has given them the capability to explore, think and to come up with innovative ideas. Teaching through technology in the classroom has made the student capable and competent enough to face the existing challenges of the society in this present globalised world. The implementation of technology on the classroom has enhanced the motivation of the students to understand and accomplished the tasks (Mistler-Jackson & Songer, 2000)

Conclusion

The initiative undertaken by NEP 2020 on technology use has enriched the teaching and learning process. The integration of technology in the classroom teaching and learning has increasingly help the students in improving their critical

thinking skills and made them skilled to face the challenges of future. The NEP 2020 envisions transforming the nation into a digital society by providing quality education to all through the appropriate integration and use of technology.

The classroom that are well equipped with all the modern necessary educational facilities has ensure that the students are well prepared to meet and face the shortcomings in the future. Learning through technology like virtual reality, augmented reality, Google app platforms, Artificial Intelligence (AI), experiential based learning, smart boards and blended mode of learning etc has alter a vast leaning experience to the learners. It has also grant access to learn with equity removing all the barriers promoting inclusivity. The integration of technology in the classroom has immensely contribute in the upgradation of the education system of the country and has direct towards a more develop and knowledge society leading to the progress of the nation.

Reference:

- 10 benefits & uses for technology in the classroom: Lumen learning. Lumen Learning | Open for student success. (2021, October 29). <https://lumenlearning.com/technology-in-the-classroom/>
- Aakriti Guleria. (2023). Insight into the implementation of national education policy (NEP-2020). *International Journal For Multidisciplinary Research*, 5(4). <https://doi.org/10.36948/ijfmr.2023.v05i04.5615>
- Bay Atlantic University June 3, University, B. A., & Name. (2022, June 14). How does technology impact student learning?. Bay Atlantic University - Washington, D.C. <https://bau.edu/blog/technology-impact-on-learning/>
- Deep Kumar, & Dr. Madhu Singh. (2022). India's new education policy (NEP) 2020 creating children with disability. *International Journal of Advanced Research in Science, Communication and Technology*, 70–74. <https://doi.org/10.48175/ijarsct-2505>
- Essay on technology in the classroom - free essay example. Eubirdie. (n.d.). <https://eubirdie.com/examples/essay-on->

technology-in-the-classroom/

- Extramarks. (2023, August 29). Emphasis on use of technology in NEP 2020: How does it ensure Digital Equity. Extramarks Blogs: Weaving stories for schools, students, and parents. <https://www.extramarks.com/blogs/emphasis-on-use-of-technology-in-nep/#:~:text=The%20NEP%202020%20mandates%20that,ensuring%20technological%20and%20online%20safety.>
- FZE, B. B. (2023, March 21). A technology aided learning. UKEssays. <https://www.ukessays.com/essays/education/a-technology-aided-learning-education-essay.php>
- Lighthouse Learning. (n.d.). Unleashing technology integration in education. Unleashing Technology Integration in Education. <https://www.lighthouse-learning.com/Transforming-Education-The-Role-of-Technology-in-Your-Childs-Academic-Growth.html>
- Mrs. Shalini, & Dr. Deepti Dimri. (2022). The role and impact of ICT in improving the quality of education in reference to NEP 2020. *International Journal of Advanced Research in Science, Communication and Technology*, 125–128. <https://doi.org/10.48175/ijarsct-7428>
- Muir-Herzig, R. G. (2004). Technology and its impact in the classroom. *Computers & Education*, 42(2), 111–131. [https://doi.org/10.1016/s0360-1315\(03\)00067-8](https://doi.org/10.1016/s0360-1315(03)00067-8)
- Pendor, S. M. (2022). NEP 2020 use of technology in education. *SUMEDHA Journal of Management*, 11(3). <https://doi.org/10.46454/sumedha/11.3.2022.442>
- Schallert, H. (2022, October 24). 10 benefits of using technology in the classroom. ChargeTech. <https://chargetech.com/blogs/blog/10-benefits-of-using-technology-in-the-classroom>
- Wani, Dr. S. R. (n.d.). Technological interventions in light of NEP 2020. Greater Kashmir. https://www.greaterkashmir.com/op-ed-2/technological-interventions-in-light-of-nep-2020 #amp_tf=From%20%251%24s&aoh=16950587185849&referrer=https%3A%2F%2Fwww.google.com&share=https%3A%2F%2Fwww.greaterkashmir.com%2Fop-ed-2%2Ftechnological-interventions-in-light-of-nep-2020

Dr. Praveen Kumar presently working as an Assistant Professor in the Department of Education, Vasanta College for Women (Admitted to the Privileges of Banaras Hindu University) Krishnamurti Foundation India, Rajghat Fort, Varanasi. Before Joining in this College Dr. Kumar was working as a TGT (Special Education Teacher) in Directorate of Education, Delhi. Dr. Kumar has Done his Graduation from S.G.N.D. Khalsa College and Post-Graduation from Shivaji College, University of Delhi and B.Ed., M.Ed., M.Phil., Ph.D. from CIE (Department of Education) University of Delhi. Dr. Kumar also done Post-Graduation in Psychology from IGNOU. Dr. Kumar have SRF and Two Times National fellowship holder. He has Qualified NET Many times in Different Subjects Like- Education, Political Science, Human Rights & Duties. Dr. Kumar has been Published Many Papers/Research Articles in National and International Research Journals and also Contributed many Papers in Edited Books. Dr. Kumar has Presented More than Twenty papers in National/ International Seminars and Conferences. Dr. Kumar has also attended more than 40 Days CRE and Research Methodology Workshops. Dr. Kumar has also delivered Lectures in different Workshops as a Resource Person. His Interest areas are Educational Psychology, Guidance & Counselling, Inclusive Education, Social Science Education, Women and Education and Dalit Discourse.



Dr. Praveen Kumar

Dr. Ajay Kumar has obtained the degree of Ph.D. from Ch. Charan Singh University, Meerut. He has expertise in Athletics, Yoga and Shooting sports. Having been appointed as Assistant Professor of Physical Education by the Department of Higher Education, Uttar Pradesh in 2008; he is continuously serving in government colleges. Till date, he has written more than 50 research papers/articles and presented them in various National and International Seminars, Conferences, Webinars, etc. Along with spreading awareness and inclusion towards health & sports in the society; his trainees are certifying their sporting abilities in various level competitions. Under his guidance, three researchers have been received Ph.D. and six have been received M.Phil. degree.



Dr. Ajay Kumar

Dr. Rajni Sharma was born in Meerut district of Uttar Pradesh. She has done M.Com., M.A. (Economics, Education, History, Psychology), M.Ed., M.Phil. (Education), Ph.D. (Education). She has 10 years of experience in the field of education. Presently She is working as Assistant Professor in Modern College of Professional Studies, Mohan Nagar, Ghaziabad. Along with presenting papers in national and international seminars and conferences. She has published many research papers in national and international journals and participated in various conferences.



Dr. Rajni Sharma



SWARAJ PRAKASHAN

4648\1, 21, Ansari Road

Daryaganj, New Delhi-110002

Ph : 011-23289915

Email : swaraj_prakashan@yahoo.co.in

ISBN 978-81-978247-8-4



9 788197 824784

₹ 795