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# PERSPECTIVE:

## MULTIDISCIPLINARY APPROACH

Chief Editor:

Dr. Sukhada Jambale

Editors:

Dr. Sunetra Dhere

Mr. D. G. Shewale

Dr. M. M. Kamat

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## **PREFACE**

*The new National Education Policy- 2020 (NEP) is a step forward to reinstate India at the position of VishwaGuru. Education is a tool to shape the future generations of the nation and hence NEP is a collective national effort to restructure the future of the nation. The policy is an effort to make future generations eligible for the transforming world and to inculcate the potential to them to take over the challenges of the technological and social revolution. To communicate NEP 2020 to the academic community especially in the Konkan region, IQAC of Shri S. H. Kelkar College, organised one day seminar on the theme, Institutional Preparedness for NEP: Understanding and Implementing, sponsored by NAAC, Bangalore.*

*This seminar was an attempt to share and discuss the applicability and implementation of NEP 2020 effectively in higher educational institutions and creating awareness about A & Aprocess of NAAC. Simultaneously, the aim of the seminar was to focus the challenges of the local soil and to use the policy as an instrument to prepare the future of the region. The success of the seminar is not only statistical or quantitative but also qualitative as major representation in the seminar was from the emerging educational institutions and young faculty members. Communicate NEP 2020 and giving them right direction of implementation was the first objective of the seminar and most of the participants expressed their happiness for understanding the policy in true sense. During the seminar the discussions between the key-note speaker, resource persons and participants on the role of college and stakeholders in implementing NEP were quite resourceful and path-finding especially for young aspirants in the field of higher education. NEP 2020 has not state or nation boundaries but it is more embracing the knowledge and competence of the world. Moreover, it can be called an endeavour to envision India regaining the coveted position of global dominance.*

*We are convinced that the seminar is a successful effort in this respect. Digitization, artificial intelligence volatile knowledge boundaries are the challenges before present and future pedagogy and learning resources. NEP 2020 has given direction to the same by removing the rigidity of discipline and faculty. Traditional rigid boundaries of knowledge streams will scrap and learners will be having freedom to cross the floor of the streams and disciplines of the knowledge. This will be a major challenge before teaching community as well teaching institutions. The seminar was quite successful to guide the participants to this challenge and communicated the ways of modification and to keep pace with the transformation. On the occasion of seminar, we invited scholarly papers/ articles on the theme of seminar and allied topics. The views of participant authors on various aspects on education and NEP are included in this proceeding in the form of chapters.*

*We are aware that our efforts to create awareness of NEP 2020 challenges are a little but contributed in our maximum capacity. We are thankful to all the contributors of the seminar who worked for the success of the seminar. We express our gratitude to NAAC, Bangalore for immense contribution and continuous support to make this event successful.*

**- Editors**

## CONTENT

<b>Sr. No.</b>	<b>Book Chapter and Author(s)</b>	<b>Page No.</b>
1.	<b>QUALITY INITIATIVES IN VIEW OF NATIONAL EDUCATION POLICY 2020: A FORWARD APPROACH FOR AFFILIATED COLLEGES</b> Sunny Sonu Pandhre	1 – 4
2.	<b>NATIONAL EDUCATION POLICY (NEP)-2020: REFORM IN INDIAN EDUCATION SYSTEM</b> Sandeep R Kapse and Rajesh Ragde	5 – 8
3.	<b>EXPLORING INDIA'S NATIONAL EDUCATION POLICY 2020: OPPORTUNITIES, CHALLENGES AND ROLE OF STAKEHOLDERS AHEAD</b> Suhas Kharat	9 – 14
4.	<b>A REVIEW ON SUSTAINABLE DEVELOPMENT AND NATIONAL EDUCATION POLICY, 2020</b> N. M. Valanju	15 – 19
5.	<b>CHALLENGES FOR RURAL INSTITUTIONS IN ADOPTING THE NEW EDUCATION POLICY 2020</b> S. K. Pawar and N. R. Kale	20 – 25
6.	<b>VOCATIONAL EDUCATION IN THE LIGHT OF NEP 2020</b> Priti Prathamesh Sarang and Shamali Shankar Tari	26 – 29
7.	<b>EDUCATION POLICIES IN INDIA</b> Rashmi Ramesh Hirlekar	30 – 34
8.	<b>TEACHING PROFESSION IN VIEW OF NEW EDUCATION POLICY 2020- OPPORTUNITY AND CHALLENGES</b> Smita Vilas Parab	35 – 37
9.	<b>PROS AND CONS OF NATIONAL EDUCATION POLICY 2020</b> Nishant Sureshkumar Sutare and Vilas Pralhad Rathod	38 – 40
10.	<b>IMPACT OF NATIONAL EDUCATION POLICY 2020 ON HIGHER EDUCATION IN INDIA</b> Pralhad N. Kamble	41 – 49
11.	<b>ONLINE LEARNING: UNDERSTANDING STUDENTS' PERSPECTIVE</b> Sunetra Dhere	50 – 63
12.	<b>THE ROLE OF GEOSPATIAL TECHNOLOGY IN WIDENING THE HORIZONS OF SKILL EDUCATION AND RESEARCH IN GEOGRAPHY</b> Guruprasad E. Ghadi	64 – 68
13.	<b>NEED OF PROVOKING EDUCATIONAL COGNITIONS</b> Mangesh N. Jamble	69 – 72

14.	<b>POST PANDEMIC CHALLENGES: CHANGE IN PSYCHOLOGY OF STUDENTS IN LEARNING</b> Mugdha Tanmay Joshi	73 – 76
15.	<b>ROLE OF TECHNOLOGY IN TEACHING-LEARNING</b> Shaikh Tahemina Naaz and Kaneez Fatima	77 – 80
16.	<b>EVALUATION OF ACADEMIC PERFORMANCE USING DEEP LEARNING</b> Omkar R. Ghatage	81 – 87
17.	<b>AN APPLICATION OF ICT IN DIFFERENT LIBRARY SERVICES: A STUDY OF CHETANA'S SHRI. MANSUKHLAL CHHAGANLAL LIBRARY</b> Sanjay N. More	88 – 97
18.	<b>ROLE OF ACADEMIC LIBRARIES IN RESEARCH SUPPORT SERVICES: AN OVERVIEW</b> Dadaji Govinda Shewale	98 – 103
19.	<b>REFERENCE SOURCES IN THE LIBRARY</b> Rahul Shewale	104 – 109
20.	<b>EXPERIENTIAL LEARNING IN ACCOUNTANCY EDUCATION FOR COMMERCE STUDENTS</b> Sumedha Naik	110 – 114
21.	<b>AN OVERVIEW OF CURRENT MARKETING TRENDS</b> Hrishikesh Ramchandra Rane	115 – 118
22.	<b>A STUDY ON PREFERRED INVESTMENT AVENUES AMONG SALARIED PEOPLE WITH REFERENCE TO DEVGAD, SINDHUDURG, MAHARASHTRA</b> Tanvi Vaibhav Ghare	119 – 125
23.	<b>USE OF PESTICIDES IN MANGO CULTIVATION IN DEVGAD: A SURVEY</b> Nutan Sachin Kadam	126 – 132
24.	<b>ETHNOBOTANICAL STUDY OF FEW MEDICINAL PLANT IN DEVGAD</b> V. B. Kunure, R. P. Jadhav and V. R. Naik	133 – 141
25.	<b>नविन शैक्षणिक धोरण - एक चिकित्सा</b> अविनाश विनायक बापट	142 – 144
26.	<b>नविन राष्ट्रीय शैक्षणिक धोरण 2020 – मूलभूत विज्ञान शाखेतून उच्च शिक्षण</b> चंद्रकांत दत्तात्रय भेंकी	145 – 148
27.	<b>इतिहास आणि नवीन शैक्षणिक धोरण २०२२</b> सचिन शांताराम दहिबावकर	149 – 152

28.	राष्ट्रीय शैक्षणिक धोरण - २०२० व शिक्षणविषयक योजना संजय भास्कर तायडे	153 - 156
29.	नवीन शैक्षणिक धोरणातून जगण्याशी जोडणारे शिक्षण आवश्यक प्रमोद बळीराम जाधव	157 - 165
30.	मातृभाषेचे महत्त्व अधोरेखित करणारे नवीन शैक्षणिक धोरण हेमश्री किशोर चिटणीस	166 - 168
31.	सामाजिक सर्वेक्षण: विद्यार्थ्यांमध्ये कौशल्य विकसित करण्याचे एक प्रभावी माध्यम रतन रा. चौधरी	169 - 172
32.	आंबेडकरवादी स्त्री लिखित आत्मकथा - एक दृष्टिक्षेप अभिता बाजीराव निकम	173 - 176

## BRIEF ON KEY-NOTE ADDRESS AND GUIDANCE SESSION I

### UNDERSTANDING NEP AND ACADEMIC BANK OF CREDITS (ABC)

**Vijay Joshi**

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NEP 2020 has a dominant philosophy which is highly integrated, comprehensive, futuristic and providing flexibility of learning, keeping student's at core of policy making. The features of NEP 2020 can be identified as Learner centric, Experiential, Inquiry Driven, Discovery Oriented, Discussion based etc. Suboptimal governance and leadership, fragmented higher education ecosystem lack of desired learning outcome are existing major challenges in front of current higher education system. Key areas where NEP 2020 aims to bring transformation are, changes in teaching learning philosophy, phasing out affiliation of colleges, four year degree courses etc. Institutions should consider student's composition, teacher's strength, courses offered, governance structure, revenue sources, academic innovation and student support system while framing strategies. Institution should have vision document i.e. Institutional Development Plan (IDP) inclusive of financial plan. Effective monitoring and review system of HEIs should be in place.

NEP puts faculty at the heart of transformation. Therefore, establishing training centers for continuous faculty development is necessary. Faculty development programs for vocational and soft skills development should be conducted periodically.

Revised HR policies, differential reward system for innovation and faculty empowerment are key points in transforming faculties for adapting to rapid changing environment.

In institutional strategies, progression is an essential part which includes: improvement in NAAC Grade, imbibing quality culture through branding exercise and perception management. Further accreditation will be outcome based inclusive of input that includes curriculum, human resource, infrastructure and teaching resource. Expected outcome have to be measured with learning outcome, extent of skill development of students and employability, research publications, patents and consultancy. The education in future would lead the learner to develop higher cognitive ability. Independent learning, independent inquiry and critical thinking are traits of cognitive ability which would be inculcated through broad based liberal flexible curricular structure, creative combination of courses and multiple entry and exit points.

Academic bank credit (ABC) is another prominent feature of NEP. Institutes and learners are required to register themselves on National Academic Depository (NAD). The ABC provides facility for inter transferability of credits, choice of courses to tailor one's own degree. It promotes learner friendly interdisciplinary approach, best course combination to suit learner's aptitude and provides multiple entry-exit and mobility across the disciplines. Accumulation of credits, redemption of the same as per requirement and award of degree will be done by the NAD. Advantages of ABC are that learner can swap specialisation or institute any time. They can choose the courses considering the institute's grade, faculties and courses offered. Learners can hop on different level UG /PG/Ph.D. through online courses and skill courses. ABC enables students mobility across HEIs which helps in seamless integration of skills and experiences into a Credit Based system.

## SUMMARY OF GUIDANCE SESSION II

### PREPAREDNESS TOWARDS OUTCOME BASED MULTI/ INTER-DISCIPLINARY AND ONLINE EDUCATION

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NAAC has notified all Higher Education Institutes (HEIs) to specify institutional preparedness for NEP 2020 in AQAR from 2021-22. The HEIs are required to transform from single-stream institutions into multidisciplinary universities and autonomous degree-awarding HEIs. This can be achieved through academic collaboration between institutions, through HEI clusters, merger of single-stream institutions with other multidisciplinary institutions under the same management or different managements and strengthening of institutions by adding departments in subjects. To achieve this objective, institutions have to conduct orientation programmes for students and teachers, offer career guidance and counselling and make required infrastructure available. Integration of the humanities and arts with science, technology, engineering and mathematics (STEM) have been associated with positive learning outcomes such as increased critical thinking abilities, higher-order thinking and deeper learning, content mastery, problem solving, teamwork and communication skills, improved general engagement and enjoyment of learning etc. Institutions should perform a cultural audit of courses, programs, and spaces on campus where integration is already taking place, partnering with student affairs, professionals to evaluate programs and initiatives intended to integrate learning between the class and non-classroom environment. Institutions and employers should find ways to collaborate for the greater success. The new education policy intends to develop well-rounded individuals that possess critical 21st century capacities. HEIs should be prepared to offer environment education, value based education, global issues, internships with local industry and research etc. HEIs offering programmes with flexibility as multiple entry and exit points, inter-multi-disciplinary education need to register in the ABC to enable acceptance of multidisciplinary courses, credit transfer, and credit acceptance. Qualification Type and Credit Requirements have specified for various levels of education. e.g. The Level 5: Undergraduate Certificate that corresponds to 30-40 credits while Level 9: Master's degree with duration Two years or four semesters after obtaining a Bachelor's degree requires 72–80 credits. HEIs should plan to engage in Start-up and incubation centers and support vibrant research. Focus of Interdisciplinary education is to combine theories, methodologies, and perspectives from two or more disciplines; to connect a single theme or idea across disciplines.

By 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education, for which a clear action plan with targets and timelines will be developed. For this purpose, reforming curricula through enhanced content of vocational knowledge and skills, better course alignment with skill standards and interdisciplinary content connections and developing workplace for related skills through internships and on-the-job training, are the requirements. Appropriate integration of Indian Knowledge system into formal education is expected of institutions. Thus, institutes are to prepare themselves for all round education across all levels.

## SUMMARY OF GUIDANCE SESSION III

### SKILL DEVELOPMENT AND APPROPRIATE INTEGRATION OF INDIAN KNOWLEDGE SYSTEM

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Key changes in education under NEP 2020 are revamping curriculum, pedagogy, assessment, and student support, reaffirming the integrity of faculty and institutional leadership positions, establishment of a National Research Foundation (NRF) etc. Higher Education Institutes (HEIs) are undergoing a phase of transformation. To cope up with the changing policies in education, HEI have to take effective measures towards the seamless collaboration, internationalization of education, joint degrees between Indian and foreign institutions, and to enable credit transfer. By 2040, all (HEIs) shall aim to become multidisciplinary institutions. NEP 2020 is intended to inculcate various skills such as Vocational skills, Employability skills, 21st Century skills, Soft Skills among the learners. Higher Education Institutes (HEI) should plan to offer programmes to promote vocational education. Offering value-based education to inculcate positivity amongst the learner, that include the development of humanistic, ethical, Constitutional, and universal human values of truth (satya), righteous conduct (dharma), peace (shanti), love (prem), nonviolence (ahimsa), scientific temper, citizenship values, and life-skills, is also a directive for HEIs.

HEIs should take efforts to design a credit structure to ensure that all students take at least one vocational course before graduating, to engage the services of Industry veterans and Master Crafts persons to provide vocational skills, to offer vocational education in ODL/blended/on-campus modular modes, NSDC association to facilitate all this by creating a unified platform to manage learner enrolment, skill mapping, and certification.

In order to integrate Indian Knowledge System into the curriculum using both offline and online courses HEIs have to outline the strategy. Institutions should plan to train its faculties to provide the classroom delivery in bilingual mode including vernacular medium. Institutes have to outline plan to preserve and promote Indian languages (Sanskrit, Pali, Prakrit and classical, tribal and endangered etc.), Indian ancient traditional knowledge, Indian Arts and Indian culture and traditions.

Institution have to undertake initiatives to transform its curriculum towards Outcome Based Education and to incorporate the Outcome Based Education in teaching and learning practices. HEIs are to seek the possibilities of offering vocational courses through ODL mode in the institution. Also, development and use of technological tools for teaching learning activities has to be done by the stakeholders. The institution has to take efforts towards the blended learning to offer online/ distance and conventional courses as per learner's demands. NEP 2020 is an important leap towards the change of the Indian educational system. NEP 2020 focuses on employability and acknowledges the role of education in providing students with the right skillsets. The vision of the government via this initiative is to meet the 2030 Agenda for Sustainable Development.

## **QUALITY INITIATIVES IN VIEW OF NATIONAL EDUCATION POLICY 2020: A FORWARD APPROACH FOR AFFILIATED COLLEGES**

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### **Abstract:**

Education of 21<sup>st</sup> Century must have holistic approach in real sense. The National Education Policy 2020 is a document that provides the exact roadmap to achieve the approach, which will not only be restricted to information sharing, but adoption of multi-disciplinary approach in teaching-learning and research in higher education. The paper suggests the steps in Quality Initiatives in view of National Education Policy 2020: A forward approach for Affiliated Colleges. The study concludes that the reforms are always continuous and unending process in improvement of quality and hence steps suggested are relevant today and continue even after the implementation of the NEP:2022.

**Keywords:** Holistic education, reforms, quality, access, and change

### **Introduction:**

The National Education Policy 2020 has proposed a holistic approach to education in India. Its time to relook at most of the initiatives and begin to implement new things. For instance, the affiliated system for colleges will come to an end, a new approach will role out with each college being given three options to place its self. The three proposed options are being an autonomous college, being part of Cluster of Colleges and to become Constituent College of the University. Each options have its own pros and corns and after a systematic study each college in India will have to take a decision. Autonomy will help to design curriculum which will be relevant and the process of introduction of new courses will be quick and effective. The focus could be on online and blended programs aimed at up-skilling the graduates.

Secondly, the cluster of college is the best way ahead to work with collaboration and have multi-disciplinary and transdisciplinary approach towards education. Resource sharing will be the advantage and the colleges will promote exchange of ideas and co-operation will be the key word replacing the competition and focus will be on creating employable graduates with set of skills relevant in the present-day context. Thirdly, the consistent college set-up which is

already existing in many parts of the country will continue and the University will have to play a major role in improving the quality of education in the Colleges.

The options given in the NEP:2020 are with one objective and that is making the education holistic, multi-disciplinary and practical oriented. The best part of NEP: 2020 is access to Higher Education at an affordable cost and with a forward-looking approach with makes way for life-long education with the option of multiple-entry and exit, rewarding the student with each year of his or her Degree. Ensuring that there is mechanism to earn, store, retrieve and use the credits earned at any point of time through the system of Academic Credit Bank. The next significant step is about the removing the rigid system of classification of the subjects into a particular core group. The policy entirely is student centric and allows the student to make a choice of subjects from the pool of subjects. However, with all the above advantage along with access, quality has been the focal point of NEP:2020 and with the word quality automatically follows the process, practices and procedure which can be followed to achieve the pre-determined standard.

### **Objective of the study**

The present study aims at presentation of the quality initiative already taken by the Colleges which can continue and be used as a forward step towards successful implementation of NEP:2020.

### **Quality Initiatives by the affiliated colleges considering NEP: 2020**

The affiliated colleges most of the time have a fixed style and methodology of working. Its most of the time depend on the University to implement most of the reforms in various key area about NEP:2020. The good initiatives which can help the college are

- ❖ The Colleges have already started the discussion about the formation of cluster of colleges and have decided that its co-operation and not competition. The focus has shifted from creating more resources to sharing the existing resources and creation of pool of resources.
- ❖ The College are offering add-on, certificate, skill-based courses to its students in association with government and non-government agencies and professional bodies in-order to bridge the gap between the lacking of syllabus and imbibe updated curriculum.
- ❖ Faculty Exchange and Student exchange programs have been initiated and encouraged by the colleges in order to give exposure to the students and faculty of the recent trends in the subject matter and the type of teaching methodology adopted by the different higher education institutions.
- ❖ The planning and delivery of higher education through digital mode is gaining popularity in the country. UGC has allowed select Universities and autonomous colleges to offer

degree through online mode and soon the same advantage will be passed to the other consistent colleges and colleges with graded autonomy under the cluster.

- ❖ The e-content development under the four-quadrant system is an excellent step ahead for enhancing the quality content delivery. It helps the student to go through the content as per the convenience of the student and feedback mechanism enables to raise doubts.
- ❖ Most of the College have established research, development, and innovation cell as a pre-requirement for implementation of NEP:2020. The cell will play pivotal role in orientation of faculty in publication of research papers in UGC care list and ABDC journals. The training programs and faculty development programs will further enable the faculty to publish in Scopus and Web of Science journals and apply for major and minor projects to funding agencies in India and abroad.
- ❖ The next forward quality step is development of Programme Outcomes, Programme Specific Outcomes, Course Outcomes and Learning Outcomes of each paper of the Programme. It is a very important step in taking the student from the lower order thinking to higher order thinking in terms of implementation of blooms taxonomy in general education.
- ❖ Efforts of the Colleges in engaging with the community has significantly improved considering NEP:2020 preparation. Today, the concept of social connect and internship are accepted by the institutions. The colleges are actively working for the cause of environment conversation and skill development of the community.
- ❖ The development of programs which are intra-disciplinary, multi-disciplinary and trans-disciplinary are in progress. Many universities and colleges are in process of upcoming up with new programme which are directly aimed to provide candidates which are as per the requirement of Industry 4.0.
- ❖ Few colleges have incorporated the internship as an integral part of the Programme at all the general education which again is an excellent step towards improvement in quality.

**Conclusion:**

All the above steps mentioned, in light of implementation of NEP: 2020 can go a long way in improving the quality of the current status of education in affiliated system and in the new form as adopted by the respective college. Education 4.0 is ultimately all about the access, cost effectiveness and most importantly quality. The reforms are always continuous and unending process in improvement of quality and hence above steps are relevant today and will be replaced by positive outlook in future. Change in the system is inevitable, but under the

NEP:2020 it will be radical. The change which will have full proof solution towards to problem of under-employment and lack of skill development and multi-disciplinary approach in India.

**References:**

1. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf)
2. Gupta, A. (2021). Focus on Quality in Higher Education in India. *Indian Journal of Public Administration*, 67(1), 54–70. <https://doi.org/10.1177/00195561211007224>
3. H.J. DeJager & F.J. Nieuwenhuis, Linkages between Total Quality Management and the Outcomes based Approach in an Education Environment, *Routledge Journal of Quality in Higher Education*, Vol. 10, No.3, November, 2005, pp. 251 – 260.
4. <http://cprhe.niepa.ac.in/content/quality-higher-education-india>

## **NATIONAL EDUCATION POLICY (NEP)-2020: REFORM IN INDIAN EDUCATION SYSTEM**

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### **Abstract:**

The National Policy on Education was created in 1986 and revised in 1992. Since then, several adjustments have been made, necessitating a revision of the Policy. The National Policy on Education (NPE), 1986, which had been in place for 34 years, was replaced with the NEP 2020, the first education policy of the twenty-first century. This policy, which is based on the fundamental pillars of Access, Equity, Quality, Affordability, and Accountability, is in line with the 2030 Agenda for Sustainable Development and seeks to transform India into a thriving knowledge society and a global knowledge superpower by enhancing both school and college education and making it more holistic, flexible, multidisciplinary, appropriate for the needs of the 21st century, and focused on bringing out each student.

**Keywords:** NEP, Education, Policy.

### **Methods and Limitations:**

As a first attempt at studying NEP 2020, this work has some limitations because it is based on secondary data. Through an examination of the literature, the results are highlighted, and suggestions are given. Future research can use these findings as a foundation. One can find empirical studies about the effects of NEP 2020 following its implementation. However, future research on several NEP 2020 aspects can be used as a starting point for this project.

### **Review of Literature:**

The policy has been formulated after a very detailed consultative process, unprecedented in depth and scale. The goal of India's new educational system is outlined in the National Education Policy 2020 (NEP 2020), which was introduced on July 29, 2020. To ensure ongoing learning, NEP 2020 focuses on five pillars: *affordability, accessibility, quality, equity, and accountability*. It has been designed to meet the needs of the populace because of the need for knowledge in both the economy and society, which necessitated the regular acquisition of new skills. Thus, the focus of NEP 2020 is on providing high-quality education and fostering

possibilities for lifelong learning for everyone, which will eventually lead to full and productive employment and decent work as outlined in the United Nations Sustainable Development Goals 2030. The new policy replaces the earlier National Policy on Education, 1986, and creates a thorough framework to improve both primary and secondary education.

**The salient features of the policy are as follows:**

**i) Self – reliant India:**

The primary goal of the NEP is to design and carry out effective solutions to internal issues that are in line with Government of India initiatives and programmes, including Make in India, Skill India, Start-up India, and most recently Atma-Nirbhar India.

Looking back, we can see that these programmes were launched in stages beginning in 2014, but they all shared the same objective: to encourage entrepreneurship over employment. The current Covid19 crisis has demonstrated the necessity and viability of such an independent society and served as a catalyst for a young person who was looking for work to be redirected toward a self-sustaining skill-based model.

**ii) Higher education in NEP 2020:**

The NEP 2020 was designed to increase the Gross Enrolment Ratio (GER) in higher education from its present level of 26% to 50% by the year 2030. By enhancing open and distance learning infrastructure, online education, and expanding the use of technology in education, it seeks to develop students' overall personalities.

Additionally, the National Research Foundation (NRF) will be established to support national research efforts. There will be a National Accreditation Council (NAC), which will serve as the nation's sole regulator for institutions of higher learning. There will be numerous verticals within the Higher Education Council of India (HECI) to carry out various duties. All government recruiting examinations will be administered by a National Recruitment Agency, and a Common Eligibility Test (CET) for various recruitment exams of the same level. Academic Bank of Credits will be established to facilitate Transfer of Credits.

**iii) Education and skilling in cyber security:**

According to the World Economic Forum's (WEF) Global Risk Report 2021, the fourth most serious threat to the world is "Cyber Security Failure." Due to the continuous pandemic, education and learning have already shifted online, making it crucial to safeguard each person's security and privacy. Making our networks and the internet secure is crucial as the adoption of digitization takes centre stage. Considering the current

situation, it is essential that higher education curricula, regardless of the discipline studied, prioritize capacity building for "Cyber Security Resilience."

**iv) Research and Innovation in HIE:**

Encourage substantial R&D investments from the public and commercial sectors is one of NEP 2020's main focus areas. This will promote creativity and imaginative thinking. Strong industry commitment and close academic interaction are required to support industry-led skilling, upskilling, and reskilling.

**v) The National Education Technology Forum (NETF):**

The NETF that is planned to be established under NEP 2020 is a positive move. Institutions of higher learning would be able to respond fast if quality ed-tech tools were hosted across all delivery dimensions for teaching and learning. To ensure "privacy & security" in addition to adherence to cyber security standards, adoption of firewalls and Intrusion Detection System (IDS) from external threats and vulnerabilities, the emphasis needs to be on hosting native Ed-Tech tools on "open-source development platforms" with built-in cyber security resilience. The "personal privacy of individual students" shall be protected in this way.

**Conclusion:**

**Expected outcomes of NEP 2020:**

Results of NEP 2020 Aligning with SDG 4, universalization from ECCE to secondary education by 2030.

- By 2025, the National Mission will have achieved the goals of foundational learning and numeracy.
- By 2030, all pre-school through secondary levels will use GRE
- Bring back 2 million absentee/never attended students.
- Board Exams will be conducted to test core concepts and application of knowledge.
- Education System that is Inclusive and Equitable by 2030.
- Teachers will be prepared for assessment reforms by 2023.
- Every student will graduate from school with at least one skill in hand.
- The Common Standards of Learning in Public and Private Schools, which will be tested by board exams.

**References:**

1. National Policy on Education 2016, (2016). National Policy on Education 2016. Government of India, 1–217. Retrieved from <http://www.nuepa.org/New/download/NEP2016/ReportNEP.pdf>
2. NUEPA. (2014). Education for All: Towards quality with equity - National EFA-2014 Review for India, 156. Retrieved from
3. [http://mhrd.gov.in/sites/upload\\_files/mhrd/files/upload\\_document/EFAReview\\_Report\\_final.pdf](http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/EFAReview_Report_final.pdf)
4. NEP (2020) (1): Policy document released by Government of India Retrieved from [https://www.education.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English.pdf)

## **EXPLORING INDIA'S NATIONAL EDUCATION POLICY 2020: OPPORTUNITIES, CHALLENGES AND ROLE OF STAKEHOLDERS AHEAD**

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### **Abstract:**

India is on the cusp of a major educational revolution with the introduction of the National Education Policy (NEP) 2020. This landmark policy seeks to provide a comprehensive framework for the overall development of the education system in India. It lays out a roadmap for achieving the government's vision of 'transforming India into a vibrant knowledge society'. The NEP proposes an ambitious transformation of the Indian education system that aims to ensure that all students have access to quality education. It also seeks to promote equity and inclusiveness in the system. The NEP offers tremendous opportunities for India to become a global leader in education, while also providing significant challenges. This article will explore these opportunities and challenges ahead as India embarks on its journey to implement the NEP.

Keywords: NEP 2020, Indian Education System, Stakeholders.

### **Overview of the National Education Policy (NEP) 2020:**

The National Education Policy (NEP) 2020 is an ambitious policy that aims to transform the Indian education system. The policy was formally approved by the Union Cabinet on July 29, 2018 following its passage by both houses of parliament. That makes it the first national education policy since 1986. (*Advances in Global Education and Research*, 2021) It aims to address the growing need for skilled human capital in India and to tackle issues related to education, including the quality of education, equity, inclusivity and employability of its youth. The policy was drafted by an expert committee led by the former Chief of the Indian Space Research Organisation (ISRO) Dr. K. Kasturirangan. It seeks to create a comprehensive framework for the overall development of the education system in India. The policy has been designed to provide a roadmap for achieving the government's vision of 'transforming India into a vibrant knowledge society'. It seeks to promote equity and inclusivity in the system. The policy has been designed to provide a roadmap for achieving the government's vision of 'transforming India into a vibrant knowledge society'. It seeks to promote equity and inclusivity in the system. The policy has been designed to provide a comprehensive framework for the overall development of the education system in India. It seeks to provide a comprehensive framework

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**Objectives:**

1. To study opportunities and challenges of NEP 2020
2. To study role of various stakeholders of NEP 2020

**Research Methodology:**

The data required to present the paper is collected from secondary data. It is collected from NEP 2020 policy and various research paper published.

**Opportunities presented by the NEP**

The NEP is an opportunity for India to transform its education system and emerge as a global leader in the field. The policy provides an opportunity for the country to consolidate the gains it has made in improving access to education and reducing the gender gap in education. Showering more responsibilities to Departments of Education in universities can be considered as opportunities to act. (Roy and Mandal, 2021). The NEP also offers an opportunity for the country to leverage the demographic dividend to become a knowledge economy. The policy has been designed to provide a roadmap for achieving the government's vision of 'transforming India into a vibrant knowledge society'. It seeks to promote equity and inclusivity in the system. The NEP provides India with an opportunity to reverse the declining trend of learning outcomes in the country. It also provides an opportunity to improve the quality of education and address issues related to employability of its youth. The policy has been designed to provide a roadmap for achieving the government's vision of 'transforming India into a vibrant knowledge society'. It seeks to promote equity and inclusivity in the system. New system proposed because there is

need of time, there is need of upgradation, to make the young India able to compete with the time and the World. The objectives of higher education is to create new knowledge or new interpretation of existing knowledge through systematic analysis. (Aithal & Aithal, 2020). NEP 2020 promotes holistic, integrated, enjoyable and engaging learning. (Gunasekaran et al., 2021)

### **Challenges in implementing the NEP**

The NEP is a policy that seeks to address the growing need for skilled human capital in the country. The challenge is to ensure that the policy is implemented in a timely manner. The implementation of such a policy is a complex process, given the sheer size of the country. The stakeholders may find difficult to adopt to the changes since they are not aware about the functioning of NEP 2020. (Devi & Cheluvvaraju, 2020) The implementation of the NEP will require the government to bring together stakeholders from a wide range of areas. It will require close coordination between the government and a wide range of stakeholders, including the private sector, educational institutions, civil society organisations and the community. For the government to be able to effectively implement the NEP, there needs to be close coordination between various ministries and departments. The policy has been designed to provide a roadmap for achieving the government's vision of 'transforming India into a vibrant knowledge society'. It seeks to promote equity and inclusivity in the system. It will require the government to bring together stakeholders from a wide range of areas. It will require close coordination between the government and a wide range of stakeholders, including the private sector, educational institutions, civil society organisations and the community. For the government to be able to effectively implement the NEP, there needs to be close coordination between various ministries and departments. The policy has been designed to provide a roadmap for achieving the government's vision of 'transforming India into a vibrant knowledge society'. It seeks to promote equity and inclusivity in the system.

### **Role of the government in NEP implementation**

The National Education Policy (NEP) places a significant emphasis on the role of the government to transform the education system in India. Specifically, it calls for the government to play a pivotal role in the following areas: The government needs to establish a clear vision and mission for the education system. The government needs to provide a stable policy framework for the education system. The government needs to develop a robust regulatory and monitoring framework for the education system. The government needs to promote research and innovation for the education system. The government needs to create an enabling environment for the education system. The government needs to provide appropriate funding for the education system.

### **Role of the private sector in NEP implementation**

The National Education Policy (NEP) has recognised the importance of the private sector for the overall development of the education system in India. The challenge is to ensure that the policy is implemented in a timely manner. The implementation of such a policy is a complex process, given the sheer size of the country. The implementation of the NEP will require the government to bring together stakeholders from a wide range of areas. It will require close coordination between the government and a wide range of stakeholders, including the private sector, educational institutions, civil society organisations and the community. For the government to be able to effectively implement the NEP, there needs to be close coordination between various ministries and departments. (Govinda, 2020)The policy has been designed to provide a roadmap for achieving the government’s vision of ‘transforming India into a vibrant knowledge society’. It seeks to promote equity and inclusivity in the system. It will require the government to bring together stakeholders from a wide range of areas. It will require close coordination between the government and a wide range of stakeholders, including the private sector, educational institutions, civil society organisations and the community. For the government to be able to effectively implement the NEP, there needs to be close coordination between various ministries and departments. The policy has been designed to provide a roadmap for achieving the government’s vision of ‘transforming India into a vibrant knowledge society’. It seeks to promote equity and inclusivity in the system.

### **Role of educational institutions in NEP implementation**

Educational institutions have a significant role to play in the implementation of the NEP. They can become a major stakeholder in the NEP by providing innovative ideas and best practices from around the world that can be applied in the current education system. They can also play an important role in capacity building initiatives in the education sector by providing inputs and ideas that can help improve the quality of education imparted in the system. Educational institutions can also play a significant role in the adoption of the NEP by providing feed-back based on the experience of operating in the current system. They can also play a significant role in providing ideas and best practices from around the world that can be applied in the Indian education system.

### **Role of the community in NEP implementation**

The community has a significant role to play in the implementation of the NEP. It can become a major stakeholder in the NEP by providing ideas and inputs that can help improve the quality of education imparted in the system. It can also play an important role in capacity building initiatives in the education sector by providing inputs and ideas that can improve the

quality of education imparted in the system. The community can also play a significant role in the adoption of the NEP by providing feed-back based on the experience of operating in the current system. It can also play a significant role in providing ideas and best practices from around the world that can be applied in the Indian education system.

### **Creating a roadmap for NEP implementation**

The implementation of the NEP will be a long-term process. It will not happen overnight, but will be a gradual process that will extend well into the future. The process to develop and implement the NEP will be an iterative one, with multiple stages and stages of feedback and review. The process is expected to take approximately five years, with the first two years being primarily devoted to the formulation of the policy and setting up the institutions and mechanisms to implement it. The remaining three years will be devoted to actual implementation of the policy. Towards the end of the process, a roadmap for implementation of the NEP can be drawn up, which will help guide states and other stakeholders in the implementation process. (*Advances in Global Education and Research*, 2021) Drawing up a roadmap for implementation of the NEP will provide a common understanding of the implementation process, and will help stakeholders stay focused on the goals of the NEP.

### **Impact of the NEP**

The NEP 2020 can potentially have a wide-ranging and long-lasting impact on the Indian education system. It can help transform the current education system into a top-notch world-class system that meets the needs of the current and future generations of Indians. The NEP is expected to be a significant step towards achieving the aim of ‘transforming India into a vibrant knowledge society’. The NEP will facilitate a transformation of India’s education system, and pave the way towards creating a society that is more inclusive, with greater equity, and better equipped to meet the challenges of the 21st century. The impact of the NEP will depend on the effective implementation of the policy. The roadmap for implementation of the NEP should provide guidance on all aspects of the implementation process, and ensure that the impact of the NEP is maximized. It will be important to keep the implementation process transparent, with feedback and review at various stages. This will enable stakeholders to track progress on the implementation.

### **Conclusion:**

Higher education system is important parameter of the country to decide the social status, technology adoption and to the economy. NEP 2020 will improve the quality of the education. It is based on the skill development of the student. It enables private sector as well as other sector to get skilled human resource. NEP 2020 has suggested standard education for all the

stakeholders of the society by making an educating system and wants to rebuild Indian Education System. The NEP 2020 will fulfill the demand of all stakeholders nationally as well as globally. It will achieve the economic the growth of the economy.

**References:**

1. James, W. B., Cobanglou C. and Cavusoglu M. (2021). *Advances in Global Education and Research: Volume 4*. Anahei Publishing. <https://doi.org/10.5038/9781955833042>
2. Aithal, P. S., and Aithal, S. (2020). Analysis of the Indian National Education Policy 2020 towards Achieving its Objectives (SSRN Scholarly Paper No. 3676074). <https://doi.org/10.2139/ssrn.3676074>
3. Devi, L., and Chelubaraju. (2020). A Study on Awareness about the Impact of National Education Policy-2020 Among the Stakeholder of Commerce and Management Disciplinary. *European Journal of Business and Management Research*, 5(6), Article 6. <https://doi.org/10.24018/ejbmr.2020.5.6.640>
4. Govinda, R. (2020). NEP 2020: A Critical Examination. *Social Change*, 50(4), 603–607. <https://doi.org/10.1177/0049085720958804>
5. Gunasekaran, S., Natarajan, R., and Nayagam, A. (2021). *Multidisciplinary Research- Vol. 2 (3) (1) (p. 218)*.
6. Roy, G., and Mandal, B. (2021). An Appraisal of National Education Policy 2020 with respect to Higher Education.

## **A REVIEW ON SUSTAINABLE DEVELOPMENT AND NATIONAL EDUCATION POLICY, 2020**

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### **Abstract:**

Education is a fundamental human right, which provides knowledge and skills to increase employment, reduce poverty and improve health and wellbeing. 2030 Agenda for Sustainable Development which emphasizes on educational quality, ensuring inclusive and equitable quality education and promoting opportunities for lifelong learning for everyone. One of the most important tasks to do is to ensure the sustainability of the resources the planet has and at the same time to ensure the humans well-being. For sustainable development, there is clear need to make the education more effective and efficient. The National Education Policy 2020 (NEP 2020) is a blueprint for a new India that aims to reform the educational system. The NEP 2020 is also in the line of Goal 4 of the United Nations Sustainable Development Goals, which clearly believes quality education is the base of sustainable development.

NEP 2020 will make stronger all the citizens of the country by improving their skills and knowledge. Furthermore, it is openly discussions about the complete revolutionizing of Indian educational system from pre-primary to higher education along with curricular reform to institutional reform in a phased manner, which will help India to achieve Sustainable Development Goals objectives.

The author had reviewed the existing literatures on Sustainable Development and NEP 2020 and had tried to mention the good practices that schools, universities and educational institutions can adopt for Education for Sustainable Development.

**Keywords:** Sustainable development, NEP 2020, Higher Education

### **Introduction:**

Due to lack of multidisciplinary approach, coordination among the funding agencies, lack of the problem-solving nature of research and less provision for sustainable development in previous education policies. After 34 years, new National Education Policy 2020 come into existence which has been shown by the immense history of ancient and eternal Indian knowledge and ideas with durable base for the introduction of modern and more strong education scheme. The NEP 2020 has put more importance on aboriginal principles, Indian languages, and practices

that incorporate scientific dynamics of several discipline genres that started in elementary school and continued through higher education. A quality education is the foundation of sustainable development, the main aim of which is to achieve universal quality education for all. The new national Education Policy 2020 and Sustainable Development Goal 4 share the goals of universal quality education and lifelong learning. “National Education Policy 2020 focuses on learning instead of studying and goes ahead of the curriculum to focus on critical thinking; National Education Policy stresses on passion, practicality and performance than on ‘Process’ Sustainable Development Goals 2030. The Sustainable Development Goals (SDGs) were introduced in January 2016 following the Paris Conference, which brought together 184 member governments and the education sector to advance global development. There are 17 Goals with 169 targets, which have been set for the world community for Sustainable Development. Among these 17 goals of sustainable development, Goal 4 is ‘Quality Education’, which is most important and basic element of sustainable development, which helps to develop world in accurate direction. Essential factor, for the upgrading of people’s lives is standard of living and for proper use of natural resources and quality education. The objective of goal 4 will uplift enrollment ratio of children in education system and also to make sure that they must attain proper academic achievement with help of well-trained educators and school infrastructures to reach towards positive educational outcomes.

The aim of goal 4 is “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. As per New Education Policy, every university should aim to become multidisciplinary by 2040, which will help the country gain an accurate expertise from the graduates of the universities. The National Education Policy also emphasizes research and innovation through establish technological development centers, centers in research fields, increased industry-academic links, and inter-disciplinary research, including study in the social sciences and humanities. The NEP 2020 gives a comprehensive foundation for a fundamental change in planning and delivering education at all levels and in all forms. This policy emphasis on multidisciplinary learning, it mainly focuses on innovation, creativity, critical thinking, problem solving, and idea development. Quality Education for Sustainable Development makes the students an active and responsible citizen of world and which try to make a safe, healthy and habitable environment for everyone for present and future.

In this review article various aspects of New Education Policy 2020 were studied in respect sustainable development though Quality Education which are integrated in NEP 2020.

## **Education and Sustainability**

The relationship between the Education and Sustainable Development is complex in nature. The higher status and level of education has a capacity to reach Sustainable Development Goal and targets. Without understanding it, the set goals and targets would just be a dream. Any goal without a plan is just a wish and following this, we as a nation need an educational plan and strategy in action and not just in paper.

Bringing education as a powerful tool, it can improve the standard of living and quality of life of citizens by generating employment opportunities for the youth, providing safety for women, protecting the environment, providing education to all age groups, reducing dropout rates, etc.

Education is key component and the main tool in achieving Sustainable Developing and thus over the past two decades several international conferences, workshops, seminars and symposiums have been organized to feature and build up the importance of Education for Sustainable Development. The SDGs became very famous since they have been announced in 2015. Tremendous efforts and resources were made in an attempt to increase awareness about the importance of SDGs.

It is very essential to make awareness, to develop the positive approach and to bring developmental revolution towards sustainable development. To achieve sustainable development goals, many factors such as communication, public awareness, training and capacity building, scientific and applied research, information sharing and access, networking, and collaborations are very much important which are included in NEP 2020.

Aim of sustainable development through education programs to improve public's attitudes and beliefs toward nature. According to the world rapid changes we have to become able to face the challenges to develop needed skills. Need to update the educational curriculum, educational resources and current pedagogy to overcome the challenges such as school dropouts, unemployment, and unskilled employee, reskilling of citizens, urbanization and multi-cultural immersion

NEP promoters for high-quality education, which is entrenched in 'Universal Declaration of Human Rights,' 'Convention on the Rights of the Child,' 'World Declaration on Education for All,' 'Dakar Framework for Action,' and the 'Millennium Development Goals,' and thus education is important for as vibrant to the good fortune of individuals and nations. According to SDG 4, all girls and boys receive a free, equitable and high-quality primary and secondary education that results in relevant and effective learning outcomes, all girls and boys have access to high-quality early childhood development, care, and pre-primary education and all women and men have

equitable access to cheap and high-quality technical, vocational, and postsecondary education, including university, by 2030. To promote sustainable development all learner should acquire the knowledge and skill through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship, and appreciation of cultural diversity and culture's contribution to sustainable development, among other things.

### **New Education Policy and its vision to education for sustainable development**

National Education Policy (NEP 2020) is introduced with a vision on Education for Sustainable Development to achieve Goal 4, Quality Education, inclusive and equitable education to all. To achieve the set goals and targets there is need of structuring the entire education system of the country. NEP 2020 has put a attention on providing inclusive and integrated education such as sustainable development and living, waste management, environmental protection, biodiversity, protection of environmental and biological resources, sanitation, and climate change. NEP predominantly highlighted on training and alerting teacher, educators and trainers around Sustainable Development and has made it mandatory environmental education as a part of the curriculum. Education for Sustainable Development has been a major area of the focus nationally and internationally. As National Education Policy 2020 is announced and there is still a long way for the entire and effective implementation of the policy. Till implementation of NEP 2020, the Institutions of the nation's can keep following and implementing the good practices according to guidelines of NEP 2020.

### **Discussions:**

Without awareness environmental sustainability and education, it is impossible to achieve set target. There is need to know relationship between sustainable development and education. To implement sustainable development through education requisite to develop effective curriculum to developing right attitude, skills and behavior amongst the school community and stakeholders. It is very important for the experts designing curriculum to consider the local context and relevancy. The School Management Committee in Schools should engage community members in their meetings and plans and there should be a particular focus on how local community can be involved in school activities and contribute towards sustainability. To increase involvement of children, teachers, parents and community members in the implementation process of NEP for sustainable development need to restructure existing forums and committees. There is need to encourage activities throughout the year on sustainability. To make a one collective implementing sustainable development there should be partnership and

collaboration private sector, Institutions and Government. This will to develop the ability and will also provision in addressing financial and resource constraints.

**Conclusion:**

Through the Education, there is possibility to bring the change in the attitude, behavior and skills among the students who are going to become ultimate future decision makers. Education is key to bring sustainable development and is a game changer tool. By keeping the sustainability as central theme in the school and colleges, it will become utmost contribution to sustainable development. This article tried to asses to education and literature regarding best practices, barriers to sustainable development and how to overcome barriers and tries to make awareness among the schools, colleges and related stakeholders regarding sustainable development and action to take for implementation of NEP 2020 for sustainable development.

**References:**

1. Gupta, B. G., & Gupta, B. L. (2022). Atmanirbhar (self-reliant) Bharat - Heutagogy in Higher Education. *Mazedan International Journal of Social Science and Humanities*, 3(4), 16-21.
2. Kaurav, R.P.S., Suresh, K.G., Narula, S. & Baber, R. (2020). New Education Policy: Qualitative (contents) Analysis and Twitter Mining (Sentiment Analysis). *Journal of Content, Community & Communication*, 12, 4-13.
3. Kumar, S. (2022). Education for Sustainable Development in India: a Narrative Review, *International Journal of Mechanical Engineering*, 7, 69-73.
4. Kurien, A. and Chandramana, S.B. (2020). Impact of New Education Policy 2020 on Higher Education. <https://www.researchgate.net/publication/346654722>, Conference paper 2020.
5. Rani, R. (2020). National Education Policy-2020: Issues and Challenges, *Journal of Research in Humanities and Social Science*, 10-2, 06-09
6. Sood, N., Das, M. and Mishra, B. (2021). Sustainable Development Goals for Multidisciplinary and Interdisciplinary Education and Research in Universities. *Global and Lokal Distance Education- GLOKALde*, 7-1(5)
7. Venkateshwarlu B. (2020). A Critical Study of NEP 2020: Issues, Approaches, Challenges, Oppertunities and Criticism. *International Journal of Multidisciplinary Educational Research*, 10-2(5), 191-196.
8. Verma, H. & Kumar, A. (2020). New Education Policy 2020 of India: A Theoretical Analysis *International Journal of Business and Management Research*, 9-3.

## **CHALLENGES FOR RURAL INSTITUTIONS IN ADOPTING THE NEW EDUCATION POLICY 2020**

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### **Abstract:**

The National Education Policy-2020 is a significant milestone document that will serve as a roadmap for much-needed reforms in India's educational system. In order to make India a superpower in the realm of knowledge, it lays forth a plan for expanding opportunities for access, equity, excellence, inclusiveness, and affordability. Changes in pedagogies, knowledge generation, innovative delivery mechanism and integrated management of education systems are some of the ways to revolutionize India's educational landscape. Although the NEP has acquired some headway and is capable of empowering the future India with much-needed global competence, attaining its aims is loaded with obstacles. In this article, we present a number of potential risks and difficulties that could arise during the NEP 2020 rollout. We'll examine some of the key issues surrounding its implementation at higher education institutions situated in rural areas in more detail in this article.

**Keywords:** NEP 2020, Threats, Rural Education, Limitations of rural HEI's

### **Introduction:**

There is no greater tool for a nation-building than a quality education, as nation's future and the fate of its people are shaped through education. Long-term growth and improvement of the state can be expected from the impact of education. In the current context, the function and significance of education simply cannot be downplayed. When the period before independence is compared to the period after, it is clear that there was growth and development. After a long span of 34 years, the Indian government is finally updating its educational policy for the third time after independence. The National Education Policy 2020 is expected to undergo a number of modifications that could have a real impact on all stakeholders. By encouraging a culture of inquiry, critical thinking and applicability among the students, the plan aims to make India a global hub for education and to prepare the nation to face the challenges of the twenty-first century. The new education policy differs from the established educational model in a number of significant ways.

It is anticipated that NEP 2020 will have various effects on the education system in India due to its emphasis on fostering innovation. It has also provided the necessary structure for its efficient execution. The New Education Policy, 2020 contains some flaws too. This NEP is the third in a planned series to be implemented in India. After the last one in 1986, it took thirty-four years to come up with this one. The strategy takes into account a number of important factors, such as how to make education accessible to all, how to ensure that all students receive a high-quality education, and how to encourage greater involvement from the business sector. The emphasis on teacher development at Indian institutions based on the Chinese university model has been emphasized by (Suryavanshi, 2020). It stressed allowing professors at colleges and universities the freedom to choose their own pedagogical approaches and providing funding for faculty research and new ideas. A bold step into the future is the recommendation that HEIs have operational and financial autonomy. Including business and technical education in elementary school curricula is just one of several goals of NEP-2020.

As a departure from the traditional system, it also includes support for e-learning conducted over the internet. The five pillars of NEP are the Universal Declaration of Human Rights' goals of access, equity, affordability, responsibility and quality. Though not perfect, NEP has shown considerable understanding of the global scenario. Careful implementation is needed to face the difficulties inherent in promoting high-quality education for all. National Education Policy (NEP) 2020 includes a discussion of the importance of infusing Indian values into the classroom. A substantial quantity of study that is focused on the implementation of NEP 2020 and the accompanying risks, opportunities and advantages can be started using various research articles ((Aithal & Shubhrajyotsna, 2020), (Kumar, Prakash, & Singh, 2020), (Parvati & Jha, 2020), (Pawan, 2020), (Suryavanshi, 2020), (Kumar A. , 2021), (Kumar, Prakash, & Singh, 2020), (Kurien & Chandramana, 2020).

### **Insights of NEP 2020**

India's National Education Policy 2020 seeks to develop an educational system that takes into account the country's rich history, diverse culture, and enduring ethos. The foundations and structure of India's educational system are rooted in the country's rich history and contributions of its number of scholars in the subjects such as arithmetics, astronomy, medicine, surgery, engineering, architecture, shipbuilding, chess, the fine arts and yoga to the globe. NEP focuses on developing the much-needed skills among the students such as creative thinking, problem-solving approach, collaboration and logical reasoning with creativity and innovativeness. Further, it aims to double the current Gross Enrolment Ratio (GER) up to 2035 by giving every aspirant student access to a transdisciplinary and interdisciplinary liberal education.

Multidisciplinary and transdisciplinary liberal education is NEP 2020's main goal. The common educational structure has been changed in the New Education Policy to 2+3+3+4+4+1, where the first formal education begins as a foundation stage at the third birthday of the child. Four-year undergraduate programs allow students to leave with a diploma after one year, an advanced diploma after two years, a pass degree after three years, or a project-based degree after four years. One to two years are spent in a postgraduate program, which focuses more on research and specialization. All HEIs, including colleges, will not be affiliated with state universities, and will have autonomy in determining their curricula and methods of evaluation. A continuous evaluation system includes examination and assessments, which are handled by the department, and evaluations are under the purview of the professor teaching the course. The teaching-learning strategy focuses mostly on hands-on learning, fieldwork, and research projects. In higher education, the typical student-to-faculty ratio is 30:1. Courses that are both inside and outside of a student's field of study are available to them. NEP 2020 provides multiple entry and exit options for all undergraduate courses. All single-discipline institutions must become independent interdisciplinary colleges in order to avoid closing and becoming monuments or public libraries.

The Higher Education Commission of India (HECI) would combine with other HE monitoring and governing organizations including the AICTE, UGC, etc. to act as a unified HEI regulator. The current accreditation organizations like NAAC and NAB would be replaced with a powerful National Accreditation Council (NAC). In HEI pedagogy, emphasis will be placed on interaction, exposition, conversation, challenge, inquiry, research, and interdisciplinary thinking. If an Academic Bank of Credit (ABC) is established, the college or university will be able to take into account the academic credits which all enrolled applicants have earned from various approved HEIs (SWAYAM and ODL mode) while issuing degrees. Its few advantages are that it uses a student-centered model and has an integrated control and monitoring system as well as a competency-based continuous evaluation system.

### **Pros of National Education Policy 2020**

New education policy focuses on a Holistic and Multidisciplinary Education at undergraduate level with following opportunities.

- i. It can amalgamate the humanities and arts with Science, Technology, Engineering and Mathematics (STEM) to yield constructive outcomes.
- ii. It will help to foster aesthetic, emotional, intellectual, social, moral, and physical proficiencies of human beings in cohesive manner.

- iii. It may develop ability to master research addressed to certain requirements of industries with regard to all levels such as applied, pure and transactional so as to meet social objectives.
- iv. It can encourage collaborative research environment through sufficient funding, timely mentoring and multidisciplinary approach in Engineering and Technology, arts and humanities, educational technology, social sciences and natural sciences.
- v. It will provide flexibility in curriculum with regard to course options, subject specializations, etc.
- vi. It will help to develop emotional soft skills such as grit, empathy, leadership, teamwork and perseverance.
- vii. The process of evaluation will shift from summative assessment to formative assessment.

### **Present scenario of higher education in rural areas**

It is evident that qualified and dedicated teachers are pillars of Higher education institutions. However, in the present scenario in many rural HEIs there is lack of qualified and efficient faculties and also many of the institutions are run on unaided basis. The teachers from these institutes have not taken advanced trainings related to the recent trends and technologies in their fields. These kinds of trainings are much essential for all the teachers from such areas to enable them to adapt shifting educational landscape. It is also stressful that insufficient infrastructural facilities, inadequate financial support, connectivity and internet resources present challenging learning environments for students from HEIs in rural areas. Further, lack of new technology-based tools for knowledge acquisition, and curricula too hampers educational growth of the students. The development and upgradation of modern education largely depends on the advanced facilities of communication, whereas, the rural areas face less access to science labs, and traditional educational facilities like libraries at national level.

### **Major challenges in implementation of NEP 2020 in rural areas**

At this stage in the implementation of multidisciplinary education, there are many hurdles to be surpassed by many rural colleges with limited infrastructure and wherein only programs in Arts and Commerce are available and research activities are not up to the mark. Some major challenges faced by rural HEIs are:

- i. To provide education to all with accessibility, equality, accountability, affordability, and reachability.
- ii. To cater the infrastructural needs of rural HEIs.
- iii. To take along the students and institutions, who are deprived with high-quality multidisciplinary education with curricular autonomy.
- iv. Low Gross Enrolment Ratio.

- v. Socio-economic barriers.
- vi. Fulfilment of qualified faculties.
- vii. Diversity and the size of India's education sector in rural areas.
- viii. Reorientation and capacity building of the stakeholders from rural HEIs in implementation of experiment based productive teaching-learning process.
- ix. To cultivate and enhance the cooperation among HEIs, stakeholders, and industries.
- x. To pool a linkage between private sector and rural HEIs.
- xi. To raise the public funding in education sector up to 6%.
- xii. To change the mindset of students, teachers and all stakeholders including institute to go for NEP 2020.
- xiii. To train the educators and to drive a learning ecosystem that takes care of cultural and geographical diversity along with the learning pace of each learner.

### **Measures to overcome the foreseen threats**

In order to implement NEP-2020 at each institution, certain unique ways or novel schemes must be adopted to deliver education to everyone. It is imperative that departments in Literature, Languages, Theatre, Philosophy, Music, Dance, Art, Mathematics, Education, Statistics, Pure and Applied Sciences, Sociology, Economics, Sports, and IT be established and strengthened at all rural HEIs prior to the implementation of NEP-2020. These departments should be well equipped so as to have proper learning environment. Universities must immediately take the lead and play a vital role in this regard, as they are constant source of innovative ideas and expertise that must be created and disseminated. Currently, a variety of steps and initiatives must be taken systematically by various academic and administrative bodies in order to implement the education policy. For proper execution of the policy at all levels and across all institutions, the Central and State governments, UGC and RUSA, Universities, the Department of Education, and the governing bodies of various educational institutions must work together. In order to capitalize the private sector's participation and recognize it as an equal participant in the NEP process, the government and regulatory agencies must establish practical institutional frameworks. The current educational system does not provide college and university teachers with formal pedagogy training or orientation. This urgently necessitates a redesign of the curriculum to make it horizontally and vertically flexible and natural for permitting the inculcation of fundamental and higher-order thinking and pedagogical skills as a core of NEP-2020.

### **Conclusion:**

NEP 2020 is a landmark document in every respect. It is also efficient to prepare students for the future and adapting them to the needs of a modern India. The policy seeks to address

pedagogical concerns, structural disparities and the expansion of access. The NEP is tasked with solving numerous education challenges at once, which is arguably its most difficult mission. If India is to benefit from its young population and capitalize on the opportunities presented by the expanding knowledge economy, its implementation must be successful. It is a formidable task in rural areas because of complexity of its execution, especially in terms of securing coordination and collaboration among various stakeholders at the state, district, and private sector levels. Along with this, there is the problem of a stifling educational atmosphere that inhibits the development of novel concepts and methods of solving old problems. Taking into account the adverse situations with regard to inadequate academic and infrastructural facilities across most of the rural HEIs, it is the need of the hour to formulate special framework to cope up with the issues of rural HEIs for smooth implementation of NEP 2020.

**References:**

1. Aithal, P. S., and Shubhrajyotsna, A. (2020). Analysis of the Indian National Education Policy 2020 towards Achieving its Objectives. *International Journal of Management, Technology, and Social*, 5(2), 23. doi:<http://doi.org/10.5281/zenodo.3988767>
2. Kumar, A. (2021). New Education Policy (NEP) 2020: A Roadmap for India 2.0. *Advances in Global Education and Research*, 4, 8.
3. Kumar, K., Prakash, A., and Singh, K. (2020). How National Education Policy 2020 can be a lodestar to transform future generation in India. *Journal of Public Affairs*, 20(4). doi:<https://doi.org/10.1002/pa.2500>
4. Kurien, A., and Chandramana, S. (2020). Impact of New Education Policy 2020 on Higher Education. *Conference Paper*, 10. doi:10.6084/m9.figshare.13332413.v1
5. Parvati, P., and Jha, P. (2020). National Education Policy, 2020. *Governance at Banks, Economic and Political Weekly*, 55(34), 14-17.
6. Pawan, K. (2020). An Empirical Study on NEP 2020 [National Education Policy] with Special Reference to the the Future of Indian Education System and its effects on the Stakeholders. *Journal of Management Engineering and Information Technology*, 7(5), 17. doi:<http://doi.org/10.5281/zenodo.4159546>
7. Suryavanshi, S. (2020). Reflections from a Comparative Study for Reimagining Indian Universities. *University News*, 58(33), 17-23.
8. Verma, H., and Kumar, A. (2021). New Education Policy 2020 of India: A Theoretical Analysis. *International Journal of Business and Management Research (IJBMR)*, 9(3), 302-306. doi:[doi.org/10.37391/IJBMR.090308](http://doi.org/10.37391/IJBMR.090308)

## **VOCATIONAL EDUCATION IN THE LIGHT OF NEP 2020**

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### **Abstract:**

The National Education Policy, 1986, focused on improving the organizational and management structure of vocational education. It recommended vocationalisation, both at secondary and higher education levels, by introducing Socially Useful Productive Work (SUPW) as a separate subject in secondary classes and vocational degree courses at higher education level. The vocational education space, over the years, has witnessed a painfully slow and stagnant growth. An assessment by the National Institute of Open Schooling highlights that only 2% of the total population in between 15-29 years of age have received formal vocational training, and only 8% have received non-formal vocational training.

**Keywords:** NEP, Education, Vocational Training

### **Introduction:**

Vocational education will be integrated in the educational offerings of all secondary schools in a phased manner over the next decade. The development of vocational capacities will go hand in-hand with the development of 'academic' or other capacities. To achieve this objective, secondary schools will have to collaborate with Industrial Training Institutes (ITIs), Polytechnics, Local Industry, etc. Higher education institutions will offer vocational education either on their own or in partnership with industry and other institutions. Vocational Education and Training programme prepare students to develop skill, knowledge, personality overall behavior & attitude. Technical education is career oriented. Vocational Education provide technician to work or skilled full employee for company & Traders or artisan. This is an education that makes people as a technician or a job in a skilled artwork or to trade as a merchant or craftsman. It is career and technical education sometimes referred.

The NEP aspires to develop an education system that directly contributes to the country's transformation by delivering high-quality education to all citizens and developing India into a global knowledge superpower.

The new education policy 2020 was launched by the Central Government of India. The new National Education Policy (NEP), which was approved by the Union Cabinet, is expected to bring a flurry of reforms, ranging from school curriculum reductions to the abolition of MPhil

programs. The new education policy 2020 was beneficiary to New Reforms and Infrastructure in India.

The Indian government's New Education Policy is referred to as NEP. It was last modified in 1992 after being drafted in 1986.

School education begins at the age of 3 year. 3-18 years age bracket is compulsory schooling in the new education policy. Three years of pre-school education are involved in 12 years formal education.

The 10+2 school curriculum framework will be replaced with a 5+3+3+4 curricular structure corresponding to ages 3-8, 8-11, 11-14, and 14-18 years, respectively, with an emphasis on Early Childhood Care and Education (ECCE)

The NEP suggest to using the mother tongue, home/ local/ regional language, compulsory for getting instruction to the students. Three-language formula are using to communication in the school. "Both public and private schools will follow this," the regulation adds.

The Higher Education Commission of India (HECI) will be established as a single umbrella body for all higher education in India, excluding medical and legal education. Public & Private higher education institutions followed rules, regulation and academic standers of HECI.

Under NEP 2020 there are no separate deference are given for arts and science, curricular and extra- curricular activities, or vocational and academic programs Students can choose from a variety of disciplines throughout the streams. Internships will be a part of vocational education,

HEIs will be allowed to conduct short-term certificate courses in various skills including soft skills. The government will also provide facility of an Academic Bank of Credit to store digitally academic credits earned at various HEIs and they can be transferred and counted toward a final degree. Students can get benefit of local expertise exists in entrepreneurship, agriculture, technician and any other subject to help preserve and promote local knowledge.

Vocational education in higher education institutions.

- HE institutions will offer vocational education either on their own or in partnership with industry.
- In 2013 B. Voc degree are introduced and it continue in NEP
- Vocational course will be available to students enrolled in all other Bachelor degree programmes, including the 4-year holistic bachelors program

Alignment with National skill Qualification Framework (NSQF)

- NSQF will be detailed further for each discipline Vocation/Profession
- Indian standards will be aligned with the international standard classification of occupations maintained by the international labor organization (ILO)
- The Framework will provide the basis for Recognition of Prior Learning (RPL)

Monitoring Mechanism

- ❖ Portal for monitoring and tracking of the Vocational Education
  - Fetching data of students moving to ITIs, Polytechnics and skill development programmes of Ministry of skill Development & Entrepreneurship (MSDE)
  - NIOS will provide the data on the students undergoing vocational courses.

#### Implementation Plan

- **Goal-** By 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education.
- ❖ **Action-** Children will be exposed to vocational education from class 6 onwards in all secondary and higher secondary schools through integration of VE with general education subjects.
- **Goal-** Awareness about the importance of vocational education and destigmatization through social media and ICT
- ❖ **Action-** Awareness programmes will be organized to change the general perception and attitude towards Vocational education. Focus on good practices and innovations by teachers and students.
- **Goal-** Students will be allowed to mix and match academics with skills education, with sports and arts, and with soft skills
- ❖ **Action** -Collaboration of schools with industrial Training institutes, polytechnics, local businesses, industries, hospitals, agriculture farms, local artisans and NGOs for imparting skills training
- **Goal-** Career counseling and guidance will be provided to children in classes 9 to 12 so that children can make a career choice, based on their interest, aspiration and abilities.
- ❖ **Action-** Skill Based Aptitude Test (SBAT) will be introduced in class 8 to provide guidance to the students for making informed career choice

#### Highlights:

- No hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams and so on.
- Important vocational knowledge will be made accessible to students through integration into vocational education courses.
- NCIVE setup mechanisms for individual institutions to adopt vocational education as early as possible and to find models and practices with other institutions to help for understanding NEP
- Higher education institutions will provide experimented vocational education, and apprenticeships of various models

- Higher education institutions will be set up partnership with industries for the incubation centers.
- The National Skills Qualifications Framework will be detailed further for each discipline vocation and profession.
- The credit-based Framework will also facilitate mobility across 'general' and vocational education.

**Challenges to overcome:**

- Higher secondary levels Teachers are not fully skilled in professional courses teaching and enough teachers with proper skilled training is required.
- The difference between the needs of the training skills and the labour market must be taken into account due to the unreasonableness of the courses.
- More strain on publicity, counseling and advertisement because the vocational stream has the overall enrollment is low.
- Formal education system is convert into the practical knowledge. Practical knowledge helps to learner to choose the right career path for our growth and development. Different vocational training can help to student to easily understand theoretical knowledge

**Conclusion:**

The National Educational Policy has been given importance in 2020 to enhance the employment capacity of students and professional skills at all levels of the development of vocational education and teachers. Vocational education has given importance to the learners at all levels. Vocational education systems operate as separate verticals with limited mobility. Vocational education training programmes provide to teachers. It is enhanced the ability of teachers to development of vocational courses and skills standards to maintain Quality of VET at the national level. Identification, design and development of vocational courses and suppliers registration of vocational courses and suppliers will increase the quality and durability of VET programs, and it should include teacher selection and recruitment processes. Vocational education works as an independent vertical with limited dynamics.

**References:**

[https://www.education.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf)

<https://sprf.in/vocational-education-in-the-nep-2020>

<https://www.education.gov.in/>

<https://itpd.ncert.gov.in>

<https://www.mhrd.gov.in>

## EDUCATION POLICIES IN INDIA

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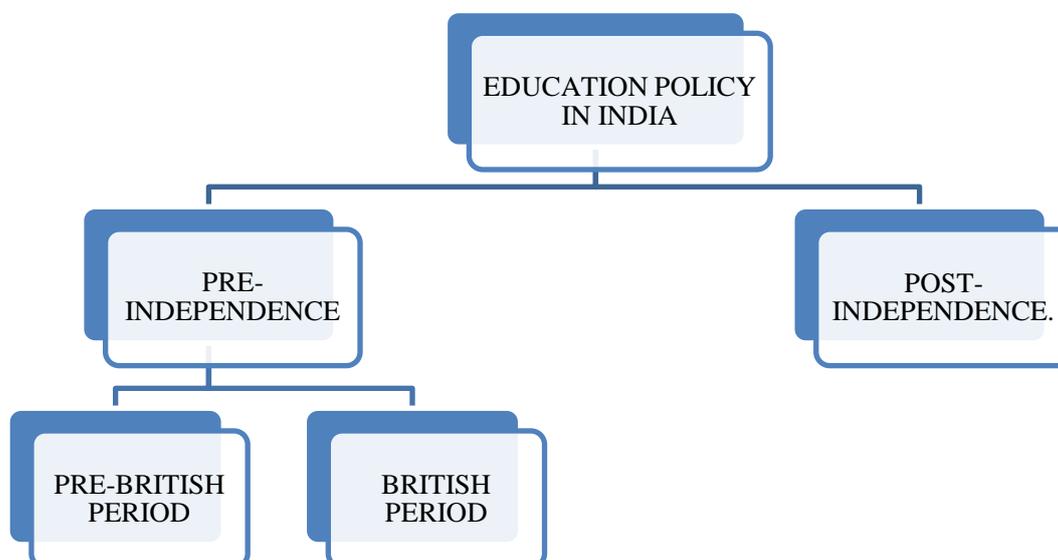
### Introduction:

Education means transmitting knowledge or fostering skills and character traits. Education is for achieving full human potential, developing an equitable and just society. It is for promoting national development. Education policy consists of the principles and policy decisions for the field of education. It is the collection of laws and rules that govern the operation of education systems. Thus, education policy refers to the rules and principles that govern the operation of educational systems.

In order to understand current status of Indian education system, it is essential to view the historical background of education in India. Indian educational institutions have existed since the emergence of civilisation. Historically, the Indian education system evolved from the 'Gurukul' tradition. Students resided together at the home of their teacher to receive education from a guru, which was not based on wealth or personal gain. For soundly understanding of education policy in India and for its historical analysis we have to divide it into two time periods, these being pre-independence and the post-independence.

### Education policy in Pre-Independent India

The education policy in pre-independent India could further be classified into two time periods Pre-British and the British period.



### **Pre-British period education**

Our education system is very ancient. It evolved from the time of Rigved over the period. At that time its focus was on the comprehensive development of the individual by taking care of both the inner and the outer self. Thus, this system was focused on the moral, physical, spiritual and intellectual aspects of life. At that time the main focus of education was on values such as humility, truthfulness, discipline, self-reliance and respect for all creations. Students were taught to appreciate human beings as well as nature. Teaching and learning were followed by the principles of Vedas and Upanishads by fulfilling duties towards self, family and society, thus bounding all the aspects of life. Education system was focused both on mental and physical development. In other words, the emphasis was on healthy mind and healthy body. Thus, ancient Indian thinkers regarded education as an instrument which puts an ignorant person on the path of an intellectual, progressive, moral and virtuous course of life. Students in ancient India were required to study the subjects not only from the point of view of making themselves capable of handling life, but were also required to study them basically from the point of view of engaging in research and work towards creating an advanced body of knowledge in the area. As a result, when students reached the status of learned persons, they were greatly respected and revered.

After the Vedic period, there developed large kingdoms of powerful kings who wanted to develop an advanced course of life in their society. They took keen interest in promoting the interests of higher education by giving rich donations and lands to learned scholars. And more importantly these kings enacted policies to redefine and reconstruct the education system in India. The major universities in ancient India were Nalanda and Takshashila which were known for their scholarship.

During the Mughal period the rulers did not make any significant efforts to universalise the existing educational system, but tried to spread Islamic education in India. There were no significant efforts made to universalise education and include people from different groups. In particular for medieval time's education continued to be monopolised by a few groups, determining both access to and utilisation of educational opportunities.

### **British period education**

In British period western education was introduction in India which is great historical significance for the emergence of an education policy in India. Before the introduction of modern education, opportunities for learning were generally confined to a very small portion of the population. Those from castes and classes placed lower down in the social hierarchy had hardly any access to education.

Under British rule missionaries had taken the initiative work in the field of education. They did make efforts to spread education but often it was motivated by the desire for the spread of Christianity among the natives of India. By the end of the British era, formal schooling took place and the Indian education practices had now been overhauled by the global practices.

## **Post-Independence**

### **First education policy in independent India (1968)**

First education policy of India was announced by former Prime Minister Indira Gandhi in 1968. This policy was based on the report and recommendations of the Kothari Commission (1964-1966). This was the first education policy in Independent India. The National Education Policy sought 'total reformation' and aimed at extending the prospects of education to all sections of the society to accomplish the goal of harmony and integration. The policy suggested the provision of compulsory education to children in the 6-14 years age group as proposed in the Indian Constitution. Further, it also recommended that regional languages must be encouraged for being used in secondary schools. The Commission was of the opinion that English had to be the medium of instruction in schools and status of national language was given to Hindi. The National Policy on Education also promoted the development of Sanskrit, which was the symbol of India's cultural heritage. The National Policy on Education 1968 was widely criticised for its promotion of the 'three language formula'. It was pointed out that the policy was very vague and lacking in clarity by not indicating the ways by which the guidelines contained in the policy could be implemented. However, the policy received considerable attention as it was the first of its kind to give a proper direction to the educational system in independent India.

### **National policy on education (1986)**

The Government led by Former Rajiv Gandhi introduced new National Policy on Education in 1986. Its major objective was to provide education to all sections of society, with a particular focus on scheduled castes, scheduled tribes, other backward classes and women, who were deprived of educational opportunities for centuries. In order to fulfil these objectives, the National Policy on Education (1986) stressed on the provision of fellowships for the poor, imparting adult education, recruiting teachers from oppressed groups and also developing new schools and colleges. The policy focused more on providing primary education to students. The NPE called for a "child-centred approach" in primary education, and launched "Operation Blackboard" to improve primary schools nationwide. Further, it also gave importance for the establishment of open universities by setting up the Indira Gandhi National Open University (IGNOU) at Delhi. The policy had recommended that education be given to rural people in consonance with the Gandhian philosophy. It also set the stage for the emergence of information

technology in education, besides opening up the technical education sector in a rather big way to private enterprise.

### **Amendment to NEP 1986 in 1992**

Amendment of NEP 1986 was done in 1992 by the former Prime Minister P. V. Narasimha Rao government. Another amendment was done in 2005 by the Former Prime Minister Manmohan Singh. This new policy based on the "Common Minimum Programme" of his UPA government. National Policy on Education (NPE), 1986 envisaged to conduct of a common entrance examination on all India basis for admission to professional and technical programmes in the country.

The resolution of Government of India dated 18 October 2001 laid down three-exam scheme JEE and AIEEE at the National Level and the State Level Engineering Entrance Examinations (SLEEE) for State Level Institutions with an option to join AIEEE for admission to Engineering and Architecture/Planning programmes. The care of varying admission standards in these programmes in these programmes was taken by these entrance exams and it helps to maintain professional standards

This also solves problems of overlaps and reduces physical, mental and financial burden on students and their parents due to multiplicity of entrance examinations.

### **National Education Policy 2020**

Ministry of Human Resource Development released a draft of New Education Policy 2019, On 29 July 2020, the cabinet approved this draft to introduce various changes to the existing Indian education system. As India is one of the youngest countries in the world which is gearing towards knowledge-based leadership. Aligning this, the NEP 2020 aims to meet the changing educational requirements. Through innovation and research. NEP 2020 is bringing changes in the host of the education system, right from the pre-primary years to higher education. NEP 2020 promotes stern research-based specialization and opportunities for multi-disciplinary work and interdisciplinary thinking at the graduate, Masters and Doctoral level education in large multidisciplinary universities. Some of the main contents in NEP 2020 are as follows.

1. Ministry of Human Resource Development (1985-2020) will change to the Ministry of Education.
2. The Foundation of Learning will start early at age of 3 to create strong base of Early Childhood Care and Education (ECCE). Its main motto is to promote better, overall learning, development, and well-being.
3. The new structure of education will be of 5+3+3+4.

4. The efforts of NEP is to optimise learning for students based on cognitive development of children.
5. Focus of NEP is on enhancing essential learning, critical thinking and more holistic experiential, discussion-based and analysis-based learning by reducing content of curriculum.
6. Degree programme will be of four years with multiple disciplinary and entry exit option. Student will have the choice to leave the course and receive the certificate/ degree accordingly.
7. The procedure for the award of the one year Certificate, two year Diploma, three years Bachelor Degree, four years Bachelor Degree ( Research/Honours) and Master's
8. Introduction of Academic Bank of credit.
9. These credits can be collected and transferred and go into final degree earned.
10. Subject like Research Methodology is added in the last year of graduation course to create research awareness.
11. Continuous Professional Development (CPD) Teachers will be given continuous opportunities for self-improvement and to learn the latest innovations and advances in their professions.

**References:**

1. National Education Policy 2020 MHRD Govt. of India and handbook of SARTHAQ (Student's and Teacher's Holistic Advancement Through Quality Education)
2. History of Education Policy in India - e-PG Pathshala
3. The Evolution of India's Education Policy -BY JU'S
4. National Policy on Education –Wikipedia
5. Handbook of National Curriculum Framework for 2022

## **TEACHING PROFESSION IN VIEW OF NEW EDUCATION POLICY 2020- OPPORTUNITY AND CHALLENGES**

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### **Abstract:**

Well defined and futuristic education policy is essential for a country at school and college level due to the reason that education leads to economic and social progress. Different countries adopt different education system by considering the tradition and culture and adopt different stages during their life cycle at school and college education levels to make it effective. Recently Government of India Announced its new education policy which is based on the Recommendation by an expert committee headed by Dr. Kasturirangan former chairman of the "Indian Space Research Organization" (ISRO). This paper highlights various policies announced in the higher education system and compares them with the currently adopted system. New Education Policy and Analyses how they affect the existing Education System.

### **Introduction:**

Education is best for identifying human power, ability and developing skills, an equitable and society as well as promoting development of nation, for access to equity education. Education is key to success, leadership and global stages with economic growth, scientific advancement, National integration, culture etc. India has a high population of young people, so in the next decade have to provide high quality education and employment opportunity for the future of the country. Sustainable Development Goal - 4 have to adopt equity with quality education and promote lifelong learning for all the people up to 2030. The second aim is equitable access to the highest - quality education for social and economic backward class by 2040. NEP 2020 is the 1st education policy in the 21st century, its aim to many growing and developmental activities in all education rich heritage and ancient Indian knowledge, thoughts, highlight this policy. The wisdom and trust is the highest thoughts of Indian culture and philosophy. India's education is not just a knowledge it is prepared to man for Good lifestyle, Humanity Liberation of self-world class institution of ancient India, such as Takshashila, Nalanda, Vikramshila, Vallabhi etc.

### **Education:**

Education is the most powerful weapon which you can use to change the world.

**Objectives:**

- Identifying the skills and capabilities of each and every student.
- To Achieve Literacy by Grades - 3.
- Multidisciplinary education science, Social science, Arts
- Humanities and sports.
- To core education for all levels - Childhood - School- Higher.
- Outstanding Research as a core requisite for outstanding education to development.
- No hard Separation between Arts and Science in curricular and Extracurricular activities.
- The purpose of the education system is to develop good human beings with skills, thoughts, action.
- ABC analysis system.
- Digilocker account open by every college and students.
- Skill gap analysis.
- Higher education = Social status + Economic Status.
- Attempt to bridge the divide between Tradition and modernity.
- Need to all colleges NAAC Accreditation

**Teaching profession NEP- 2020**

**Opportunities:**

- This policy showed respect about Indian philosophy and culture
- Support to Indian culture, Experiential learning, learned centered.
- Pilot study help to publically communication and continuous growth or progress.
- All educational institutions, organization have to develop digital infrastructure as per NEP 2020. It can be used multiple platforms.
- Online teaching platform with tools such as Swayam, Swayam Prabha, Diksha etc. two-way audio, two-way video interferes for holding online classes.
- Fun based learning will helpful for students to understand Indian culture, art, operating instructions with languages.
- Online lectures and programmes available on learning platform 24/7 in different languages.
- Academic Credit Facility Available for students, 15 Hours = 1 Credit Point.
- Experience based learning credit point count in students' degree certificate, like online credit, holiday learning, tailor degree, rigid degree etc. As well as multiple entry and exit.
- Digilocker Available for students in his / her college.

- Student credit point can deposit in his / her registered college.
- After 120 Hours students can get his / her degree.
- Credit point based on any subject combination.

### **Challenges in New Education Policy.**

- The change in mind set will involve to our more generation of parents, teachers, grandparents and educator's.
- The boards that conduct school leaving examination will have to rethink their assessment parameters for students and also identify the appropriate earning content rubric.
- We need to hire the very best and brightness to enter the teaching profession at all levels.
- Over 250 million students are expected to enroll in schools in india by 2030 with a teacher- students ratio of 1:35, india need an estimated 7 million plus teachers to address this huge student's population.
- Digital infrastructure for this purpose will include digital classroom, expertise- driven online teaching models ar/vr technology to overcome gaps in physical teaching and labs infrastructure, uniforms assessment scheme across schools, career counselling session and teacher training to become adopt at new - age technologies. This will continue to be a major challenge in the next decades.
- Improve naac grade.
- Research innovation.
- Branding exercise
- Teaching appointment is based on 360 degrees, with triangular track.

### **Conclusion:**

In the End, we can say that the teaching profession is not just a job. The teaching profession is all about Skills for shaping future of the country. So to guide our Youth in the right direction and making their Dream come true teaching professional plays a vital Role. The success of New Education Policy will depend in how it is implemented and providing high Quality Education opportunities to Youth.

### **References:**

1. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf)
2. <https://www.indianera.com/editors-pick/national-education-policy-nep-2020-overview-reforms-objectives/>
3. <https://www.orfonline.org/expert-speak/five-challenges-that-would-shape-the-outcome-of-nep-2020/>

## **PROS AND CONS OF NATIONAL EDUCATION POLICY 2020**

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### **Abstract:**

In light weight of the problems brought on by the Covid-19 pandemic, the govt. of India's New Education Policy (NEP 2020) was a welcome move and piece of recent news. The NEP 2020 news came as a whole shock to several. Several education professionals ne'er anticipated the changes that NEP 2020 has advised. though each high school and school education are touched by the education policy, this text primarily concentrates on NEP 2020 and its professionals and Cons education.

### **Introduction:**

There is an amazing amendment determined in Indian teachers, starting from elementary school to school level. The Union cupboard has approved a brand-new National Education Policy that includes all of the changes.

This recently approved arrange discusses major transformational reforms within the Indian tutorial sector that many folks applaud. Beside praise, there's additionally criticism that specialize in the shortcomings of this new education policy.

So, what are the benefits and drawbacks of the new 2020 education policy? In step with the NEP 2020, that post/course has been eliminated from higher education? These are bound unreciprocated queries.

### **Pros of latest ducation Policy 2020**

- With the assistance of NEP 2020, the govt. hopes to create education accessible to all or any.
- This new approach can permit close to 2 large integer college students to come back to academic establishments.
- The national education policy 2020 states that the 5+3+3+4 structure can replace the prevailing 10+2 structure. This structure is centered on the childhood of learning for college kids. This 5+3+3+4 structure corresponds to ages 3–8, 8–11, 11–14, and 14–18. This structure includes twelve years of schooling and three years of Anganwadi and pre-schooling.
- NCERT can style and develop a National information and education Framework for infancy Care and Education for youngsters up to the age of eight.

- The Education Ministry can establish a National Mission on Foundational acquirement and acquirement below the National Education Policy 2020. The responsibility for achieving the muse acquirement and acquirement for all students up to category 3 falls on the states of Republic of India. This implementation is anticipated to be completed by 2025.
- One of the benefits of NEP 2020 is that the institution of a National Book Promotion Policy in Republic of India.
- The college examinations for grades three, 5, and eight are going to be administered by the acceptable authorities. The board exams for grades ten and twelve can continue, however the NEP 2020 aims to structure the structure to market holistic development.
- This new strategy focuses on establishing a Gender Inclusion Fund. education Zones for underserved regions and teams are on the priority list.
- The Govt. can establish a Parakh national education policy.
- Each state/district in Republic of India can have a special daytime private school referred to as "Bal Bhavans." These private schools are going to be used for activities like play, career, and art.
- By 2022, the National Council for Teacher Education can develop a group of common National skilled Standards for lecturers together with lecturers and skilled organizations like NCERT and SCERTs (NPST).
- The states/UTs can establish SSSA, or A freelance State college Standards Authority.
- A tutorial Bank of Credit are going to be established, in step with the national education policy 2020. The credits earned by students will be saved and counted once the ultimate degree is completed.
- In step with the national education policy 2020, the country can establish Multidisciplinary Education and analysis Universities on par with the IITs and IIMs. These are planned to be established so as to introduce multidisciplinary teachers.
- Each public and personal tutorial bodies are going to be radio-controlled by an equivalent set of certification and regulation rules.
- School affiliation and autonomy are going to be phased out over time.
- By 2030, it'll be needed to own a minimum of a four-year B. impotence degree to enter the teaching profession.
- To higher prepare students for future pandemics, on-line teachers are going to be promoted on a bigger scale.

### **Cons of the New Education Policy**

- Language may be a negative consider the National Education Policy 2020 as a result of Republic of India encompasses a problematic teacher-to-student quantitative relation, creating introducing mother tongues for every subject in tutorial institutes tough. Finding a

competent teacher will be tough occasionally, and with the implementation of the NEP 2020 comes a brand-new challenge: transferrable study materials in mother tongues.

- In step with the National Education Policy 2020, students World Health Organization wish to graduate should study for four years, whereas a certificate degree will be completed in 2 years. this could encourage the coed to drop out of the course within the middle.
- In step with the national education policy 2020, students privately faculties can begin learning English at a way younger age than students publically faculties. the tutorial course of study is going to be schooled to government college students in their individual regional languages. this can be one in every of the main new education policy drawbacks as a result of it'll increase the quantity of scholars World Health Organization ar uncomfortable human action in English, widening the social divide.

### **Implementation arrangment of NEP**

- When thirty years, the new education policy in 2020 is about to alter India's existing tutorial system so as to bring it up to international tutorial standards.
- The Government of Republic of India intends to determine the NEP by 2040. The key purpose of the arrange is to be enforced one by one till the targeted year.
- The projected reform by NEP 2020 are going to be enforced through collaboration between the Central and State Governments. The GOI can type subject-specific committees with each central and state-level ministries to debate implementation strategy.

### **Conclusion:**

Many changes have occurred since the implementation of NEP 2020, one in every of that is that the ending of the M. Phil course. albeit the new education policy has several flaws, it additionally has several benefits. Many folks believe that by implementing these changes, the Indian academic system can advance.

### **References:**

1. <https://timesofindia.indiatimes.com/readersblog/herbinger/national-education-policy-2-43528/>
2. <https://vsp1toireaderblogs.indiatimes.com/readersblog/herbinger/national-education-policy-2-43528/>
3. <http://haratangen.net.test.levonline.com/intellectual-breadth/impact-of-new-education-policy-2020-on-higher-education>
4. [https://mgmu.ac.in/wp-content/uploads/NEP-Indias-New-Education-Policy\\_2020-final.pdf](https://mgmu.ac.in/wp-content/uploads/NEP-Indias-New-Education-Policy_2020-final.pdf)
5. <https://triumphias.com/blog/national-education-policy-2020/>
6. <http://oldisrj.lbp.world/UploadedData/10490.pdf>
7. [https://www.tutorialspoint.com/current\\_affairs\\_july\\_2020/current\\_affairs\\_july\\_2020\\_pdf\\_version.pdf](https://www.tutorialspoint.com/current_affairs_july_2020/current_affairs_july_2020_pdf_version.pdf)

## **IMPACT OF NATIONAL EDUCATION POLICY 2020 ON HIGHER EDUCATION IN INDIA**

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### **Abstract:**

Systematic and comprehensive education policy is necessary for a nation at school and college levels because education leads to economic and social upliftment. Recently Government of India announced its New Education Policy which is based on the recommendations by an expert committee under the chairmanship of Dr. Kasturirangan, Former chairman of the Indian Space Research Organization (ISRO). This paper highlights on various policies announced in the higher education system and compare them with the currently adopted system. Various innovations and probable aspects of NEP 2020 on the Indian higher education system along with its advantages are discussed. The present research paper also deals with the major suggestions so that the policy helps to overcome the drawbacks itself and it will be beneficial for all sections of the community.

**Keywords:** National education policy, Higher education, Professional and vocational education.

### **Introduction:**

In India where educational reforms takes place, currently has about 845 universities and approximately 40,000 higher education institutions (HEIs), indicating the overall high fragmentation and many small sized higher education institutions in the country which are affiliated to these universities. It is observed that over 40% of these small sized institutions are conducting single programme against the expected reform to a multidisciplinary or interdisciplinary method of higher education which is pre-requisite for the educational reforms in the country in present scenario. Moreover, 20% of the colleges have annual enrolment less than 100 students making them inefficient and only 4% of colleges enroll more than 3,000 students annually due to regional disparity as well as the quality education they provide.

In order to encourage the growth of the education sector in India, the Central Government is determined to refresh it by introducing an inclusive National Education Policy 2020. The National Education Policy 2020 focuses an India centered education system that contributes

directly to transforming our country sustainably into an equitable, skillful and valuable knowledge society, by providing quality education to all sections of the society.

**Objectives of the study:**

The following objectives are set for the present research paper.

- i. To focus and review the policies of the newly adopted higher education system (NEP 2020)
- ii. To make comparative study of National Education Policy 2020 with the currently adopted policy in India.
- iii. To discuss the merits and demerits of Higher Education Institutes under NEP 2020.
- iv. To make suggestions for further reforms and proper implementation of NEP 2020 to achieve the various targets before education sector.

**Highlights of National Education Policy 2020:**

The major aim of the present NEP 2020 is to provide a multidisciplinary and interdisciplinary liberal education to every student to increase the current gross enrolment ratio (GER) to 50% by 2035. In order to obtain the overall knowledge about all the streams like astronomy, engineering, oceanography, medicine, commerce and management, IT and computer, artificial intelligence along with traditional education, the policy tries to incorporate all these branches jointly. In this context, the overall structure of New Education Policy 2020 is as below.

**i. Foundation stage:**

Five years Foundation Stage provides basic education to the student which is more flexible, multilevel, play-based, activity-based, and discovery-based learning.

**ii. Preparatory stage:**

Three years Preparatory stage comprises of building on the play, discovery, and activity-based learning. In addition to that, this stage mostly introduces formal classroom learning with textbooks. The main aim is to disclose several subjects to the students and prepare them to get deep knowledge in the said activities.

**iii. Middle school education stage:**

Three years of Middle school education focus on more abstract concepts in each subject like sciences, mathematics, arts, social sciences, and humanities. This stage also gives emphasis on experimental learning which is guided by the teachers. Students are expected to know about the semester system and yearly two class level examinations will be conducted.

**iv. Secondary education stage:**

Four years of Secondary school education is designed to provide multidisciplinary subjects including Liberal Arts education. This stage will be built on the subject-oriented

pedagogical and curricular style with greater depth, greater flexibility, greater critical thinking. Students are expected to familiar with the semester system and will study 5 to 6 subjects in each semester.

**v. Under Graduation education stage:**

The Undergraduate degrees in every subject will be of either three- or four-year duration with multiple exit options including a certificate after passing first year, a diploma after passing second year, or a Bachelor's degree after passing third year.

**vi. Post Graduation education stage:**

The Master's degree – a one-year for four years bachelor degree students, a two-year degree for three years bachelor degree students, and an integrated five-year degree with a focus on high quality research in the final year. The Masters' degree will lead to a strong research aspect to strengthen competitiveness and efficiency in the professional area and to prepare students for a research degree.

**vii. Research stage:**

Research stage consists of pursuing high quality research leading to a Ph.D. in any core subject, multidisciplinary subject, or interdisciplinary subject for a minimum period of three to four years for full-time and part-time study respectively. During Ph.D. they should undergo 8-credit coursework in teaching/ education/ pedagogy related to their chosen Ph.D. subject. The M. Phil. Programme which was earlier stage of research degree is demolished in the New Education Policy 2022.

**Comparative analysis between NEP 2020 and existing NEP 1986:**

The National Education policy 1986 focused on the modernization of the education sector using information technology. The policy was more focused on restructuring teacher education, early childhood care, women's empowerment, and adult literacy. It also announced that the autonomy or freedom of universities and colleges will improve the quality of education sector in the country. However, the present policy failed to improve the quality of education in terms of generating graduate students with more employable, professional skills and failed to create research environment in terms of patents and quality publications. In order to tackle the failure of previous NEPs, the proposals of a liberal education to encourage multidisciplinary and interdisciplinary education and research in under-graduation and post graduation levels are coming in NEP 2020. The Following table states the comparative study between these two education policies.

**Table 1: Comparison between NEP 2020 and NEP 1986**

Sr. No.	NEP 1986	NEP 2020
1.	The role of education is the overall progress of students.	The main objective is to provide Multidisciplinary & interdisciplinary liberal education to student.
2.	Common education structure of 10+2+3+2 is followed.	New education structure of 5+3+3+4+4+1 is suggested.
3.	The preliminary education starts at 6 <sup>th</sup> year of a child as Primary school level.	The preliminary education starts at 3 <sup>rd</sup> year of a child as a Foundation stage.
4.	The admission for all undergraduate and postgraduate courses is provided on the basis of the entrance exam conducted at the college level or state level except NITs & Medical Colleges.	There is a single authority namely National Testing Agency (NTA) will take entrance examination to seeking admission for all undergraduate and postgraduate courses.
5.	Most of the Colleges in HEIs are affiliated to state universities and hence they had no freedom to design the curriculum and evaluation system.	All colleges and universities are autonomous and there will be no affiliated colleges to state universities and liberty in designing the curriculum and evaluation process.
6.	In HEIs faculty members are considered as facilitators of educating students to make them more efficient.	In HEIs faculty members are considered as collaborators and guide of educating students to make them as innovators & creator.
7.	The performance & accountability of Faculty is linked to promotion but not linked to compensation.	The performance & accountability of Faculty is linked to promotion and compensation.
8.	Both single discipline and multidiscipline colleges are promoted in this policy.	Only multidisciplinary colleges and universities are promoted. All single discipline colleges have to convert themselves autonomous multidisciplinary colleges.

### **Highlight of NEP 2020 for improvement in Higher education system:**

The following things are going to be introduced for the overall development of Higher Education system in NEP 2020.

1. HE monitoring and controlling institutions like UGC, AICTE etc will be merged with the Higher Education Commission of India (HECI) as a single regulator in higher education.
2. The current Accreditation Institutions of the colleges and universities like NAAC and NAB will be replaced by National Accreditation Council (NAC).
3. In order to provide fund for research activities conducted in universities and colleges, National Research Foundation (NRF) will be set up.
4. Amalgamation of existing diversified HEIs into two types of Multidisciplinary Universities (MU) and Multidisciplinary Autonomous Colleges (AC) with the campus having more than 3,000 students.
5. An Academic Bank of Credit (ABC) will be established which would digitally store the academic credits of all registered or enrolled students obtained from various recognized HEIs that can be undertaken while awarding degrees by the college or university.
6. All HEIs will develop, support, and fund for topic-oriented groups and activities organized by students with the help of faculty and other experts as required, in the area of science, mathematics, arts, humanities, literature, music, sports, etc.
7. In order to fulfill the financial requirements of ranked students, the National Scholarship Portal will be restructured and expanded in the country. In addition to that the Private HEIs will be motivated to provide larger numbers of free ships and different scholarships to their students.

### **Evaluation of National Education Policy 2020:**

The positive and negative effects of NEP 2020 on Indian education sector must be discussed so as to evaluate this policy properly and transparently.

#### **➤ Advantages of NEP 2020:**

**The following advantages or positive impacts of NEP 2020 are noteworthy.**

#### **i. More Spending on Education Sector:**

Presently, the Indian education sector gets only a 3% share from GDP, but with the implementation of NEP 2020, spending will raise to approximately 6% which is more helpful and beneficial for the overall development of education system.

#### **ii. Changes in the School Structure:**

The Present school education structure of 10+2 will be replaced with the 5+3+3+4 pattern, to reduce students' burden of board exams. There will be also a focus on vocational

learning right from class 6 to 8, so that the students can learn practical skills to expose and develop their interests while growing a better understanding, respect for these skills.

### **iii. Wider Options to Learn:**

The children in classes from 9 to 12 will now have multidisciplinary course options available to them, it means that the different streams will be wide with various subject combinations. The student can choose the subject as he wish or as per his interest, even if they are outside of their core discipline without strict obligations to the streams of Arts, Science and Commerce. It means that a science student will be able to study Sociology and an art student shall be free to take the degree from Physics.

### **iv. Entrance Tests for Colleges:**

A single and unified authority namely National Testing Agency (NTA) has been set up to conduct common entrance test for getting admission in colleges and universities for various courses.

### **v. Modified Undergraduate Program:**

The existing undergraduate program consisting 3 years will be replaced with a 4-year program that will give the option to have a one-year degree after completing the 1st year, a diploma after completing the 2nd year, and a degree for the completion of 3 years. The fourth-year will be researched-based. The students will also have an alternative to change their stream; their obtained credits will be transferable and available till their education is going on.

### **vi. Motivation to Culture and Ethos:**

The Indian culture and ethos will be included in syllabus in order to make awareness among the students about India's ancient history and its glorious past. The major aim is to restructuring the Indian traditions and encourages unity and fraternity at childhood.

#### **➤ Disadvantages of the NEP 2020:**

Though the draft of the National Education Policy 2020 is more inclusive, advanced and futuristic it's having some drawbacks on various grounds. Some of the lacunas of NEP 2020 are as below.

### **i. Inclusion of Languages:**

The NEP 2020 has focused on the introduction of mother language in the primary classes which will be used to teach the major subjects, while English language will be taught in the next stage. Unlike other nations such as Russia, Japan, France etc., which having one common mother language, India is a diversified country with 22 major languages and thousands of sub languages. It will be difficult task to convert the basic subjects into various regional languages as it requires lot of time, efforts and skilled trainers. Moreover, some people to be vocal against the NEP is

that the inclusion of mother language and regional languages is seen as the central government's move to enforce Hindi on the non-Hindi speaking states in India.

**ii. Delay in Teaching of English:**

The NEP 2020 suggests that the government schools will start teaching English subject after class 5, which will adversely affect on those students who are enrolled in government schools. On the other side most of the private schools can start the English subject right from the beginning of Pre- Primary stage and it is much helpful to those students who have enrolled in private schools. It will increase the disparity between different students and straight discrimination between poor or deprived students registered in government schools and rich or affluent students enrolled in private schools.

**iii. Emphasis on Digital Learning:**

The NEP 2020 has focused strongly on expansion and promotion of digital education across the nation. Especially, the schools run by the government do not have a strong IT infrastructure, so the students in remote areas or deprived socio-economic backgrounds won't be able to familiar with the IT-based learning till such a facility is made available on urgent basis.

**iv. The Revised concepts of Undergraduate Program:**

Under the purview of NEP 2020 a student can exit from the graduate level and he can get a certification or diploma, this can cause the students to leave without completing their running course, leading to their unconsciousness and a high drop-out rate at graduate level.

**Suggestions for further improvements in NEP 2020:**

The following suggestions are to be made for better implementation of NEP which will more beneficial for inclusive growth in education sector.

**i. Ph.D. should be a mandatory qualification for a permanent faculties in Colleges & Universities:**

In order to implement the NEP 2020 with sound way especially for enhancement of graduate courses which are mainly linked with research activities, Ph.D. degree should be mandatory for teaching at College and University level for the faculty.

**ii. An appropriate definition of Multidisciplinary College:**

A multidisciplinary higher education Institution should have a minimum of five streams consisting to different faculty areas. The main objective of studying in a Multidisciplinary college or university is to provide multidisciplinary choice and experience of campus which covers the several subjects from different disciplines.

**iii. Higher Education Leaders should be Ideal Models in Research & Innovations:**

The heads & members of all Committees of Higher Education Departments and various regulating agencies should be appointed based on their active research contribution in their concerned subjects. There should not be any political or bureaucratic interference or appointments to these committees. While appointing all these higher positions, performance should be the foremost criteria rather than the age of that person.

**iv. Publication/Patent during Post-graduation Courses is mandatory:**

Students are expected to do honest and high quality research based on industry internship and publish quality research papers / patents as a part of their degree requirement. The awareness related to IPR should be provided during their undergraduate programme so that acquiring copyright/ patent during the post graduation period is possible.

**v. Compulsory Employability & Entrepreneurship related papers in each semester to promote Employability & Entrepreneur ability among the students:**

The undergraduate programme must have to be designed in such a way that there should be two subjects which are skill-oriented leads to increase the employability skills and entrepreneur ability skills respectively apart from principal subjects among the students. The continuous internal evaluation should be adopted for assessment of the students' knowledge in these skill-oriented subjects. Such an innovative idea gives confidence for the students to choose a business-oriented career.

**Conclusion:**

National Education Policy 2020 is path making step towards educational enhancement across the country for making India super power in future. All higher education institutions with present education pattern of affiliated colleges will expand as multi-disciplinary autonomous colleges with degree giving power in their name or becomes constituent colleges of their affiliated universities. The key agency viz. National Research Foundation will provide research fund for creative projects in prime research areas of basic sciences, applied sciences, and social sciences & humanities. These transformations will start from the academic year 2021-22 and will continue until the year 2030 where the first level of transformation is expected to be realized. Therefore, the Indian higher education system is transforming from teacher centric to student centric, information centric to knowledge centric, marks centric to skills centric, examination centric to experimental centric, learning centric to research centric, and choice centric to efficiency centric.

**References:**

1. Aithal P. S. & Aithal Shubhrajyotsna (2020). 'Analysis of the Indian National Education Policy 2020 towards Achieving its Objectives, International Journal of Management, Technology and Social Sciences (IJMITS), ISSN: 2581-6012, Vol. 5, No. 2, August 2020. P. No. 4 – 10.
2. Desai M. S., & Johnson, R. A. (2014). Integrated systems-oriented student-centric learning environment. *Campus-Wide Information Systems*. 31(1), 24-45.
3. Draft National Education Policy 2019, <https://innovate.mygov.in/wpcontent/uploads/2019/06/mygov15596510111.pdf>
4. National Education Policy 2020. [https://www.mhrd.gov.in/sites/upload\\_files/mhrd/files/nep/NEP\\_Final\\_English.pdf](https://www.mhrd.gov.in/sites/upload_files/mhrd/files/nep/NEP_Final_English.pdf) referred on 10/08/2020.
5. Prathap, G. (2014). The performance of research-intensive higher educational institutions in India. *Current Science*, 389-396.
6. Sankaran, K., & Joshi, G. V. (2016). Autonomy for excellence in higher education in India. *Nitte Management Review*, 10(2), 1-10.
7. Singh, J. D. (2011). Higher education in India—Issues, challenges and suggestions. *Higher education*, 93-103, ISBN: 978-3-8465-1753-6.
8. Sinha, V., & Subramanian, K. S. (2013). Accreditation in India: path of achieving educational excellence. *Business education & accreditation*, 5(2), 107-116.

## **ONLINE LEARNING: UNDERSTANDING STUDENTS' PERSPECTIVE**

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### **Introduction:**

The human world no longer remained the same after the spread of Covid -19 pandemic. This pandemic has affected almost every aspect of human life. As a precautionary measure to minimize the rate of spread of the Covid-19, partial/ complete lockdown was implemented in nations. Agriculture, fitness industry, constructions industry, art and theaters, government and corporate offices, schools and colleges almost all the sectors are facing hardships due to lockdown. The education sector also not an exception to misery caused by the disaster. The education sector required to be transformed to online education suddenly [1]. Many of the countries were not ready with infrastructure and set of skills for such reforms [2].

In India, the first nation-wide lockdown was declared in March 2020. Since then schools and colleges were closed. Educational institutes are crucial places where the important stakeholders - the students; acquire knowledge, competency, and skills. Closing the educational institutes and waiting for situations fall back to normal was difficult phase for entire academic community. Based on the guidelines and regulations laid by government, the educational institutes operated during the lockdown. The campuses were closed but the education was not halted. As the time passed, the education sector coped up with new normal of teaching-learning process.

Online education was the only substitute to continue the teaching-learning during the pandemic phase. Even if the concept of online teaching is not altogether new, it was least practiced by majority of teachers and students. There is a spectrum of conditions which make the online education not very favorable in our country. Affordability of devices for online education, network connectivity, geographical location, IT illiteracy etc. are a few factors which could hinder the process of online education [3]. The New Education Policy 2020 and White Paper by NAAC discusses the introduction of online education in phased manner. While implementing online education and online mode of assessment/ examination, it is crucial to ensure the inclusiveness of students from all classes and regions.

The authors of this article being teachers, a part of education system, felt the urge to understand students' view on the ongoing online teaching in higher education. The effectiveness of online teaching, students' participation in the online lectures, efficacy of the online examinations etc. were the point where the authors were doubtful about the success of online teaching. These doubts lead the authors to take a survey of the college students in the region.

### **Objective of the study**

During the pandemic and the lockdown, averting the education could not be a solution. The government had taken audacious decision so that there could not be students' educational loss. It is time to review the feedback of students to measure the effectiveness of those decisions. In view of the surging number of Covid-19 cases in Maharashtra, in the month of June 2022, it would have been an alarming situation as far as the preparedness of the education sector and willfulness of learners is concerned. In order to quantify the usefulness of the online education, a survey of students has been conducted. Students' viewpoint on online education needs to be understood. This research paper would compare aspects of online education considering rural and urban background. It is high time for Indian education system and institutes to hurl themselves into the pressing demands of globalization and thus the educational reforms. In India, the new education policy is about to be implemented. This policy suggests inclusion of online courses, credit transfer, ICT based education etc. [4]. This survey would give an account of feasibility to transform education into online and digital mode in near future.

### **Research methodology**

Once it was decided to conduct a survey regarding online education, review of literature was done to understand what the advantages and challenges were identified in previous research works. Based on the previously set measures and the questions authors had regarding students' perspective on online learning, a questionnaire was prepared.

This is the era of information technology. India has 600 million smartphone users [5]. In general every household is in possession of smartphone. The target participants of the survey were the undergraduate students with sufficient knowledge to operate the smartphone, internet and fill the survey forms. Therefore, it was decided to conduct the online survey using Google form comprised of multiple-choice type questions relating to the perspective on online education, challenges, teacher's efficiency etc. English language of questionnaire could also be a barrier in obtaining maximum and factual response; therefore, questionnaire was prepared in regional language *Marathi*. The link was shared among the students via social media. Translation of the questionnaire in English is provided as supplementary material.

The questionnaire: <https://forms.gle/m3b6SRcX9QoDietr5>

The link was kept open for 10 days from January 9-19, 2022, so as to obtain responses from a considerable sample size.

To respect the choice of not disclosing identity, following two questions were kept optional:

1. Student's name (विद्यार्थ्याचे नाव)
2. Name of student's institute (विद्यार्थ्यांच्या महाविद्यालयाचे नाव)

Type of question	No. of questions
Total number of questions in the questionnaire	21
Personal information	5 (out of which 2 are optional)
Infrastructure availability and feasibility	5
Teachers skill	4
Online education	6
Online examination	1

### Results and Discussion:

During the analysis, the collected responses were first verified for:

- Responses obtained are from students of undergraduate level
- Repetition of responses (assuming the responses to optional questions are not repeated)

Total responses: 600

Below graduate level: 3

Repeated responses: 00

Useful responses from desired participants: 597

Out of 597 responses, 42 students opted not to mention their name and 51 students opted not to mention name of institute. Majority of the responses were received from learners of below listed institutes:

#### **Affiliated to Mumbai University**

1. Shri. S. H. Kelkar College, Devgad, District Sindhudurg
2. Karmveer Bhaurao Patil College, Vashi, Navi Mumbai
3. N.G. Acharya D.K. Marathe College, Chembur, Mumabi

#### **Affiliated to Shivaji University, Kolhapur**

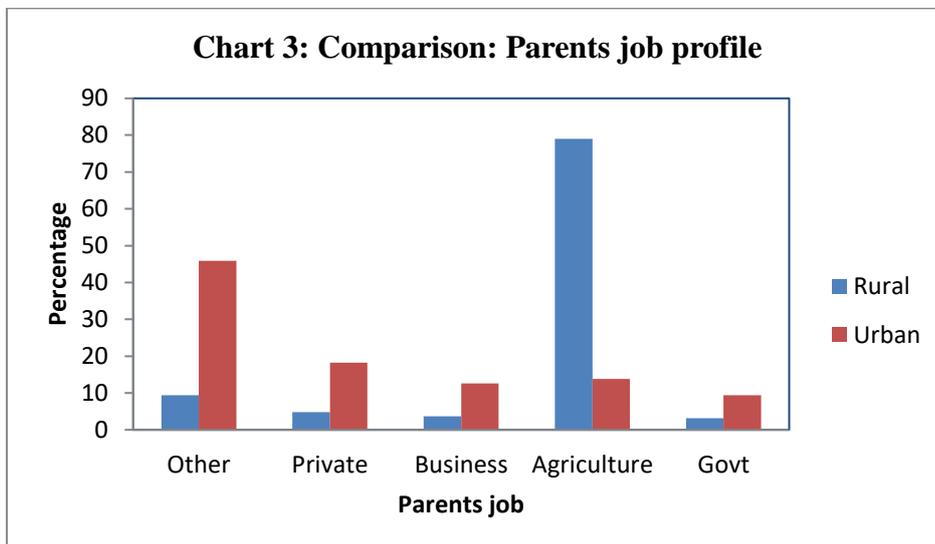
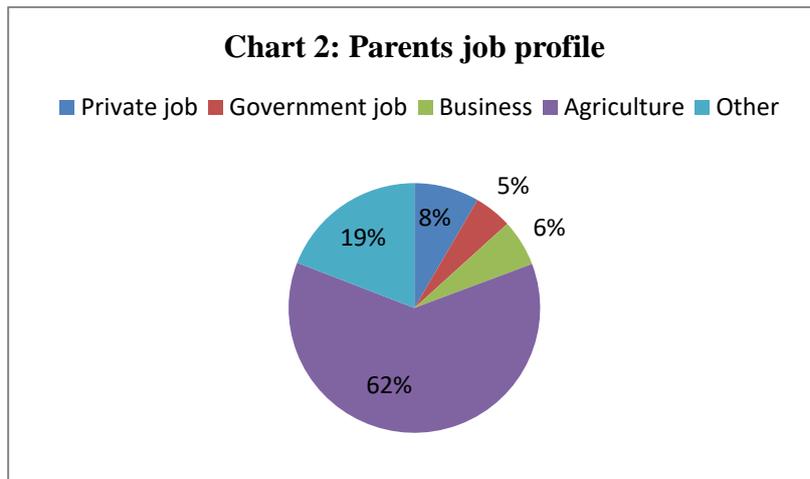
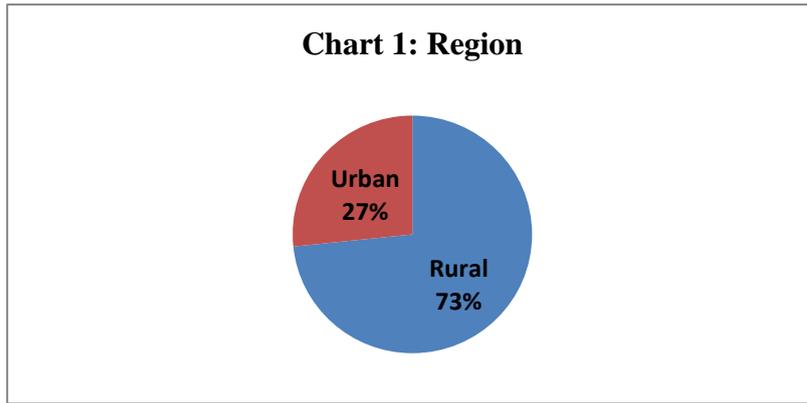
4. Aamdar Shashikant Shinde Mahavidyalay, Medha, District Satara
5. Shri. Vijaysinh Yadav College, Peth Vadgaon, District Kolhapur
6. Dattajirao Kadam A.S.C. College, Ichalkaranji, District Kolhapur

#### **Affiliated to Savitribai Phule Pune University**

7. S.S.G.M. College, Kopargaon, District Ahmednagar

### Regions and parents' job profiles

The area from where a student belongs may impact the availability of online learning resources, infrastructure and perception towards the online education. **Chart 1** shows the comparison of responses from students belonging to urban and rural institutes. It can be seen that the survey is based on 27% responses (159) from learners from urban region and 73% (438) from rural region.

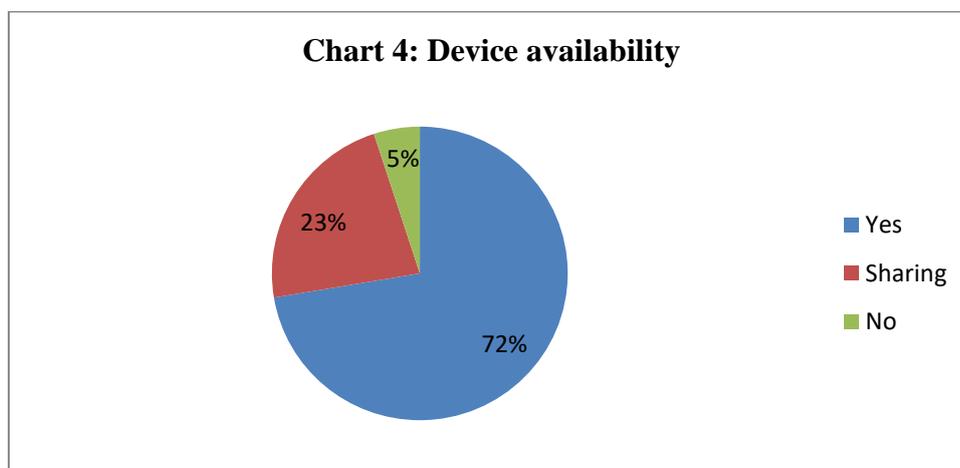


Based on literature survey, it is assumed that the parents job profile is one of the as a factor impacting affordability of online learning resources and facilities [6]. A comparison in job profile is shown in **Chart 2**. As the 73% of responses belonged to students from rural region, it is obvious to find agriculture to be the primary occupation. Out of the obtained data 62% of parents

are into agriculture, only 5% parents are government servants with job security and remaining parents are into variety of jobs. Comparison of the data for parents' job profile considering the rural and urban regions is done and depicted in **Chart 3**. 79% of parents belonging to rural region are into agriculture while 45% of the parents belonging to urban region work in varied sectors.

#### **ICT availability and feasibility of online learning:**

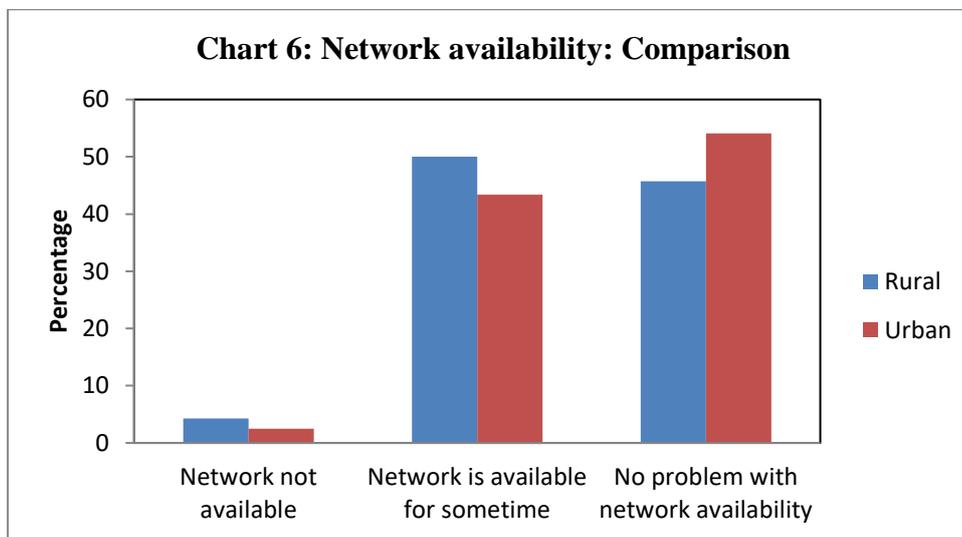
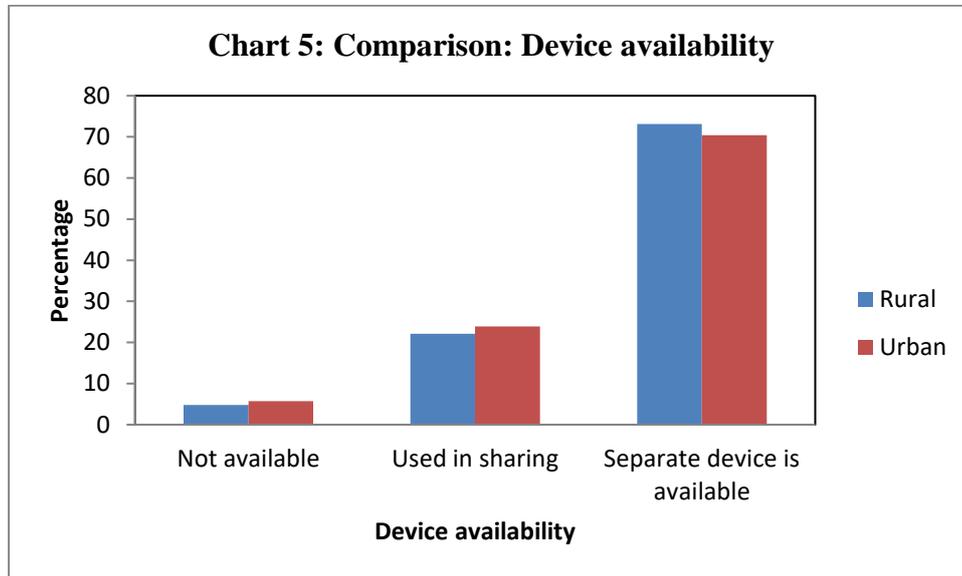
The usage and availability of smartphones has increased in the current era of digitalization. Internet usage per head, for various reasons, has elevated due to low data rates offered by telecom companies. The same is seen in **Chart 4** that 72% of the responses are in favor of availability of smartphones/ devices for online learning.



A little unexpected response for rural region students is visible in **Chart 5**. There is an assumption supported by a survey that in low-income households, the first thing is to realize that there is often one smartphone in the family being shared among many [7]. The current survey appears to contradict the views on device availability presented through a few previous surveys [8-9]. Availability of separate device is slightly more in rural regions while sharing of device is slightly more in urban region for the possible reasons that, in rural region the parents may not be techno-friendly, the siblings may be using the device during different time slots. Therefore, use of smartphone would be done preferably only by the wards undertaking the higher education. Also, unlike in urban areas, the students from rural regions enjoyed flexibility of time considering electricity and network availability during the online classes.

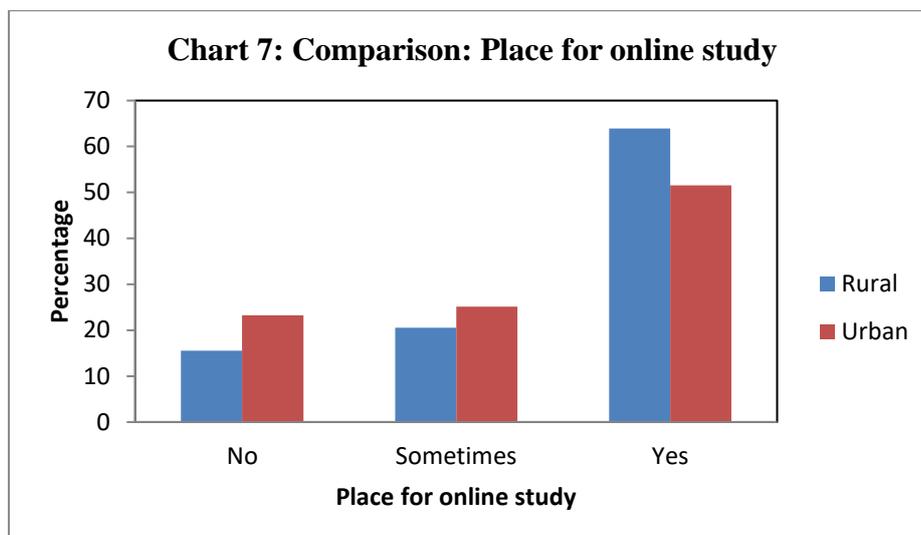
Even though 66% of the country's population lives in its villages, rural internet density is just 25.3. In comparison, urban areas have a significantly higher density of 97.9' is stated in data released by TRAI. [10]. Though interrupted but internet network is available in the rural regions. Unavailability of network is reported by a very small percentage of students. As seen in the **Chart 6**, almost 46% of students belonging to rural region responded that there are no issues with network availability. For remaining, 54% of students, the availability of internet network

and speed, data per day, interrupted power supply etc. are infrastructure related factors concerning the smoothness in undertaking the online education. The government has to go a long way ahead in making the competent ICT infrastructure available across all the regions in India. Also, natural calamities such as cyclones, heavy rains and winds could add to the reasons for power cut and network unavailability.

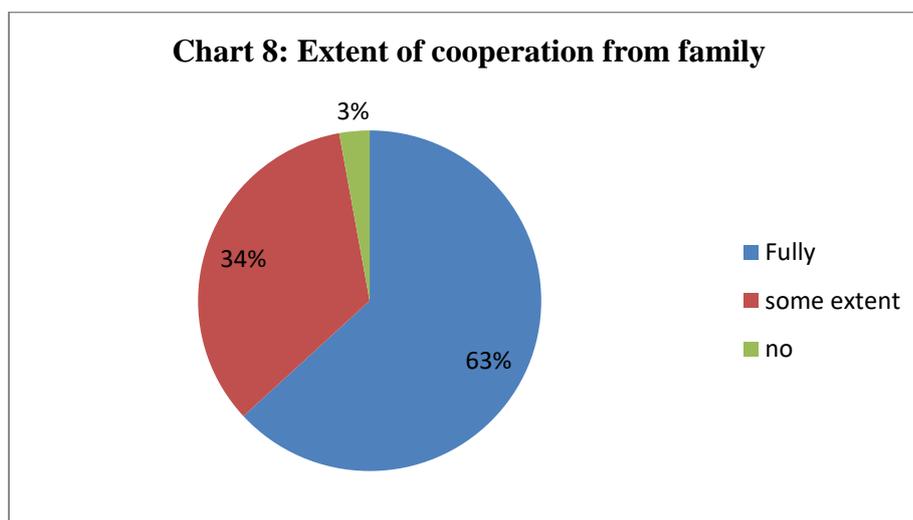


Apart from the ICT infrastructure, students may have faced issues regarding the availability of space and suitable place. To understand the conditions in which the students undertake online education, a couple of questions regarding place availability and cooperation/support of family members in attending the online college classes were included in the survey. The responses to the questions would indicate the feasibility of online education. **Chart 7** is presenting the comparison of place availability in rural and urban regions. 64% students belonging to rural region and 52% students from urban region indicated that they have place

available during the online studies. The students who have no suitable place available are also in considerable percentage 15% and 23%, from rural and urban regions, respectively.



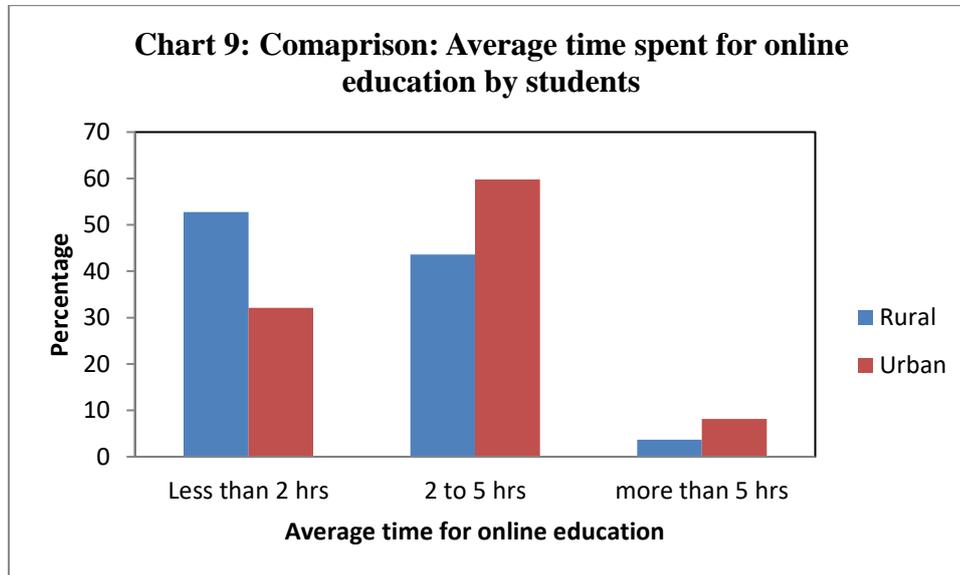
Here, we feel that the meaning of ‘place for online study’ is understood by most of the students as open place/ terrace/ ground/ farms etc. The students who filled the survey form who belong to the colleges of authors were asked about the same in person and the responses were surprising. Students used to attend lectures sitting on compound walls, roaming on the farm fields, under the umbrella on grounds during rains due to network unavailability at home etc. We personally have witnessed these situations during live online lectures and online viva examinations.



**Chart 8** below is presenting the extent of cooperation from family during the phase of online education. 63% of students responded positively for this question. The parents, be literate or illiterate, encourage their wards for education. They, in their capacity, provide the necessary facilities for education. The students who indicated the cooperation from family is to some extent

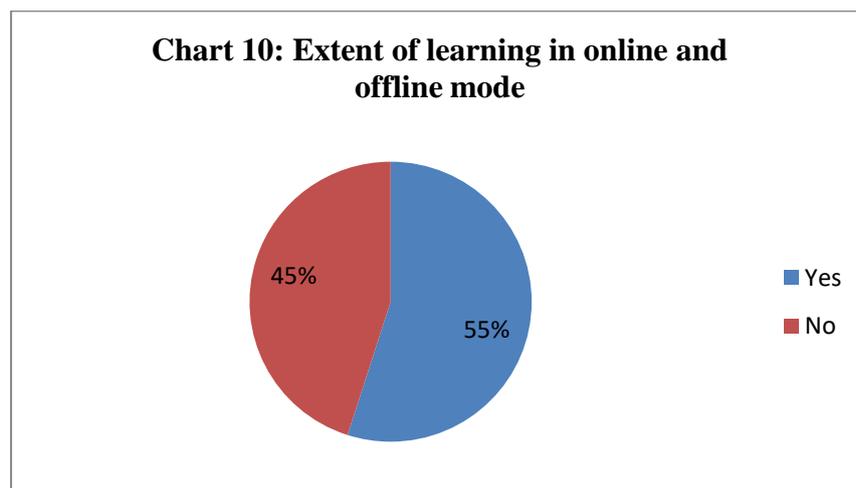
may actually be working students or have to undertake household chores. As it was told by students that their parents sometimes refrained them from using smartphones due to extended hour's usage of smartphones.

### Time spent for online learning



It is clearly visible from **chart 9** that average time spent for online learning by students in urban region is more as compared to that of the students belonging to rural regions. Obvious reasons for this disparity are availability of network, supply of electricity, awareness about use of mobile beyond curriculum learning etc.

### Extent of online learning in comparison with offline learning

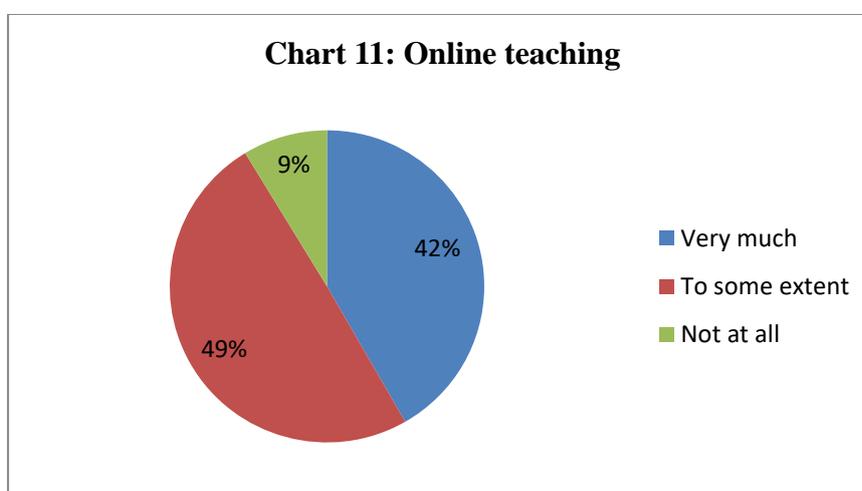


Being curious to know about the extent to which students are able to learn in the new mode of learning, a question, 'Are you learning as much online as you did when you were in school/college?' was included in the questionnaire. The response is surprising with 55% of students responding Yes. There are two possibilities to such a response. Students would have either could not understand the question or they responded leniently. All the teachers are well

aware of the limitations which we faced during the online live teaching sessions. To convey the content and the complete curriculum in online mode was a challenge for the teachers' community. Therefore, this response is surprising in a way.

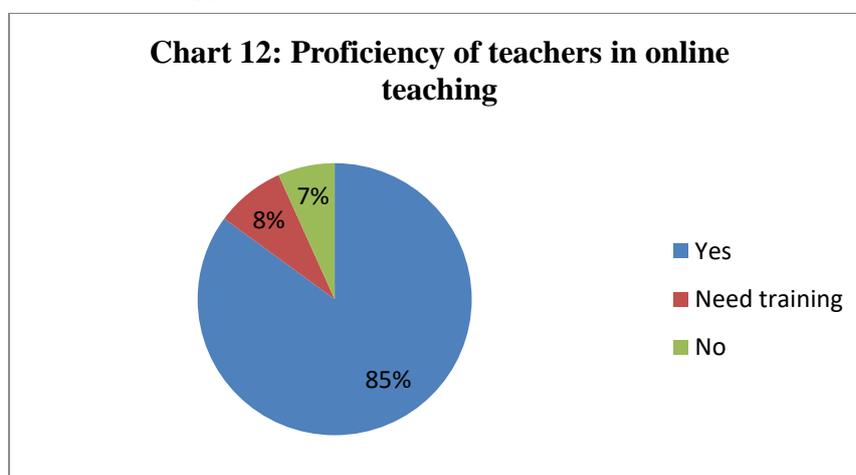
### Online teaching

The pandemic forced the education system to switch to online teaching-learning system when the academic community was not prepared for the same. At large, the teachers were not very techno-savvy; they might have a little hesitation to use mobile/ computers/ laptops for academic purpose. Assuming that this could have impacted the teaching of teachers, a question was framed to know students poll about do they like the online teaching. Only 9% of the students indicated they did not like the online classes of their teachers. This can be a positive sign in view of forthcoming policies regarding online education.



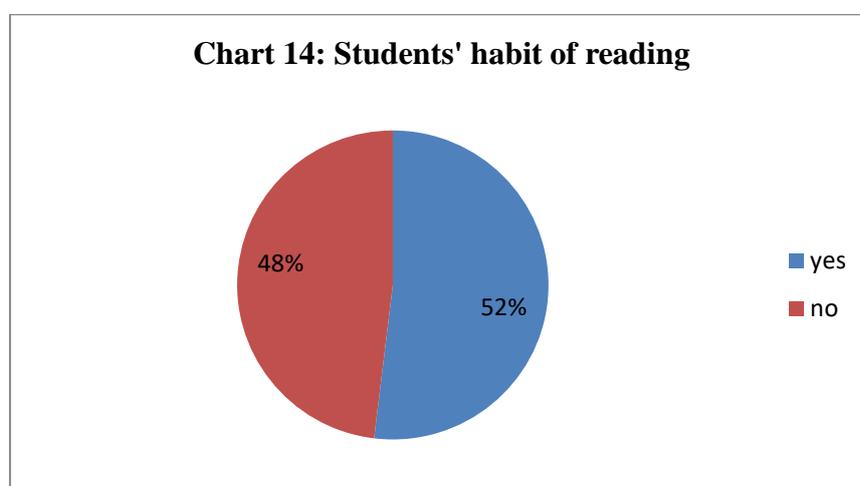
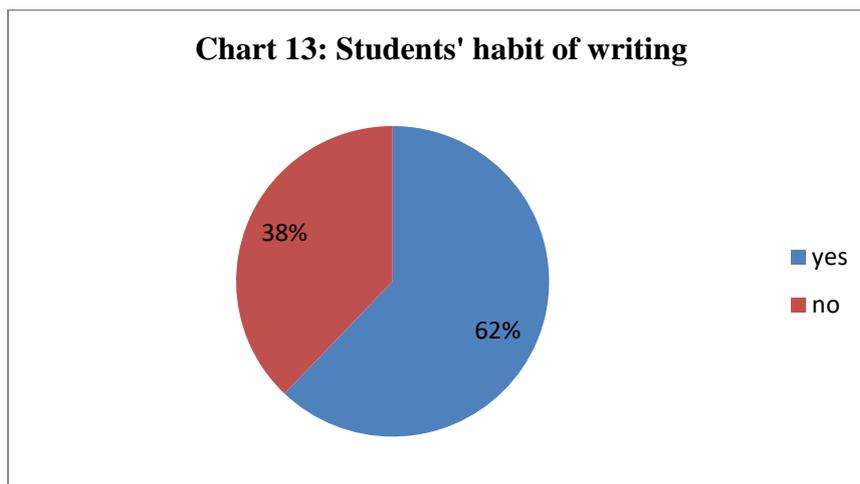
### Proficiency of teachers in online teaching

It is indeed a really encouraging observation in the survey about the proficiency of teachers in teaching online using the technology. Students were asked to give their opinion if the teachers require undergoing training for conducting online lectures. A considerably large percentage, 85%, of students indicated that their teachers are good at using the online teaching methods and related technology.



### Students' habit of writing and reading

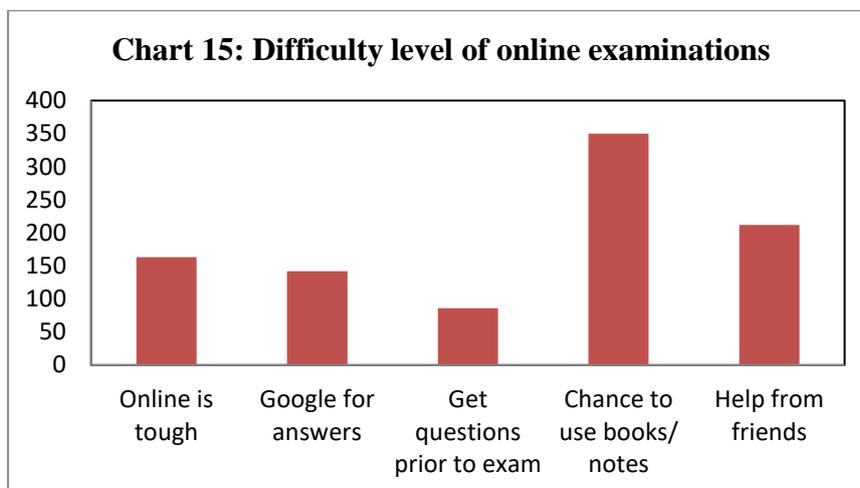
Students during the lockdown phase were detached from regular academic atmosphere which has impacted their reading and writing habits. 62% of students indicated that their writing habit is impacted negatively while 52% students indicated that their reading habit has impacted as per the **chart 13 and chart 14**. These numbers are considerably big for concern. The batches of students which have cleared their exams in online mode during pandemic would have to struggle to get back to offline mode of education. Reading and writing are basic components of education.



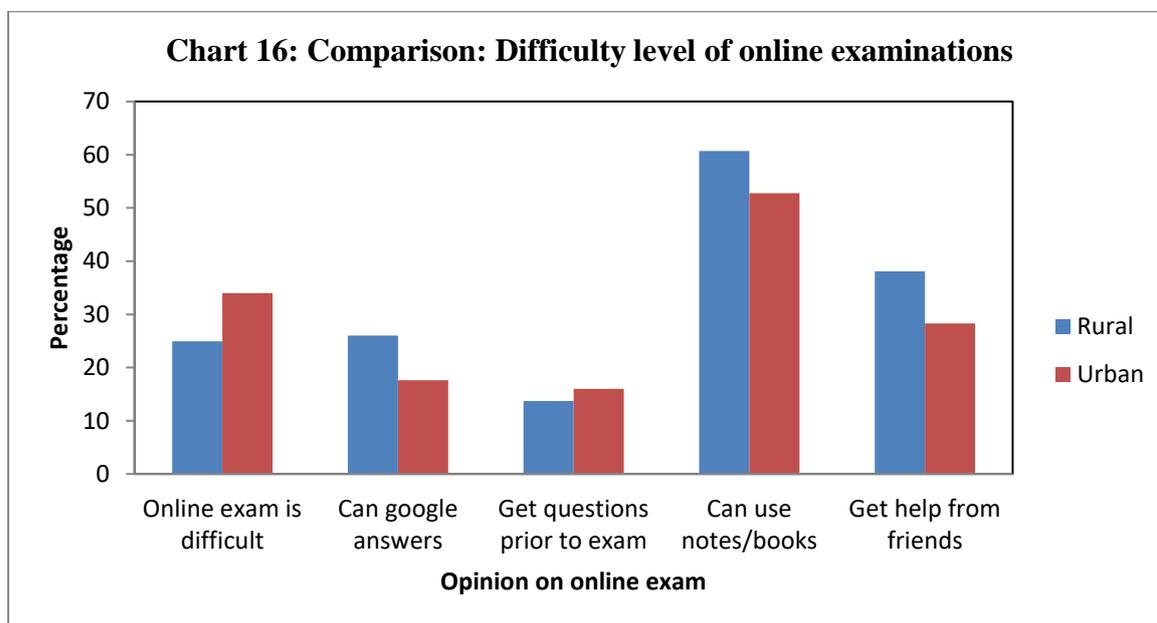
### Online Examination

**Chart 15 and chart 16** are based on question related to online examination. Students responses are very clearly indicating the online examinations which were absurdly conducted were received by students positively. Only around 24% students responded that the online mode of exam is difficult, while the rest of students followed some or the others ways to trick in the exam to pass. The online proctoring was a challenge in rural area due to network, device, and electricity availability. Online exams were based on questions to evaluate student know the curricular points or not. The exam did not assess any skills and cognitive abilities. The teachers

are required to be trained to frame objective questions which can assess the level of intelligence, cognition, logic, reasoning, problem solving skills etc.



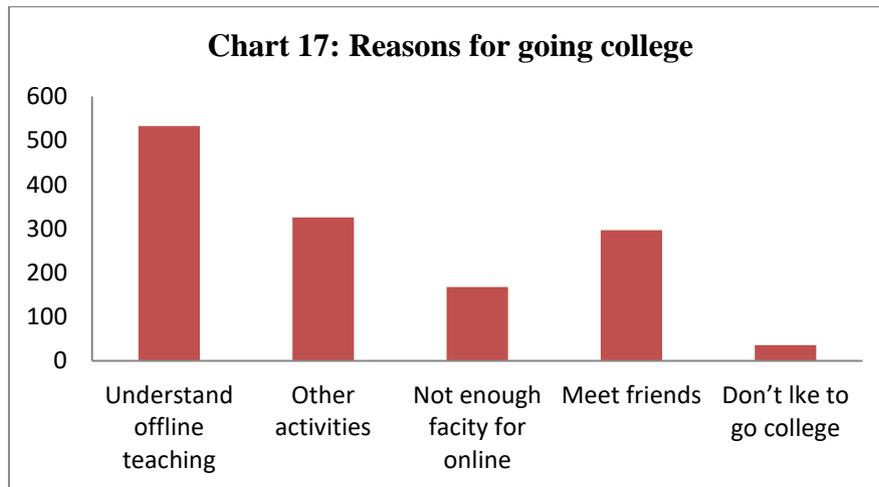
Almost 35% of urban students consider that the online exam is difficult while 25% of rural students think the same. Difficulty level of questions, proctoring and comfort level while attempting exams could be the factors in student’s perspective that would have influence on difficulty level of online exam. Both, rural and urban students synch on the opinion that they can get help from fellow students while attempting online exams. This is alarming for academicians. There is necessity to set up a standard procedure for conducting online assessment.



### Reasons for going college

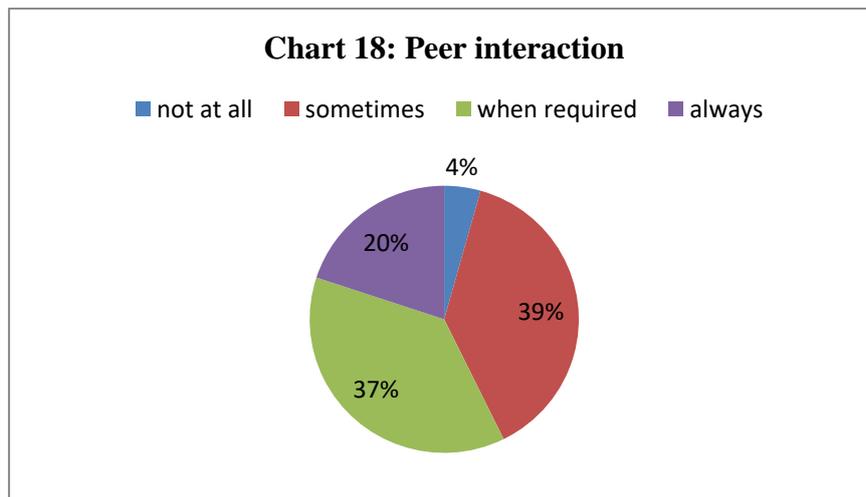
Interesting response received on reasons why students love to go to college as shown in **chart 17**. Out of multiple responses, 88% students love to go to college as they understand offline teaching. This could be a little contradicting to the response for the online teaching liking (**Chart 11**). Participation in other activities and meeting friends are other major reasons for students to like coming college. Also, a significant number of students also indicated that they

lack the availability of the facilities required for online learning. These are the factors which must be taken into account while framing policies in education.



### Peer interaction

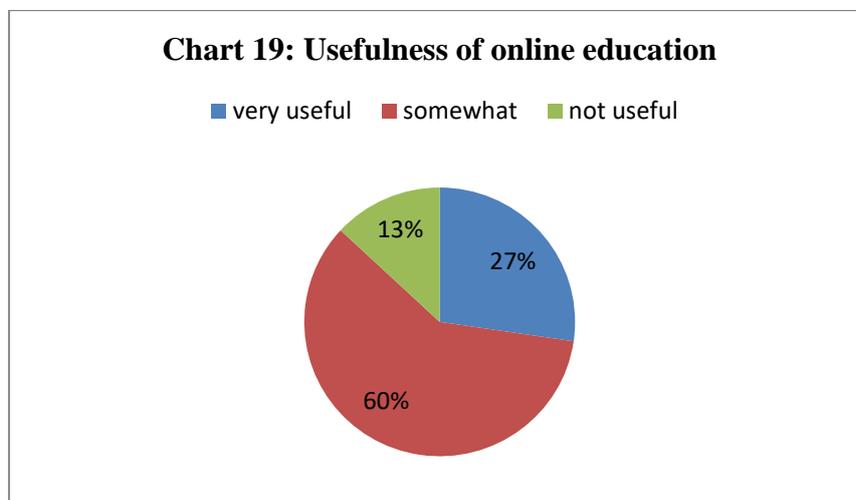
The regular classroom education gives the students the opportunity to interact with their peers. They can make friends, exchange their thoughts, knowledge and explore the curriculum. But the lockdown phase, made it difficult for students to see their friends. Such a situation created psychological problems such as stress, tension, anxiety; depression etc. As in **chart 18**, 96% students indicated they keep in touch with their friends. Physical mode of education plays an important role in making the students social and reduces their psychological stresses. Peer interactions have potential to improve the learning outcomes prepare students for higher education and future employment [11].



### Usefulness of online education

In the end it is essential to understand how the students view towards the online education. According to **chart 19**, noticing 13% of students participated in the survey would turn away the online education as they don't find it useful, could be a fact for concern. The

government, policy makers should take into account this considerable number of students denying the usefulness of online education. 60% students, who consider online education is somewhat useful, may expect reforms and improvements in the existing way of online instruction.



**Conclusion:**

From the responses of the students for the questionnaire, both positive and negative inferences can be drawn. The online education which was need of hour was undertaken all of a sudden without prior preparations. But, the policies and views towards mode of education have drastically been changed after pandemic. Globally, the governments have realized that there is the possibility of switching the education entirely in online mode. As far as India is concerned, we have many challenges such as device availability, network connectivity, mental preparedness for online education, parent’s incapability of accessing technology, not up to the mark system for online assessment at school/college level etc. Before implementing the education policies, inclination of students, feasibility of online learning, effectiveness of online courses, impact on psychology and health etc. should be to be taken into account.

**References:**

1. Internationaljournal Of Multidisciplinary Educational Research Issn:2277-7881; Volume: 9, Issue: 7(5), July: 2020, Online Education In India: Issues & Challenges Shreeda Shah, Tejal Jani
2. García-Morales VJ, Garrido-Moreno A and Martín-Rojas R (2021) The Transformation of Higher Education After the COVID Disruption: Emerging Challenges in an Online Learning Scenario. *Front. Psychol.* 12:616059
3. Preparedness for online learning in the context of Covid-19 in selected Sub-Saharan African countries Judith Pete, Jeketule Jacob Soko *Asian Journal of Distance Education*, Volume 15, Issue 2, 2020
4. New education policy 2022, Ministry of Human Resource Development, Govt. of India

5. <https://m.economictimes.com/news/india/indias-growing-data-usage-smartphone-adoption-to-boost-digital-india-initiatives-top-bureaucrat/articleshow/87275402.cms>
6. Online Teaching and Learning of Higher Education in India during COVID-19 Emergency Lockdown, Girisha Lakshman Naik, Malteshkumar Deshpande, D C Shivananda, C P Ajey, G C Manjunath Patel, Pedagogical Research, 2021, 6(1)
7. <https://www.thebetterindia.com/231129/coronavirus-online-education-india-zoom-calls-whatsapp-google-low-income-students-india-nor41/>
8. Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. Journal of Educational Technology Systems, 49(1), 5-22, A Survey of Teachers' and Students' Perspective On E-Learning During Covid-19 in Delhi
9. Menal Dahiya and Nikita Malik, MIER Journal of Educational Studies Trends & Practices November 2021, Vol. 11, No. 2, pp. 200 – 222
10. Telecom Regulatory Authority of India The Indian Telecom Services Performance Indicators January – March, 2021 New Delhi, India 27th August, 2021
11. Students perceptions of their interactions with peers at a cyber charter high school, Jered Borup, Shea Walters, Megan Call-Cummings, Online learning journal, Volume 24, issue 2, 2022

# **THE ROLE OF GEOSPATIAL TECHNOLOGY IN WIDENING THE HORIZONS OF SKILL EDUCATION AND RESEARCH IN GEOGRAPHY**

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## **Introduction:**

Geographical condition put distinct impact on human life in all over world. Geography is one of the subjects which having lot of importance and preference of students. According to R. Hartshorne Geography is concerned to provide an accurate, orderly, and rational description and interpretation of the variable character of the earth's surface (Savadi, 2011). It has major two branches Physical Geography and Human Geography. In both of the branches the emerging geospatial technologies are crucial in the research and skill education. Geospatial technology empowers us to obtain data that is referenced to the earth and use it for analysis, interpretation, modeling, simulations, and visualization.

Geospatial technology includes major three components –

- Remote Sensing (RS)
- Global Positioning System (GPS)
- Geographic Information System (GIS)

## **Remote Sensing (RS)**

Remote sensing is defined as the science and art of acquiring information about objects without any physical contact with the object. RS is the science of acquiring information about the earth using instruments that are remote to the earth's surface, usually from aircraft, drones or satellites. It may use visible light, infrared, or radar to obtain data. RS offers the ability to observe and collect data for large areas and is an important source of data for GIS. Drone surveys also provide data set for analysis.

Satellite imagery and aerial photographs are important in RS. There are two types of satellite.

### **1. Sun Synchronous satellites**

These are also called as polar orbit satellites. Most of the earth resource satellites are sun-synchronous ex. Landsat TM, CartoSat, RESOURCESAT (IRS P6), Sentinel, SPOT, IKONOS, Quick Bird. Imagery provided by these satellites is very useful for terrain analysis, the study of the changes over time, land use land cover analysis, etc. But the resolution of the imagery is also

important for accuracy and better results in the geographical study and analysis with the satellite imagery.

## **2. Geostationary satellites**

They are located at very high altitudes which view the same portion of the Earth's surface at all times. Especially these satellites are used in meteorological applications. Ex. Weather forecasting (Karlekar S. , 2015).

Sometimes atmospheric, radiometric, and geometric corrections need to be done before analysis. NDVI Normalized Difference Vegetation Index, Surface temperature map with the use of thermal imagery, monitoring deforestation process, or any coastal feature development process, surface steepness measurement from LIDAR are some good examples of the use of RS data in Geographical research. ISRO, USGS are offering various types of remote sensing data and most of the data is freely available for researchers.

We can easily identify and detect geological rocks and their structures, the actual amount of dip, their direction. Continuation of beds, layers, truncations, faults, joints, interruptions of features, new feature generation and progress ex. sand bar, spit at coastal area etc. can be detected with RS. These can help in the detection of mineral oil, natural gas, or groundwater. RS can be used in various analyses such as flood-prone area, crop area, crop stage, land degradation, potential landslide areas, areas of high salinity, forest resource potential, growth of plants and its canopy, forest management, etc.

## **Global Positioning System (GPS)**

GPS is a satellite-based radio navigation system which provides accurate location on earth surface.

It is useful in hazard management and rescue work; it provides environmental condition information. It is helpful to find routes and traffic control. Forest departments, town planners, and various government organizations are using GPS. GPS is useful for research in geography especially in tracking areas, routes, and taking points for surveying. We can take photographs, add data while taking points of a particular location with help of GPS too.

There is no need for conventional GPS for surveying now, because various mobile GPS applications are freely available. Ex. GPS Essentials, UTM Geo Map, GPS waypoints, etc.

GPS data can be easily imported into GIS software, Google Earth, etc for analysis. Also, map can be prepared very easily from the collected GPS data with the help of GIS softwares.

## **Geographic Information System (GIS)**

GIS is computerized information storage processing and retrieval system that has both hardware and software specially designed to cope with geographically referenced spatial data

and the corresponding attribute information. GIS system allows capturing and storage of both spatial and non-spatial data sets from various types of sources including toposheets, maps, aerial photographs, satellite imagery, another analog and digital remote sensing data sources, ground surveys, GPS surveyed data, etc. GIS allows users to acquire, organize, store, and most significantly analyze information about the physical and cultural environments.

In GIS the world is represented as overlaying physical or cultural layers. Means it uses layers to store geographical data. Each layers having quantifiable data stored majorly in shapefile format that can be easily analyzed and represented. Database of various aspects of one feature can be easily stored. For example we want to analyse the forest areas in Maharashtra, then it could have various layers such as types of trees, name and counts of particular tree species, elevation and slope, soil type, climate related data i.e. temperature, rainfall etc., bird-animal species type, their perticulat location of habitat, endemic species, trails, depth of soil, soil erosion rates, streams and water bodies in the forest areas, roads, the health of the forest, burn and damaged areas, regrowth and its stages, plantation area, forest rangers roots, restoration, and much more. Each of these layers would contain a layer-specific database of information in its attribute table.

Not only geographical researchers use GIS but also various disciplines, researchers are using GIS include conservation, ecology, disaster mitigation, town planning, hazard management, business, marketing, engineering, demography, ocean science, transportation, health, criminal justice, travel and tourism, news media, etc. Various GIS and image processing software are available for research. Some of them are free and open-source i.e. Q-GIS, GRASS, SAGA, etc and some are commercial such as Arc GIS, Erdas Imagine, etc. With the help of GIS software; analysis can be done using raster and vector data.

GIS uses layers as an organizing tool for large data sets which enable spatial analysis, presentation and mapping. Various mobile GIS softwares are also available which will be useful in research work related to geography ex. Q field for QGIS, Arc GIS Earth, Mapit GIS, MAPinr, etc.

With the help of GIS, the following types of analysis can be performed easily and effectively.

- Network analysis – to analyze the road, stream network
- Buffer, multiple buffers – to find out area occupied with a particular distance from the feature
- Multi criterion analysis – ex. a bank wants to start ATM centre in a city, then taking into account various aspects as per their requirements such as wardwise population, road

accessibility, the wards not having ATM centre, populous area, distance from bank branch, police station, market etc. the location of ATM center will be decided. For this analysis all the needed layers will be prepared in GIS and then using various criterias the result i.e. location will be acquired.

- 3d modeling – for 3d perspective
- Land use land cover, change detection – to analyze changes in land use land cover of a region and over the time period too.
- Simulation models – get an actual idea of the incident
- Surface analysis – slope, hillshade, aspect, and other analysis
- Spatial interpolation – used for estimating unknown values from known point values.
- Interpolation – to generate lines of equal value
- Spatial and attribute query – to solve various problems for ex. If we have two spatial layers i.e. roads and streams, then with the use of spatial query we can easily identify which roads and streams cross each other. This result enables us to check whether there are bridges on that location or not.
- Proximity analysis – to find out the nearness for the location
- Digital Elevation Models – it gives idea of elevation and its 3D view gives the representation of the exact elevation scenario
- Map making – Dot map, located bar graph, pie chart maps, thematic maps, choropleths, etc.

In the syllabus of some universities Geospatial technologies is included in practical component. But giving maximum weightage to practical parts is needed. Various types of analysis with the help of free source GIS softwares, uses of specific mobile applications pertaining to Geospatial technologies should be implemented in syllabus. It will enhance the technical job-oriented skills in their academics which enable them to build their career in GIS and research field. There are various jobs available in GIS field after completing GIS Diploma courses, MSc Geoinformatics etc. The jobs from GIS or Geospatial Technology are not only restricted to private sectors but there are various government agencies who needs GIS candidates. MRSAC (Maharashtra Remote Sensing Application Centre), ISRO, DRSO, Survey of India, Geological Survey of India, NATMO, Forest Department needs GIS candidates for the posts like Sr./Jr. Remote Sensing and GIS assistant/ associate, Project associate, GIS expert etc. CyberTech, Genesys International Pvt. Ltd, Tomtom India Pvt. Ltd, PAN India, Ceinsys, Infoysis, Atlas, TUMC, Astron etc. are some GIS companies which need GIS candidates for the posts of Digital Cartographer, GIS executive, GIS trainee, GIS expert, GIS developer etc. India's Geospatial technology is expected to cross Rs. 63,000 crores by at a growth rate of 12.8% and to

provide employment to more than 10 lakh people mainly through geospatial startups (Timesnownews, 2022).

The Geospatial Technology related syllabus should be implemented properly in curriculum taking into account the needs of GIS companies and practicality. It will enhance the ability, potential skills and research tendency of Geography students and also useful in future career in vast GIS field in competitive world.

**References:**

1. Savadi, A. (2011). भूगोलाची मूलतत्त्वे खंड पहिला . Nirali Prakashan
2. Karlekar, S. (2015). दूरसंवेदन आणि भौगोलिक माहिती प्रणाली. Diamond Publications.
3. Timesnownews. (2022, Oct 12). Retrieved from <https://www.timesnownews.com/>.

## **NEED OF PROVOKING EDUCATIONAL COGNITIONS**

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### **Introduction:**

The term 'Education' is derived from the term 'Educare'. It literally means 'to bring up' and 'to nourish' and to 'raise'. Swami Vivekananda has rightly described education as the manifestation of divine perfection which already exists in man. He had further added that education must generate curiosity among the learner as well as it should create a greed for knowledge among the learners.

On the grounds of my 32 years' experience as an undergraduate and postgraduate teacher, I think we are gradually losing these factors. In most of the faculties and subjects, our education system is just dumping information in the neuro-psychological system of learners, which is in fact, killing their curiosity. Curiosity is the factor which stimulates a student to think on a topic and probe deep into different aspects of the topic. It prominently helps to understand the matter in different angles and also stimulates queries and questions in the mind of a learner. It expands the attitude and widens the vision of a learner towards the life and society. A balanced education is supposed to provoke in the learner the sense of public manners and etiquettes, awareness about the environment and overall culture of the nation. This obviously helps a learner to build, what we call as, personality and overall behaviour in the society.

A real and aware student is expected to ask queries or questions to the teacher or guide. My observations conclude that this tendency among the students has been significantly reduced since last decade. I would like to specifically mention here that this change has drastically occurred since the semester pattern system has been implemented by Mumbai University. According to my personal experience, semester system has led to teaching of the syllabus rather than the subject. All teachers are not able to generate a good quality interest among the students as they have to finish the content of the syllabi of their respective subjects well before the commencement of the examinations and allow the students to go for the studies; so that they could secure good scores and grades in that semester examination. Students, with few exceptions (10-15%), also are not found to have any urge or need to develop any special interest in any typical subject. This statement is easily applicable to especially rural students of our traditional faculties like Arts, Commerce and Science. This statement may be slightly deviating for the students admitted in professional courses like Computer Science, Information Technology, Business Management Studies or Skill Programmes like Hotel Management, Ecotourism and all

that. There the students have to commit themselves to develop their interest in the course matter because the course is supposed to provide them a rich source of bread and butter as soon as they crack their final examination of that. So, to show interest in the faculty matters becomes unavoidable part of their attitude; irrespective of their natural instincts.

But if rural students of traditional faculties are concerned, they have less interest to listen and learn what is taught in the classrooms. There are several reasons for that. One of the reasons is that till 12<sup>th</sup> std. they are taught the subjects examination oriented; so that they could write the answers properly and to score. As a result, maximum of the students secures good or excellent scores; with minimum basic knowledge of the subjects for which they appeared in the examination. That creates an unwanted confidence among the students as well as their parents about their talent, which may not be actually existing to that extent to which they are thinking of. Majority of the students fail to get their names in the merit lists of medical, engineering, pharmacy or like that. But still, they wait till the declarations of last waiting lists of such commercial courses and even attempt to seek the admission in private institutions costing huge amounts. The students who remain out of all this trend, are likely to choose the streams of traditional faculties. So, when such students enter in their senior faculties, they expect the same type of teaching-learning process in their classes; which is not actually not expected. They take their teachers for granted their scores in the senior class examinations; with due provisions of printed study materials for them. As recently observed, post-Covid students have lost their capacity to write not only texts in the notebooks, but also answers during their offline examinations. Some students even try to get excuses from their internal assessment presentations like Ppt seminars and writing home assignments etc. They have lost their capacity to attend a classroom lecture of 50 minutes with full concentration. Majority of the students try least to read and understand any textbook and don't wish to go to library to refer any other book. They don't prefer to read any newspaper, magazine or any book which is out of their subjects. Interestingly, a significant per cent of students has been also observed who were not interested even in watching T.V. programmes, but interested badly in mobile games and addicted to social media apps like WhatsApp and Facebook.

Factually, except the commerce faculty, arts and science faculties are starving for the students' strength in last few years. After COVID impact, the conditions have become more worse for them. In such a condition, the teachers and institutions are unwillingly committed to adopt a liberal approach towards such students; so that, the students' strength should increase at the entry point up to the maximum in take capacity and be remain distributed more or less equally for the all subjects till the last year of graduation. This factor leads to emotional blackmailing of the teachers by several means and the teachers have to see that the students get cleared in their subjects at every graduate level. Besides, majority of the students generate an

inferiority complex that if they have not secured their seats in medical or engineering, they cannot do this also. This is a vicious cycle that is leading to loss of basic interests of the students in the subjects offered. It should be actually there for proper teaching-learning. Majority of the students are nonattentive in the classes, they bunk the classes frequently, remain disrespectful for the teachers, don't follow the campus disciplines; and the teachers have to ignore all this to retain the strengths. Such approach of the students and to some extent of their parents has been leading to fact that the teachers are also gradually and unwillingly relieving themselves from generating educational interests among the students. This has further led not only to lack of interest among the students about their course, but also to the lack of educational cognitions and logical senses and critical thinking among the students; which is an unavoidable part of our day-to-day routine life also. Loss of logical senses and critical thinking, as I personally think, is a major threat if we take these youths as next generation backbones of our nation. Lack of these factors, as several scientific conclusions say, leads to inhibition of our thought process, lack of maturity status of mind and depth of awareness of being a human and all that. This is supposed to be responsible for a gradual rise in the percent of criminal mentality and attitude. It is also leading to superficial and temporary thinking among the learners tempting unnecessary generation of stress over them. They easily fall victims to the thoughts of uncertainty of career life, consequent clashes among family, relatives and friend circle. This leads to mood swings and several neuro-psychological disorders. Rise in the incidences of suicide attempts by youth is a result of that, as I think so. Even if the death incidences due to heart problems are surveyed, we can see that the incidences have become very common between the age of 20-30 years. Negative thinking about oneself and about the family support is also increasing, leading to significant drug and alcoholic addictions among the youth. Majority of the students remain confused about their goals throughout their undergraduate education and lose their courage when they receive their convocations and are set free in the stream of social life. So, it is a need of time that there should be a cognitive process in our education system that could generate a strong process of positive thinking among all students during their undergraduate education. Some part of educational curriculum in every existing educational stream should emphasize on positive thinking tools and methods involving to understand significance of the 3-Ps of motivation for a successful life as - Practice, Patience and Persistence. No doubt, a teacher or institution always attempts to do that to their maximum capacity; but still, it needs to be in curriculum to get more weightage and proper time for implementation and actual workout.

Thus, I state here firmly with a due responsibility that education is a cognitive activity which has an obvious integrated purpose aimed to achieve specific predecided goals or sometimes even random unseen targets. Besides, I also think that education is not a time bound and space restricted process. If thought properly at the level of a casual common man or a

learner, transmission of the knowledge and nurturing of skills in man are said to be the required segments of any practically working education system. But it is true up to a certain extent only as these segments can satisfy professional requirements to some percent. But, the very basic purpose of any type of education is merely not restricted to a teaching-learning mechanism and outcomes of the examination procedure. But, in fact, it is to develop a sense of mature and real [at least 3-D] understanding of fundamentals of a subject in the curriculum, reasons behind the needs of a subject in the concerned curriculum, scope of the subject in developing professional skills in a candidate (irrespective of sex), relative magnitude of interest of a candidate in a subject, the attitude how a candidate is going to take on over a subject etc. or any other matter and various types of humane relationships. It should be able to make the learner to understand the cause and result (work) relationship behind every phenomenon occurring in the surrounding. Specifically, rise in the levels of positive thinking will surely lead to rise in harmonious relationships between societal strata, will reduce the magnitude of any type of socio-cultural conflicts, will help to raise the rational thinking and kindness. Promotion of cognitive thinking will also automatically lead to rise in the amplitude of logical senses and critical thinking; which is very necessary to build up value added education system and to build a strong national mind. That will also help to reduce the threat of brain drain. Product of an education system should be of that quality so that the future of our nation should be always bright and of proud for us.

Thus, to conclude, education is certainly a cognitive and motivating process that operates in any humane society as a continuous interaction and exchange between three very important elements of a society as the learner, teacher and the socio-cultural environment itself. It is a process of motivation, maturation and development of the learner gradually by all means. As stated earlier, educational cognition is very important to raise the quality of logical senses and critical thinking as 'education' itself is an art of decorating our life processes with some scientific attitude and specific applications. It may be formal, non-formal and informal; but it should be offered and taken with right and apt cognitive processes to make one's life stand with better standards. It is not merely restricted to an individual's physical level, but also intimately concerned with different values of a society such as ethics, religious, cultural and aesthetics values etc. So, educational cognitions should be provoked in such a way that a learner and the society should feel and experience that they belong to a huge global family.

#### **References:**

1. <https://www.frontiersin.org/articles/10.3389/feduc.2018.00049/full>
2. <https://www.tandfonline.com/doi/full/10.1080/00131857.2021.2006056>
3. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5839644/>

## **POST PANDEMIC CHALLENGES: CHANGE IN PSYCHOLOGY OF STUDENTS IN LEARNING**

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### **Abstract:**

The main aim of this survey research is to analyze the changing psychology of students towards learning process and revolution in learning after corona pandemic. The process of learning and teaching has seen drastic changes. MHRD took different initiatives to make learning process easy during pandemic. After reopening educational institutions students' starts offline learning as well as online learning. During this pandemic situation, students faced a lot of challenges while learning. So in post covid environment, very important factors are sustainable change in learning process as well as changing psychology of students related to learning.

**Keywords:** Psychology, pandemic, learning, student

### **Introduction:**

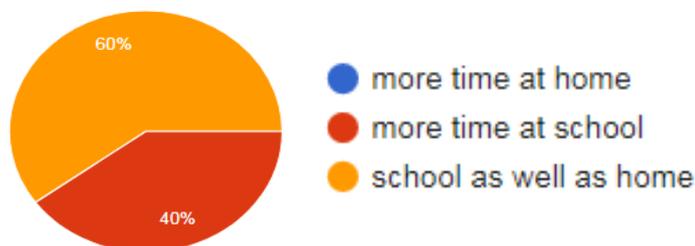
Now a days, world is gradually developing from worst situation of covid pandemic. Educational systems and infrastructure are now resuming with its full capacity. Due to this pandemic situation, learning process of colleges and schools has been changed completely. Before covid 19 pandemic, students were physically attending the lectures and exams were conducted in actual presence of the students into classrooms. Due to such simplicity in learning system before covid 19 pandemic educations was really enjoyable. When the pandemic started in India, all educational institutions were suddenly stopped working because such kind of crisis has never been experienced in the history of a country. So, first three months all educational activities were stands still. This time has created a fire test in front of students. Teachers have discovered new techniques and ways to teach students. MHRD has come up with new initiatives like swayam, diksha etc. So, the learning process was streamlined with the help of such e learning platforms. Due to regular use of e learning platforms by students, whole learning process has been improved and become very easy to access by each student.

### **Methodology**

Day by day students are being familiar with all these E-learning software's, now they are easily managing learning process at their own ease of access. This survey was conducted among SYIT students (2022-23) in S.H. Kelkar college. Following things are revealed from this survey.

After pandemic, student's opinion about learning mode is as follow:

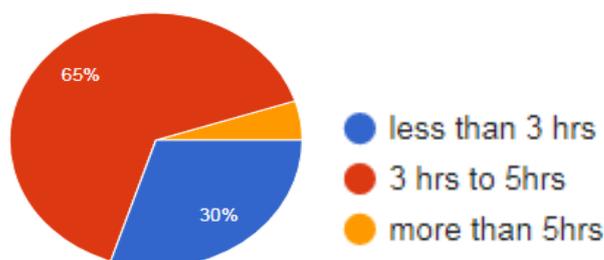
- 1) 60 % students likes both ways of learning such online and offline, 40 % students likes only offline learning.



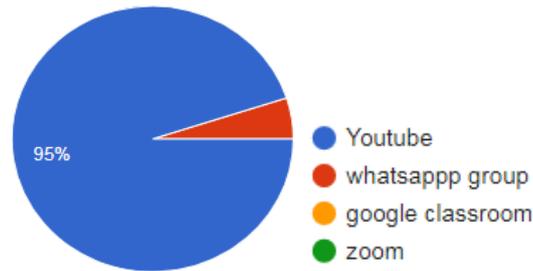
- 2) 80 % students have expressed their positive opinion about online e learning platform but suggested some more improvements in existing ways of online learning process.



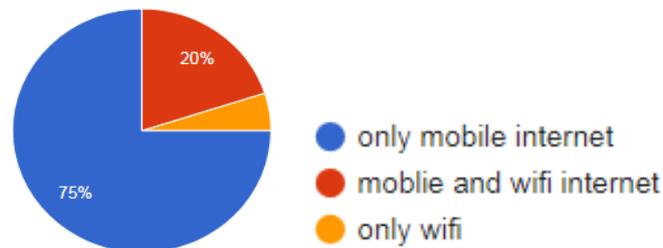
- 3) 20% students have expressed great pleasure regarding online learning method. Because these students were coming from very remote area of our Devgad taluka. In the pandemic situation, almost for more than six months MSRTC was on strike. So public transport such as ST Service was badly affected and totally stopped plying.<sup>[3]</sup> Due to these situations it was not affordable for many students to attend college by using private means of transport. So instead of paying money to transport facilities it is better to pay for internet services or for buying mobiles or laptop to attend classes virtually.



- 4) Daily use of internet used by students - 65% students are using internet for 3 to 5 hours, 30% students are using internet for less than 3 hours and 5 % students use more than 5 hours.



- 5) 75 % students have own mobile internet, 20 % students have both mobile and wifi and 5 % students have only FTTH(fiber to the home) broadband, they lives in remote area. Even there is no any network.



### Conclusion:

This survey has shown both aspects i.e. positive and negative impact of online learning.

### Positive impact

- Due to covid-19 pandemic situations, educational systems were widely using every e learning platform available in the world and due to wide use of online applications for education purpose with the help of internet enabled communication devices students became very familiar with the operations of whole online applications along with internet ready devices such as mobile, tablets, laptops, desktops etc.
- Thus covid-19 pandemic situation has given us an opportunity to discover more and more ways to continue learning process of students, though all colleges, schools were closed due to fear of virus infections. This era has empowered students about ease of using of latest communication devices and technologies such as zoom, google meet, telegram, c-dot etc.
- This online learning platform enable so many students to access world class valuable education in a reputed organizations, schools and colleges located in metro cities such as Mumbai, Pune, Delhi, Chennai etc without physically attending at the institutions. This helps to save not only money but also valuable time of those students who were wanted to learn in such a world class institution.
- In the module of online web-based learning applications, there are so many opportunities revealed for those students who were doing a part time job and studying also simultaneously. These students are learning in a very good manner by using these online

teaching tools without attending the classrooms which resulted in saving of journey time and money too.

### **Negative impact**

As I have previously narrated in the above paragraph every technology has its pros and cons. So excessive use of mobiles and tablets by students for long time have also created health related issues mainly pertaining to eye site problems, headache etc. It was also noticed that some students are doing misuse of mobile and tablet devices which were supposed to be operated for educational purpose only. Students were noticed while playing mobile games, watching videos, chatting on whatsapp etc. After end of covid 19 pandemic restricted situations educational institutions are returned to normalcy and asked students to attend the colleges / schools physically. It is also noticed that students were carrying mobile phones to class rooms and doing time pass in the classrooms neglecting the teachers' advices. So, it is being the call of time now to restrict the use of mobile phones of students to educational activities only. Now the parents need to be kept keen watch on the use of Mobile phones by the students. Due to excessive use of cell phones, students are attracted towards multimedia contents, web series, adult contents which may be proven harmful in their student's life. Due to the attraction towards mobile phones, students are compromising their playground time with mobile phones which resulted into the lack of physical fitness of this young generation. Spending more time on mobile phones, tablets etc creates a mental stress which leads to instability of their mind and lack of concentration towards their study. Online teaching is highly consisting of one-way communication such as YouTube videos, interactive websites, and web meetings. Due to ease of access and routine use of online web-based teaching modules, which comes to an end, now the students seems boring to attend classrooms and sitting for hours and hours in front of teacher under their close supervisions. So, there is a challenge in front of teachers for offline mode is to teach in more interactive ways by using ICT and other platforms, so that students can attract again to the offline classroom lectures.

### **References:**

1. <https://en.wikipedia.org/wiki/Pandemic>
2. <https://en.wikipedia.org/wiki/Psychology>
3. <https://www.hindustantimes.com/cities/pune-news/following-a-six-months-strike-msrtc-services-returning-to-normalcy-in-pune-101651158549598.html>

## **ROLE OF TECHNOLOGY IN TEACHING - LEARNING**

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Some of the global challenges of education experienced by institutions are quality of instruction, massification of education, easy access, equity and equality. Technology adoption promises to mitigate these challenges in a big way by increasing access to educational resources, creation of relevant learning experiences, and augmenting student-centered learning. Technology has implications not only for academic activities, but also for administrative and student support like curriculum planning, course offering, student enrolment, teacher training, and student assessment and evaluation. Massive Open Online Courses (MOOCs) have proved to a great disrupting factor in achieving such objectives and many world governments and businesses have launched various platforms to promote access, equity and equality. Integrating social media, learning analytics, gamification, immersive learning experiences, and applications of artificial intelligence and blockchain have facilitated innovative pedagogies in education sector. This has led to increased openness in the field of open and distance learning (ODL).

**The National Education Policy-2020** (NEP-2020) has intensive and extensive imperatives for integration of technology into all levels of education. From creating a knowledge-based economy, now India is on the path of creating a skilled workforce and focuses on multiskilled employability avenues. The policy has offered a great impetus to Digital India mission by launching various initiatives to make Atmanirbhar India. The NEP-2020 expresses its vision for India to emerge as a global knowledge superpower and it treats the relationship between education and technology at all levels as bi-directional. NEP-2020 identifies the potential of new technologies such as artificial intelligence, blockchain, machine learning, smart boards, adaptive computer testing, etc in bringing transformations not only in what the students learn, but also how they learn. This is highly important to lay greater thrust on 'learning how to learn' so that the ills of rote learning can be waned off. This vision of NEP- 2020 has significant place for working towards developing the ability to learn and thus creating learning power of the learners. NEP-2020 acknowledges the deep impact of artificial intelligence for Indian education system:

*“23.8. This policy has been formulated at a time when an unquestionably disruptive technology, Artificial Intelligence (AI) has emerged. As the cost of AI-based prediction falls, AI will be able to match or outperform-and therefore be a valuable aid to – even skilled professionals such as doctors in certain predictive tasks.”*

With improved Internet coverage, enhanced mobile telephony and launching of 5G networks are right learning empowerment tools. These call for relevant digital skills to be developed like effective search techniques, fact checking, spell-check and grammar tools, mindful use of social media and learning from digital media.

There is no doubt that role of technology in education is immensely huge. Technology applications and tools allow education systems to collect, process, incorporate, store, maintain and distribute data. “Data is the new oil”, is a famous quote. Suitable data helps us in making right and timely decisions. Technology assists us in policy analysis and formulation, task planning, projects monitoring and educational management. By using appropriate business intelligence tools, we can keep track of the progress of activities and projects. The student information systems help us in managing students' data and information from the enrolment stage till graduation and beyond. There are various information systems which are very useful for academic and administrative activities, like:

- Enterprise Resource Planning - for business operations within the organisation.
- Student Information System for - managing student data.
- Accounting Information System - used for accounting procedures.
- Office Automation System - to enhance office productivity like document creation, duplication, distribution.
- Human Resource Management System - for managing personnel operations like employee data, increments, promotions etc.
- Marketing Information System - for managing marketing operations.
- Transactions Processing System - for processing business operations like ticket selling, merchandise selling etc.
- Decision Support System - for providing data to senior leadership to make timely and suitable decisions.
- Supply Chain Management - for managing and integrating manufacturers, stockists, suppliers, retailers and customers.
- Customer Relationship Management - for managing current and potential customers for sales, services, feedback etc.

These systems increase the organisational efficiency as they reduce time in making things operational. Communication becomes faster, secure and addressed to the intended audience. Organisations can make a better SWOC (strengths, weaknesses, opportunities, challenges) analysis of their processes and operations so that employee performance can be enhanced, better products (in case of education it is course content) etc.

### **Role of technology in facilitating divyangs:**

Divyang students have special needs in terms of what they will study and how they will learn. Special provisions need to be created for divyangs. Assistive technology is a big boon for them, in the form of hardware and software. Hardware like hearing aids, mobility aids, walkers and wheelchairs make up for certain disabilities, similarly software like screen readers, text-to-speech systems using Optical Character Recognition (OCR), braille screen and display magnifiers allow divyangs to listen to content on the screen or it makes the font or information on the screen in big size for easy reading. Technology giants like Microsoft, Google, Facebook etc have created tools which are being used by divyangs. Microsoft has created a service called as Windows Narrator which allows divyangs to control pitch, volume and reading speed and offers facilities to read the text which is in bold, capitalized, underlined and italicised format.

### **ICT skills and role of faculty**

As we see that technology is changing very fast and it is bringing changes in the way we live and work at an equally greater speed. This calls for a suitable skills development framework for autonomous learners and faculty have a great role in the skills training of learners. Skills for cognitive flexibility: These skills empower the learners to become better and fast learners.

- Developing foresight (enables students to identify future challenges)
- Identify Self-learning needs (for what is useful to them)
- Set self-learning goals (learning how to learn helps them)
- Effective Decision making (helps in staying rational)
- Research competence (to identify problems and issues and finding solutions)
- Ability to teach others (enhances self-learning with better clarity)
- Ideas: their creation and dissemination (fosters creativity)
- Computational Thinking (empowers for digital world operations)

### **Skills for technology adoption:**

These skills make the learners to become successful users of digital devices and technology tools.

- Using concept maps (allows having a big picture of concepts)

- Learning agility: learning, unlearning and re-learning (discarding outdated and adopting new and useful knowledge)
- Google search skills (be able to stay focus while retrieving information)
- Using AI apps for better learning: text to speech, speech to text, machine translation
- Learning from YouTube (learning a skill through demonstration)
- Using an app to get the text of an audio or video narration
- Learning from MOOCs and mobile apps

**Self-learning:**

Motivation, engagement and volition are skills in staying focused and positive, inculcating values as highlighted in NEP2020.

- Creative thinking
- Critical thinking
- Fact checking (identify fact from false)
- Effective learning techniques
- Time Management
- Avoiding/ overcoming procrastination
- Enhancing the span of attention (focus)
- Grit : determination to overcome one's barriers to learning
- Open mindedness.

**References:**

1. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf)
2. <https://edmonger.com/2021/07/28/roles-of-technology-in-education/#:~:text=The%20important%20roles%20of%20technology%20in%20education%20lead%20to%20improve,geographical%20area%2C%20wherever%20they%20go.>
3. <https://education.msu.edu/green-and-write/2015/the-role-of-technology-in-the-educational-process/>
4. <https://www.un.org/esa/socdev/egms/docs/2013/ict/innovation-technology-disability.pdf>
5. <https://tech.af/the-role-of-technology-in-the-life-of-disabled/>

## **EVALUATION OF ACADEMIC PERFORMANCE USING DEEP LEARNING**

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### **Abstract:**

Prediction of student's performance became an urgent desire in most of educational entities and institutes. The main aim of this work is to prove the possibility of training and modelling a dataset and the feasibility of creating a prediction model with credible accuracy rate. The proposed method consists of three stages quantization, simulation and prediction. Finally, we analyzed the simulated data using deep learning algorithms. The learning algorithm Convolutional Neural Network (CNN) is used for our study. The proposed method is tested on the students' performance data sets in UCI repository. The result shows that CNN achieve higher accuracy than other the traditional approach.

**Keywords:** Classification algorithms, Machine learning, Learning analytics, Visualization, Small dataset

### **Introduction:**

The most exciting tasks in the education sector in India is to predict student's performance due to a huge volume of student data. Educational has their own criteria for analyzing the performance of the students. Due to the lack of study on existing prediction techniques there is a need to find the best prediction methodology for predicting the student academic performance. The reason behind the lack in studying the suitable factors.

Teaching and assessment are inseparable in the learning process. Assessment should stand in a dynamic interaction with them. In the traditional model of teaching learning is seen in terms of a distinct body of information, specified in detail which can be transmitted to the learner. Assessment, in this context, consists of checking whether the information has been received. The behaviorist learning theory requires practice, repetition and testing of discrete basic skills prior to any teaching of higher-order thinking skills [2]. In contrast, in the constructivist and information processing models learning is seen as a process of personal knowledge construction and meaning making. Here learning is a complex and diverse process and therefore requires assessment to be more diverse, and to assess in more depth the structure and quality of students' learning and understanding.

The amount of data in educational environment maintained in electronic format has seen a dramatic increase in recent time. The data can be collected from historical and operational data

reside in the databases of educational institutes. The task to manage the large amount of data and determine the relationships among variables in the data is not easy to be done. The prediction of student's performance in an institutions is one of the most vital issues in higher education [3]. The task to develop effective predictors of academic success is a critical issue for educators. Performance predicate is dependent upon motivation, attitudes, peer influence, curriculum and by the continued real-time monitoring of student's performance using a simple rapid response system and as noted predicts correctly which student may need some attention or reinforcements in the course of their education [4]. The various such as age, gender, school related factors, environment of the home, or the support given by the parents and other family members are responsible for failure of student's performance.

**Objectives of the study:**

The objective of the research work is,

- i. To identify factors that affect student success rate then using these factors as early predictor to expected success rate and handling their weakness.
- ii. To identify and understand different student attributes used for the predicting the student performance.

One of the bigger challenges that higher education faces today is predicting the academic paths of student. Many unable to guide students in selecting career paths, deciding majors, and detecting student population who are likely to drop out because of lack of information and guidance from the learning system. To better manage and serve the student population, the institutions need better assessment, analysis, and prediction tools to analyze and predict student related issues.

There are two major motivations of this study. The first is the critical issues for educators on the prediction of success in tertiary institutions. Although, various types of studies exist in predicting student performance, the prediction accuracy was considerably low. This fact indicates that there remains a challenging task to devise the most effective in predicting student performance [5]. The second motivation of this study is related to methodology used in extracting the data on educational area and the variables employed to construct the model of student performance predictors.

**Proposed work:**

Deep learning is a branch of machine learning that attempts to model complex abstractions in data by using a multiple-level architecture most commonly of neural networks, and non-linear transformations in its algorithms. Using these techniques, the goal is to predict student academic performance by considering cognitive skills. Cognitive skills are affected by various factors such as travel time, study time, parent relationship, health factors etc., Building

and training these systems is very computationally heavy, but recent advances using GPU-based implementations have increased the success and popularity of deep learning. Two of the most common approaches to deep learning are recurrent neural networks and convolutional neural network. In our proposed method uses Convolutional neural network for predicting students performance through study factors.

### **Convolutional Neural Network**

In our proposed method of convolutional neural network for document classification process. The Convolutional Neural Networks architecture to build four types of layers, they are Convolutional layer (CONV), Rectified Linear Units (ReLU) layer, pooling layer (POOL) and finally fully connected layer (FC). The CONV receives the inputs from data set, then computes the output of neurons that are connected to local regions in the input, each computing a dot product between their weights and regions to connect an input volume.

Activation function executes on element wise in Rectified Linear Units layer. A down sampling operation with the spatial dimensions performs on pooling layer. Finally get the resulting in volume size and class size in fully connected layer. Input layer holds all dataset. All the various implementations of Convolutional Neural Networks can be described as involving the following process:

- (i). Local Connectivity
- (ii). Convolutional Layer
- (iii). ReLU Layer
- (iv). Pooling Layer
- (v). Dropout
- (vi). Fully Connected Layer

### **Local connectivity**

It is impractical to connect neurons to all neurons when dealing with high dimensional inputs like documents because in such network architectures the spatial structure of the data is not taken into account. In convolutional neural networks each neuron is connected to a small region of the input neurons and it able to exploit spatially local correlation by enforcing a local connectivity pattern between neurons of adjacent layers.

### **Convolution layer**

Convolution layers (CONV Layer) are the core of a Convolutional Neural Network. This layer consists of a set of learnable kernels which are convolved across the width and the height of the input features during the forward pass producing a 2-dimensional activation map of the kernel. As a summary, a kernel consists of a layer of connection weights with the input being the size of a small 2D patch and the output being a single unit. The input attribute such as age , family size, travel time, weekly study time, extra educational support, family educational support, quality of family relationships, free time after school, workday alcohol consumption, weekend alcohol consumption, health are given to the convolutional layer. The features are

selected from students' performance dataset from UCI repository. The values of the numeric attributes range from 0 to 5 and the binary values is "yes" or "No".

After every CONV layer, it is convention to apply a nonlinear layer (or activation layer) immediately afterward. The purpose of this layer is to introduce nonlinearity to a system that essentially has simply been computing linear operations throughout the CONV. In the past, nonlinear functions like tan h and sigmoid were used, but ReLU layers work far better because the network is able to train is high and faster (because of the computational efficiency) without making a significant difference to the accuracy.

### **Pooling layer**

After some ReLU layers, programmers could value more highly to apply a pooling layer. It is also mentioned to as a down sampling layer. In this class, there are also several layer options, with max pooling being the most popular. This basically takes a filter (normally of size 2X2) and a stride of the same length, it represent the shown in Fig 5.2. It then applies it to the input volume and outputs the maximum number in every sub region that the filter convolves around. Other choices for pooling layers are average pooling and L2-norm pooling. The intuitive reasoning behind this layer and a selected feature is within the original input volume, its exact location is not as important as its relative location to the opposite options.

This layer drastically reduces the spatial dimension (the length and the width change but not the depth) of the input volume, this serves two main purposes. The first is that the amount of parameters or weights is reduced by 75 percentage, thus lessening the computation cost. The second is that it will control over fitting. This term refers to when a model is so tuned to the training examples it is not able to generalize well for the validation and test sets. A symptom of over fitting is having a model that gets 80 percentage on the training set and 20 percentage on the test data.

### **Dropout layers**

The dropout layer is a very specific function in neural networks, this is used to the problem of over fitting, where after training, the weights of the network are so tuned to the training examples they are given that the network doesn't perform well when given new examples. The idea of dropout is simplistic in nature. This layer "drops out" a random set of activations therein layer by setting them to zero. It makes positive that the network isn't obtaining too "fitted" to the coaching information and therefore helps alleviate the over fitting downside. An important note is that this layer is just used throughout coaching, and not throughout check time.

### Fully connected layer

The fully connected layer can the high-level features, is attaching a fully connected layer to the end of the network. This layer basically takes an input volume and outputs an N dimensional vector where N is the number of classes that the program has to choose from. Each range during this N dimensional vector represents the probability of a particular category. The method this absolutely connected layer works is that it's at the output of the previous layer and determines that options most correlate to a selected category. Basically, a totally connected layer appearance at what high level options most powerfully correlate to a selected category and has particular weights, and the product between the weights and the previous layer and get the correct probabilities for the different classes, it show in fig 1. Convolutional networks that can be expressed as groups of specialized neurons in two operations: convolution and pooling.

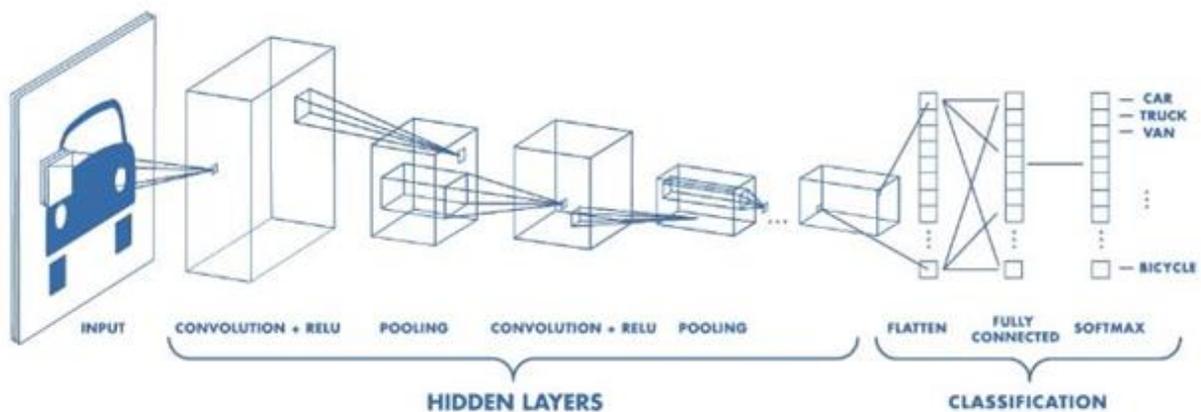


Figure 1: Convolutional networks

### Experimental results:

#### Performance evaluation

A confusion matrix was generated after running the current data set on Single Layer Perceptron using WEKA tool [11]. All measures can be calculated based on four values, namely True Positive (TP, a number of correctly classified that an instances positive), False Positive (FP, a number of incorrectly classified that an instance is positive), False Negative (FN, anumber of incorrectly classified that an instance is negative) and True Negative (TN, a number of correctly classified that an instance is negative).

For training and testing the CNN, 10-fold cross validation method is used to subset the data. The data is randomly divided into 10 parts of which one part is used for testing while the remaining parts are used as the training data. The CNN algorithm is applied for training the neural network. These values are defined in Table1.

**Table 1: Confusion Matrix**

		Observed	
		True	False
Predicted	True	True Positive (TP)	False Positive
	False	False Negative (FN)	True Negative (TN)

From the values of Table1 sensitivity, specificity and accuracy are calculated.

$$\text{Sensitivity} = T / (T + FN) \dots\dots\dots(1)$$

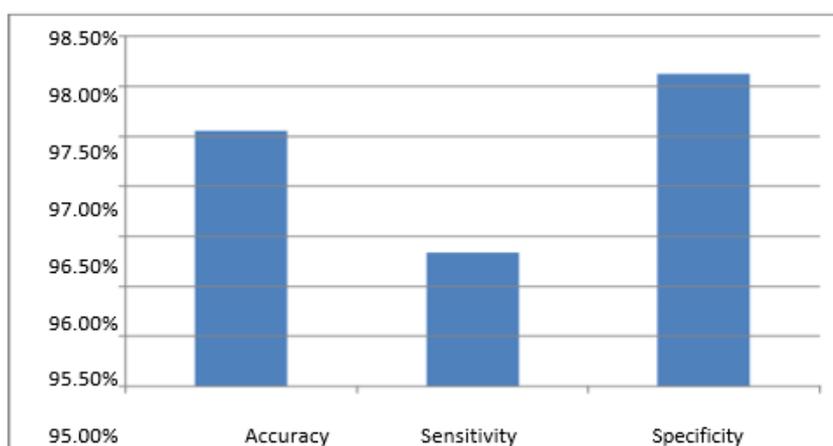
$$\text{Specificity} = T / (T + FP) \dots\dots\dots(2)$$

Correctly classified instances are known as sensitivity and incorrectly classified instances are known as specificity and can be calculated using Eq. 1 and Eq. 2 described above.

Accuracy is defined as the overall success rate of the classifier and computed by Eq. 3

$$\text{Accuracy} = (T + TN) / (T+ FP + FN + TN) \dots\dots(3)$$

Performance evaluation of CNN is represented diagrammatically in Fig.2



**Figure 2: Performance Evaluation**

**Conclusion and future work:**

Academic achievement of a student is of the highest priority for any institute or university across the globe. Using various methods to predict the performance of the student accurately would be highly required. Predicting the performance would also enable the institutions to focus more on students having more probability of performing lower in order to improve their performance. In order to improve the performance of the model i.e. the accuracy of prediction, Convolutional Neural Network Method was used. The technique of CNN modeling has many favorable features such as efficiency, generalization, and simplicity. These features make CNN an attractive choice for more accurate modeling of complex systems and this method achieved 97.55% accuracy. Future, different machine leaning technique can be applied to find more accuracy.

**References:**

1. Ahamed, A. T. M. S., Mahmood, N. T., & Rahman, R. M. (2017). An intelligent system to predict academic performance based on different factors during adolescence. *Journal of Information and Telecommunication*, 1(2), 155–175. <https://doi.org/10.1080/24751839.2017.1323488>
2. Altaher, A., & Barukab, O. (2017). Prediction of Student's Academic Performance Based on Adaptive Neuro-Fuzzy Inference. *IJCSNS International Journal of Computer Science and Network Security*, 17(1), 165–169. Retrieved from [http://paper.ijcsns.org/07\\_book/201701/20170125.pdf](http://paper.ijcsns.org/07_book/201701/20170125.pdf)
3. Amrieh, E. A., Hamtini, T., & Aljarah, I. (2016). Mining Educational Data to Predict Student's academic Performance using Ensemble Methods. *International Journal of Database Theory and Application*, 9(8), 119–136. <https://doi.org/10.14257/ijdta.2016.9.8.13>
4. Breiman, L. (2001). Random Forests. *Machine Learning*, 45(1), 5–32. <https://doi.org/10.1023/A:1010933404324>
5. Chen, J. F., Hsieh, H. N., & Do, Q. H. (2014). Predicting student academic performance: A comparison of two meta-heuristic algorithms inspired by cuckoo birds for training neural networks. *Algorithms*, 7(4), 538–553. <https://doi.org/10.3390/a7040538>
6. Ahmad, F., N.H. Ismail, and A. Abdulaziz, The Prediction of Students' Academic Performance Using Classification Data Mining Techniques. *Applied Mathematical Sciences*, 2015.9(129): p. 12.
7. Sumitha, R. and E.S. Vinothkumar, Prediction of Students Outcome Using Data Mining Techniques. *International Journal of Scientific Engineering and Applied Science (IJSEAS)*, 2016.2(6): p. 8.
8. Khasanah, A.U. and Harwati, A Comparative Study to Predict Student's Performance Using Educational Data Mining Techniques. *IOP Conf. Series: Materials Science and Engineering*, 2017. 215(012036): p. 7.
9. Nichat, A.A. and D.A.B. Raut, Analysis of Student Performance Using Data Mining Technique. *International Journal of Innovative Research in Computer and Communication Engineering*, 2017.2007(An ISO 3297): p. 5.
10. Almarabeh, H., Analysis of Students' Performance by Using Different Data Mining Classifiers. *I.J. Modern Education and Computer Science*, 2017.9(8): p. 9-15.
11. Weka 3: Data Mining Software in Java, Machine Learning Group at the University of Waikato, Official Web: <http://www.cs.waikato.ac.nz/ml/weka/index.html>, accessed on 26th March 2016

## **AN APPLICATION OF ICT IN DIFFERENT LIBRARY SERVICES: A STUDY OF CHETANA'S SHRI. MANSUKHLAL CHHAGANLAL LIBRARY**

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### **Abstract:**

This paper is an attempt to explore the study an Application of Information and Communication Technology in Different Activates in Chetana's Shri Mansukhlal Chhaganlal Library. Today the speedy developed in ICT and used in the different library services. The ICT has carried a lot of diversities of changes of traditional concept in libraries to digital or virtual libraries, books to electronic documents, catalogue card to database, corresponding mail to email and so on. There are two basic components of ICT- availability of electronic resources and trained library staff. The ICT has changed the total impression of traditional libraries. In Chetana's college library ICT started used in year 1999, and now a day all most each and every services are based on Information communication technology.

**Keywords:** ICT, Academic Library, Library Services, Chetana's Shri Mansukhlal Chhaganlal Library

### **Introduction:**

A library plays an important role in the academic institution providing access to the best information resources and services and motivates and inspired academic research. The achievement of any educational institution depends upon its library, as library services are elementary and crucial, which effect the whole educational system. National Knowledge Commission report mentions that libraries play an important role in the dissemination and communication of knowledge. They are an extremely important element of the foundation of knowledge economy. Higher educational libraries are experiencing a massive change in the way they function.

### **Definition of ICT**

Information and Communication Technology (ICT) may be defined as the coming of electronics, computing, and telecommunications. It has released a tidal wave of technological innovation in the collecting, storing, processing, transmission and presentation of information that has not only transformed the information technology sector itself into a highly energetic and

diversifying field of activity-creating new markets and generating new investment, income and job but also provided other sectors with expeditious and well organised mechanisms for responding to shifts in demand patterns and change through more efficient production processes and new and improved products and services.

According to the Encyclopaedia of Computer Science, “Information Communication Technology (ICT) is an imprecise term frequently applied to broad areas of activities and technologies associated with the use of computer and communications”.

According to the UNESCO “ICT is a scientific, technological and engineering discipline and management techniques used in handling information and application and association with social, economic and cultural matters”.

American Library Association (1983) defined information communication technology (ICT) as the application of computers and other technologies to the acquisition, organization, storage, retrieval, and dissemination of information. The computers are used to process and store data, while telecommunication technology provides information communication tools, which make it possible for users to access databases and link them with other computer networks at different locations.

### **Chetana’s Shri Mansukhlal Chhaganlal Library: The art of ICT facilities**

College Library has 52 years of successful standing to its credit since 1970. Over the years an honest attempt has been made to develop our Library for the benefit of our students. The library is situated on the ground floor of the college building. At present it has a rich collection of 113560 books, 539 bound volumes and 539 CDs/Video. In this collection, there are good numbers of reference sources and among them are a vast number of Dictionaries, Encyclopaedia and books on almost all academic subjects. Apart from the above-mentioned collection, the library has a good collection of books on competitive exams, which forms a base for the students aspiring for examination such as civil services (UPSC, MPSC, NET/SET, CAT) etc. Apart from regular print collection we have CDs. The collection is heavily used not only by our own students and faculty but by the outside visitor and others who walk in to use our library in large numbers.

### **Use of ICT tools in library to provide maximum access to the library collection**

Day by day the library users are increasing to use of the ICT tools, such as Computer, Internet, Networking, Mobile Phone and much more things as a result they required the latest information. Adopting ICT technique in library can enhance user satisfaction and maximum benefits to library user and staff. Following the ICT benefits are;

- Furnish fast and easy access to information

- Furnish remote access to users
- Furnish 24×7 access to users
- Unlimited information from different sources
- Furnish increased flexibility
- Collect and storage data from different sources.

**ICT Tools and Its application in Chetana’s Mansukhlal Chhaganlal Library**

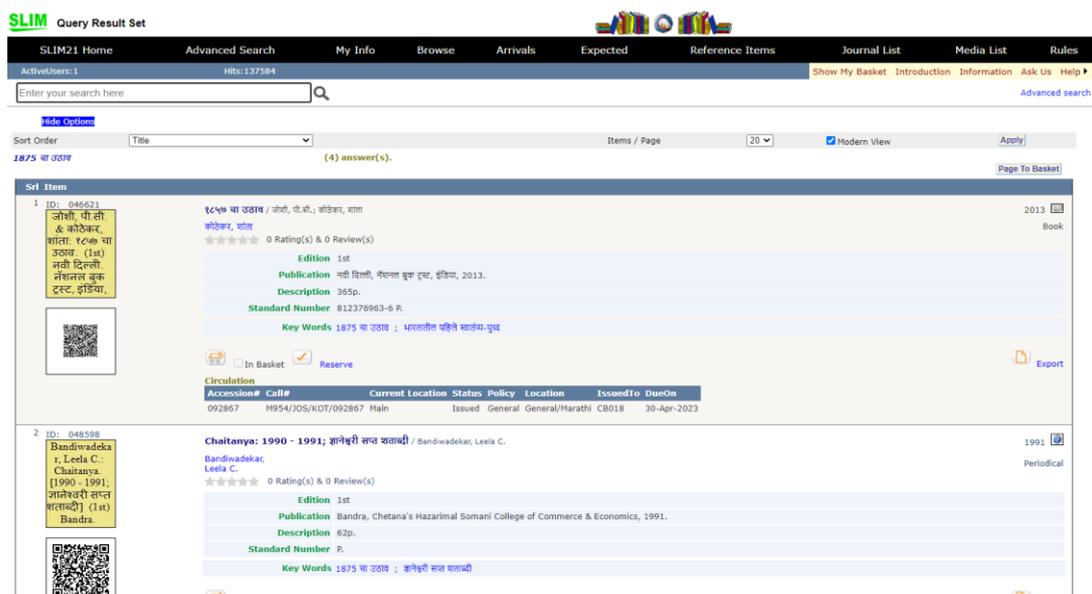
<b>Sr. No.</b>	<b>ICT components</b>	<b>Area of Applications in Libraries</b>	<b>Available</b>
01	Computers	1. Computer use for Library Automation & function day to day activities. 2. Maintaining different databases. 3. Office works in library; like preparing office orders, supply orders, email, power point presentation in meeting and other works	Computers 16
02	Printers	1. To take print out of required document for our readers. 2. To take prints official letters and information required by our readers available on Internet.	03
03	Scanner	1. To scan the required document and send to the users through e-mail and create Institutional Repository.	02
04	Library Management Software (SLIM21)	1. House Keeping operations; like acquisition, circulation, cataloguing, Serial Control, stock management, Inter library loan services etc. 2. Information retrieval through OPAC or Web OPAC.	SLIIM
05	Multimedia	1. Retrieval of information on Multimedia CD/DVD like Encyclopaedia, Dictionary, Yearbooks. 2. College function CD, Committee visited DVD.	560
06	Xerox Machines	Provide photocopy of required document to library users.	01
07	Telephone	To order textbooks, magazine & journals. To contact to library professionals and Information centre in order to find user requirement.	02
08	Fax Machine	To send the copy of official or any letter to person having fax machine.	01

09	LAN & Networks	Networks facilities of the library to make available the required document, information from other places. Through LAN simultaneous data entry in the database, housekeeping works and other official works.	16 nodes connected with LAN
10	Consortia	To make available the required information to our users at minimum cost by making member of the consortium. Example: N-List Consortia.	N-list membership
11	CD ROMs and Online database	With the help of ICT tools user can access library CD/DVD and Institutional Repository	Library CD/DVD Archive.
12	Internet	To use to find out important details about the required information using various searching technology.	
13	E-mail	<ol style="list-style-type: none"> <li>1. Chetana Library has sent New Arrivals list to users.</li> <li>2. To made Order of library items through e-mail.</li> <li>3. To keep contact to other library professional within system as well as out of the system.</li> <li>4. Current contents service can be provided electronically by applying it in the library.</li> </ol>	
14	Mobile Technology	<ol style="list-style-type: none"> <li>1. Solve the query or send the instant information with the help of Mobile Technology. Exp.Whatsapp.</li> <li>2. Provision of information about new arrivals on mobile.</li> </ol>	
15	Barcode Technology	Barcode is one of the ICT application of the Library. Our Library having 5 barcoded scanners. It help to give fast service to users.	5
16	Trained Professionals	Our Library having 6 to 7 ICT professional staff to fulfilled the user demand.	

College library is providing various ICT-based services to their users, including the following:

**1. OPAC and Web based Online Public Access Catalogues (Web-OPAC):**

The ability of libraries to provide access to their catalogues worldwide is made feasible by the internet and web-based technology. When OPAC is accessible online, it facilitates library patrons' access to information from any location in the world. The OPACs from various library systems are also simpler for people to understand and use. With a web-based OPAC, you can link to other information sources including full-text documents, tables of contents, authors, titles, publishers, publication years, etc.



Chetana Library having 15 computer nodes of the library. Out of which 3 nodes are kept for students. The OPAC is also linked to the library portal [www.chetanalibrary.webs.com](http://www.chetanalibrary.webs.com) in through the link address <http://192.168.0.100/w27/>. This link provides students and teachers access to library resources 24 X 7.

## 2. Digital Library Services:

A range of digital information sources are offered by digital libraries. It minimises physical space requirements, allows for distant information access, and gives users access to distributed information resources. Its capacity to manage content in multiple languages is a benefit. The creation of digital libraries—which have some or all of their contents available electronically and make their services electronically accessible to users over the Internet so they can access them from anywhere—is being done by librarians using ICTs.

Chetana library scanned old rare book and make it available in digitize form. Library provides and extends all possible services to the users. The readers are made comfortable; the library staff takes care of the users and extends all possible assistance to users. The Librarian, Asst. Librarian and the staff are always available to solve any difficulty while searching the data base. Remote access E-resources are handled by the librarian. Each user is given a login ID and password.



### **3. Electronic Document Delivery Services:**

Chetana library is implementing ICT-based Inter-Library Lending (ILL) using networks to deliver copies of journal articles and other documents in digital format like PDF (Portable Document Format) to the users' desktops. It helps the users to access information which is not available in their respective libraries. It is one of the most useful services for users, specifically research scholars of remote areas.

Chetana Library furnish E-books, Question papers, Study notes & other electronic materials through email, hyperlink, QR code etc. to library users.

### **4. Electronic Resource Management package for e-journals:**

The library has been subscribing to the e-journals directly through the publishers like INFLIBNET (N-List). They provide the college access through their official websites <http://nlist.inflibnet.ac.in> via static IP Address. Library has given all users N-List User ID & Password, so they can access E-Journals & E-Books through their login.

### **5. Institutional Repository:**

A college's institutional repository (IR) is a package of services it provides to its community members for the administration and sharing of digital resources between the institution and its members. It is essentially an organisation dedicated to the guardianship of these digital artefacts, including organisation, access, and long-term preservation when suitable (Lynch, 2003). It offers citation tools, simple material access, and permanent content storage. The objectives of an institutional repository are:

- To make institutional documents, such as research reports, articles, technical reports, annual reports, seminar papers, etc., freely accessible.
- To provide the chance for long-term preservation and storage of digital assets. to assist in the administration of (grey) material, such as research papers, technical reports, etc., that is frequently quickly forgotten.

Chetana Mansukhla Chhaganlal library IR provide previous year College Magazines, Question Papers, Old Report, E-books etc.

### **6. Federated searching tools to search articles in multiple databases**

For searching in-house catalogue, the college library has WEBOPAC as its search tool which is available online. the college library subscribes N-LIST databases, which having federated searching tools.

### **7. Library Portal:**

A portal is a single user interface that allows users to access many different electronic resources both inside and outside of the library. With the use of portal technology, librarians may now adopt a more proactive, user-cantered, and service-oriented approach to the library. A

library's website is a fantastic platform for publicising its activities and a way for people to use its resources and services.

Library portal is the website, which helps to get information by providing access to all relevant e-resources at one point. The college library is having a dedicated website. The URL of the site <http://www.chetanalibrary.webs.com> and it is also linked with college website.

#### **8. Library automation:**

Library is fully automated with the SLIM21 Library Management Software. It having five modules acquisition, cataloguing, Circulation, Serials and OPAC modules. The entire active collection of the library is fully bar-coded and the transaction of these books and other materials are done using barcode scanner. All Library Members having bar-coded ID card. It's all possible with the help of ICT tools.

#### **9. Current Awareness Service:**

An essential tool for keeping users current in their interests is current awareness services. A bulletin with bibliographic records of articles chosen from the most recent issues of journals and other materials, typically categorised by subjects, can serve as a current awareness service. It can also be as basic as a copy of the table of contents. Libraries now create current awareness bulletins using a predetermined search strategy, running on the database either on CD-ROM or online frequently, and receiving the desired output. The output may also be kept on a local system, distributed offline as well as online (internet, intranet), subject to copyright restrictions (print, CD-ROM, email).

#### **10. Reading list / Bibliography compilation:**

Reading list and Bibliography services is provided on demand basis related to their project work and research work.

#### **11. In-house/remote access to e-resources:**

The present server is connected to 15 computers of the library through LAN local network. These computers work as nodes from where readers can access library catalogue. Also the said server is connected to library portal [www.chetanalibrary.webs.com](http://www.chetanalibrary.webs.com) through a static IP which enables students and teachers to brows WEBOPAC of the college library and access N-List E-resources from anywhere subject to internet connection.

#### **12. User Orientation and awareness:**

The user orientation is conducted every year for new comers in the college. The librarian gives power point presentation to the students about the library and its facilities. Also they are made aware of the rules and regulations of the library.

#### **13. INFLIBNET/IUC facilities:**

It is one of the main facilities of the college library. The College has subscribed to the NLIST of INFLIBNET. Every teacher and researcher is given a personal user ID with password

so that they can access the NLIST. INFLIBNET is set out to be a major player in promoting scholarly communication among academicians and researchers in India. As an authorized user from colleges registered under NLIST programme, one gets access to 158521+ e-books and 6328+ e-journals.

#### **14. Online Chat Services:**

Online chat may refer to any kind of communication over the Internet, which offers an instantaneous transmission of text-based messages from sender to receiver. In Library, it can be used for online reference service and real-time consulting service. Online chat may address as well as point-to-point communications as well as multicast communications from one sender to many receivers. Example: Library created WhatsApp group to discuss library related issues.

#### **15. Electronic Books Service:**

The elements that are considered as importing for the use of E-books in an academic library are the Content, Software and Hardware Standards, Protocols, Digital Rights Management, Access, Archiving, privacy, market, pricing and features. Electronic books (e-Books) are one way to enhance the digital library with global 24X7 access to authoritative information, and they enable users to quickly retrieve and access specific research material easily, quickly, and effectively. Chetana library created Virtual Book Shelf, through this shelf student can access more number of the e-books in pdf form. Our library creates event base virtual book shelf. Example; Dr. APJ Abdul Kalam birthday celebrate as Reading inspiration day, library make the selected Dr. APJ Abdul Kalam books virtual book shelf and share it to all library users.

#### **16. Electronic Journals:**

Service Electronic journal may be defined broadly as any journal, magazine, newsletter or type of electronic serial publication which is available over the internet and can be accessed using different technologies such as the World Wide Web, Gopher, FTP, telnet, e-mail or listserv. Many publishers who offer subscriptions to print journals, sometimes also offer a subscription to the electronic version of the journal free of charge. Some of the publishers who are providing e-journals include Emerald, Elsevier, Sage, Springer, EBSCO, J-Gate, John Wiley, etc.

The Library has a membership of **UGC N-LIST** through which our users can access more than 6000 E-journals and 31,64,309 E-books.

#### **17. Electronic Mail (E-mail) Service:**

Emails can be sent and received using this method as well. This is frequently and widely used in conjunction with internet resources. With the improved network, email is particularly helpful for transmitting and receiving messages from and to remote places. Additionally, it is

helpful in many facets of the library setting. Therefore, it may be said that email may be a key component of services for disseminating information.

E-mail can be used as a tool to communicate with the users, to serve them by giving EDDS (Electronic Document Delivery Service). It is a web-based excellent media and most probably the most popular media. And we the library professionals can use this web medium for various purposes especially for delivering some web-based services. It helps to contact the publisher, vendor, users etc.

### **18. Internet Service:**

As a source of serious subjects of the universe of knowledge, has become information superhighway and opened the floodgates for scholarly communication. The Internet is a truncated version of inter-networking, which refers to interconnecting two or more computer networks. The Internet is described as a worldwide network of computer and people. It is an important tool for global online services. The emergence of Internet offers very high bandwidth, which will widen the scope for information processing and dissemination as never before.

Chetana library has Sixteen nodes for Internet browsing. These computers are provided with CD and PEN drives and also a laser printer is provided in sharing connectivity. Our readers can make a soft as well as hard copy of the information they want.

### **19. Reprographic Service:**

These technologies are still widely used technology in libraries globally. Most of the research libraries have a reprographic machine and provide photocopies of any document on demand.

Chetana library having one Xerox machine, which is use for educational purposes and provide service for all the users of library.

### **20. Document Scanning Services:**

Scanner is important equipment in the modernization of library. It is useful for scanning text, image and content pages of books and providing great help for establishing a digital and virtual library. Our library can use scanner for scanner Question papers, Rare books, old report etc. and store in proper manner.

### **21. Library Network Service:**

The important function of the network is to interconnect computers and other communication devices so that data can be transferred from one location to another instantly. Networks allow many users to share a common pathway and communicate with each other. The networks include the local area network (LAN) in library housekeeping and resource sharing and wide area network (WAN) that covers wide geographic area such as a country or state, that covers limited geographic area such as campus, or building.

## **22. Barcode and QR Code Service.**

Barcode is one of the ICT application of the Library. Chetana library all books are barcoded and borrower membership card having barcoded Id card. We having 6 barcode scanner for scanning barcode. It helps to give fast service to users. We also have QR code service, library all books having QR code available on OPAC & Web OPAC, So user can scan the QR code in their device after that it will get details information of the book on their device.

### **References:**

1. Adeleke, A. A. & Olorunsola, R. (2010), ICT and Library operations: More on the online cataloguing and classification tools and techniques in Nigerian libraries. *The Electronic Library*, 28(6), 453-462.
2. Bhavsar Sandeep & Patil Sambhaji G. ed. (2019). *Innovative Library Services in ICT Era*. Mumbai: Shroff Publishers and Distributors PVT. LTD.
3. Cholin, V. S. (2005), Study of application of information technology for effective access to resources in Indian University Libraries. *The International Information and Library Review*, 37(3), 189-197.
4. Gaddagimath, R. B. & Jange Suresh, & Sherikar Amruth. (2008); ICT Facilities and Services at Virtual Learning resource Centre in Gulbarga University Library, *International Conference Proceeding on Knowledge for All, TISS & ILA*, pp128-132
5. Ghatkar, D. T. & Sulsule S. R. (2012) ICT its Impact on Libraries, Akola : *Proceeding of National Conference on Academic Libraries as Knowledge Hub in the Millennium*, pp 34-35
6. Kumar, Bhoi Narendra. (2017) Use of Information Communication Technology and Library Operation: An Overview, *Proceedings International Conference on Future Libraries: From promises to Practices*
7. Matoli, Rajeshwari S. (2019), Impact of ICT on College Libraries and Library Services in Changing Environment. *Journal of Advances in Library and Information Science*. Vol. 8 No.2. pp. 71-76.
8. Mahanta, Prafulla Kumar & Das, Dhruvajit. (2019). Application of ICT in the College Libraries of Assam, *International Journal on Emerging Technologies* Vol. 10 No.2 pp 317-322.
9. Patel, R. P. (2018). ICT based practice in library. *Indian Journal of Library Science and Information Technology*; 3(2), 101-105.
10. Singh, Mahendra Pratap (2004), *Use of Information Technology in Library and Information Science*; Delhi: Abhijeet Publications.

## **ROLE OF ACADEMIC LIBRARIES IN RESEARCH SUPPORT SERVICES: AN OVERVIEW**

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### **Abstract:**

Academic libraries have been changed greatly in recent years because of the development and application of internet and web technologies. In this changed scenario, more academic libraries in the world over are exploring and offering new web-based library services such as web portal, institutional Repositories to satisfy the needs of library users. Papers aims to understand current status of 'Research support Services' in Academic Libraries and this study may help to improve the existing academic library services by providing rich and relevant information to the library users,

**Keywords:** Research, Support Services, Institutional Repositories

### **Introduction:**

The academic library profession is being redefined by shifting research and scholarly landscape, the transformation in higher education and advances in technology have brought about a major change in the role of librarian in research. Libraries are now playing a relatively larger role in educating researchers in handling their research queries and fulfilling their objectives.

Libraries of this generation are trying to provide high quality scholarly collections and resources to meet the requirements of researchers. Libraries are paving ways to provide information to users as well providing an environment that encourages development of the researchers capabilities and skills. Research support is often identified as a central pillar in the mission parameters typically identified by Academic Libraries.

Libraries are now playing relatively larger role in educating researchers in handling their research queries and fulfilling their objectives. Libraries of this generation are trying to provide high quality scholarly collections and resources to meet the requirements of researches. Libraries are paving ways to provide information to users, lending and online reading list services and thus acting as a center pillar. Libraries usually prioritize in providing an environment that encourages development of research capabilities and skills.

### **Current scenario**

New and innovative library services, in areas such as bibliometric analysis, research data management and development of data repositories are emerging in response to changes in

tertiary education funding and policies, such as national processes for the assessment of research quality. Traditionally library support for research has often been restricted to the provision of library collections and support in finding and managing information, in support of the 'Idea development and conducting the research lifecycle. Many academic libraries have management software. However, information literacy sessions aimed at academic and research can often poorly attend and there is a need to ensure that activity in this area is geared towards researchers needs and pitched at the right level. Helping researchers to prepare research grant applications, for examples, where there may need to be a requirement to describe how research outputs will be stored (Rodwell and Fairburn, 2008)

Changing role for libraries in research support for research is at a crossroads, with librarians having identified and in, in some instances, put in place a more active service role with an expanded set of services. Potential services at different stages in the research lifecycle include idea development seeking funding, carrying out the research, systematic literature reviews, Dissemination and Publication.

This study is divided into three parts:

1. Research Support Services (RSS)
2. Changing Role of Academic Libraries in Research Support Services (RSS)
3. Support Facilities in ICT Environment

#### **1. Research Support Services (RSS)**

Traditional Libraries give emphasis on storage and preservation of physical items, particularly books and periodicals of physical items, particularly books and periodicals those in which librarians were a custodian of the library. Information is physically assembled in one place. Users must travel to the library to learn what is there and make use of it. Library and information services have been changed greatly in recent years because of the development and application of internet and web technologies. The demands and expectations of users have also changed considerably. In this changed scenario, more academic libraries in the world over are exploring and offering new web-based library services such as web portal, web OPAC, Ask a librarian etc. to satisfy the need of library users. According to this study various types of library services are mentioned below.

##### **I) Institutional Repository**

Institutional Repositories are digital collections of an institution's research. The material in these collections will be in many forms, including published articles, preprints, book chapters, theses or even audio-visual materials.

“An Institutional Repository is an organization based set of services which the organization offers to the members of its community for the management and dissemination of digital materials created by the institution and its community

members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long term preservation, where appropriate, as well as organization and access or distribution”

## **II) Library Web Portal**

A library portal is a single access point combining the library catalogues, subscribed databases, electronic journals etc. Library portal meets individual needs of the users and the portal is now the standard interface to generate library resources and services through a single access and management points for users. Librarians are becoming increasingly aware that multiplication of electronic resources is a problem for end users. Users find it difficult to have the most appropriate database or resource to search for their information need. Library portal reduces the barrier of users to remember various long-on. The portal is in short, guide to users. It is gateway and centralised platform to provide e-resources for Students, Teachers and Research Scholars.

## **III) Databases**

Online databases are electronic indexes used primarily to find academic journal articles, newspaper articles, conference proceedings, and other periodical materials. Currently many academic libraries are providing this service for the teaching, learning and research purpose.

## **IV) Publishing**

The role of academic libraries as publishers is also growing in South Africa. As pointed out by Raju, Smith, Gibson and Talliard (2012), Stellenbosch University library was the first library on the African continent to offer the gold OA publishing service. Some libraries are giving advice on where to publish the research and how to get ISBN, ISSN and eISSN.

## **V) Literature Search**

Literature search can be equated to “long range reference service” where the search has to be more exhaustive, both in depth and extent. The range and complexity of reference sources to be consulted are wider and generally, more than one source has to be consulted are wider and generally, more than one source has to be consulted to adequately carry out a literature search. Besides bibliographies, other secondary sources like abstracting and indexing services, reviewing periodicals are the main sources of information. The demand for this service has been growing with the growth of scientific and technical literature which has assumed frightening proportions in the post-second -Word War era.

## **VI) Indexing**

According to the British Indexing Standard (3700:1988), an index is a systematic arrangement of entries designed to enable users locate information in a document. A document in this instance can be book, journal, audiotape, computer film and so on. However, a clear distinction between indexes to a book and indexes to a volume of journal is that while indexes to a book is an alphabetical list with page reference to a subject, persons and places dealt with within a particular book, indexes to journals or other periodicals indicate what articles have been written on subject, commentaries on a case, statutes, official reports or any other document.

## **VII) Referral and Reference Service**

The goals of Library's reference service are to connect library users with the best available library and information resources for their research needs, and to achieve the connection between the library and users in most effective manner. According to its nature, reference service may be categorized as two different types.

- a) Ready reference service.
- b) Long-range reference service.
- c) Long-range reference service.

Referral service is a type of reference service in which an information seeker is directed to an agency or expert outside the library wherefrom the information may be obtained.

## **VIII) CAS and SDI Service**

According to Edem and Unegbu, it is the responsibility of librarian to provide CAS and SDI services for the benefit of all users

- a) It helps to keep users better informed.
- b) It provides access to needed documents.
- c) It supports, Academic, Professionals and management skills
- d) It provides information in a preferred format.

## **2. Changing Role of Academic Libraries in RSS**

Many Academic libraries have started to provide following services in research support for their users

### **I) Research Data Management (RDM)**

Research data management Research -intensive universities are ensuring that their infrastructure, tools and support enables researchers to maximize the value of their research data. Meanwhile academic libraries have become the main driving force of RDM

**II) Research Impact Management (RIM)**

Providing researchers with tools, methods, guidance and training on measuring research impact by academic libraries can help researchers improve their scientific researchers and expand their academic impact.

**III) Scholarly publishing**

Scholarly publishing by academic libraries, as a new form of scholarly communication services, has steadily increased in the past few years (ACRL, 2015). It involves the organized production, dissemination, display and preservation of academic results in the form of books, periodicals, research data and institutional repositories. Its services covered all stages of the scholarly communication process, as follows.

- Authoring, including the provision of publishing strategies, copyright advice and publication tools.
- Production, including copyediting designing and printing
- Dissemination, including distribution, marketing and discoverability
- Preservation, including citabilit, archiving and metrics

**IV) Research Consultation**

Academic reference librarians contribute to the knowledge of research sources and strategies tailored with personal touch. Research who encounter problems in the course of academic activities, such as research grant application, thesis writing, scientific research methods and data management, can obtain advice by consulting librarians.

**V) Research tools recommendation**

With the development of big data, researchers of not only natural sciences but also social sciences and humanities are faced with the needs of data analysis, management and presentation. According to the survey, half of the selected libraries developed research tools recommendation services.

**VI) Bibliometrics and citation Services**

Bibliometrics is statistical analysis of written, Publications, such as books or articles. Bibliometrics methods are frequently used in the field of library and information science, including scientometrics. For instance, bibliometrics are used to provide quantitative analysis of academic literature. Citation analysis is the examination of the frequency, patterns and graphs of citations in articles and books. It uses citations in scholarly works to establish links to other works or other researchers.

## **VII) Research Commons**

The Research commons brings together people, technology and information resources to enhance research activity. Individual workspaces alternate with discussion areas and a comfortable area is provided for relaxation and networking. Professional and peer assistance is at hand to provide researcher-orientated services in unity with other support services. Utilities include, video conferencing, laptops, iPads, digital recorder, earphones, lockers, reference materials, leisure reading and a coffee dispenser.

### **3. Support Facilities in ICT environment**

Academic Libraries have initiated to provide following facilities for researchers in digital age or ICT environment.

- I) Photocopying Service:** Facilities are provided at many libraries.
- II) Digital Library:** Connectivity and electronic access to library resources is a significant priority. Numerous desktop computers are available in many libraries.
- III) Internet Facility:** Free access is provided to all subscription resources and / or to resources on the library portal.
- IV) Wireless Internet access:** wireless connection is given in many Academic libraries for the researchers.

### **Conclusion:**

This study found some ‘Research Support Services’ which are useful to improve the existing academic library services by providing rich and relevant information to the library users. This study can provide direction to academic libraries for better implement research support services. As well as Academic libraries have to change their role in the changing research environment by providing valuable services to its users.

### **References:**

1. Vaughan, K. T. (2013). Library Services throughout the research lifecycle. *Journal of the Medical Library Association*, 101(4), pp.310-314
2. Edem, N. (2013). Use of information Technology by Librarian in some selected Nigerian University Libraries. *Gateway Library Journals*, 11, (2),pp. 25-37
3. Jeremy Atkinson (2012). Academic Libraries and quality: An Analysis and Evaluation Framework. *New Review of Academic Librarianship* 23(1).
4. Clifford Lynch (2003). Institutional Repositories: Essential Infrastructure for Scholarship in the Digital Age. *Portal Libraries and the Academy*, 3(2)pp. 327-336

## **REFERENCE SOURCES IN THE LIBRARY**

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### **Abstract:**

Reference books are different from other books due to two characteristics, the nature of the information and the structure of the information. It contains updated and concise information. Reference sources are documents that supply specific information needed by library users or researchers. Every book in the library can be referred to from time to time but the reference sources are not like monographs because they cannot be read through, rather they are referred to for specific pieces of facts or information.

**Keywords:** Reference sources, Reference books, Information sources, Academic Libraries

### **Introduction:**

Libraries serve the community in various ways. They provide education, recreation, inspiration, and last but not the least, reference and information. Many people come to the library essentially to see information and enlightenment on a particular problem and some libraries have established elaborate Reference sections to meet the demand. In fact, Reference service is one of the basic functions of libraries today.

While almost any book in the library can be used for information and reference, special types of publications called Reference Books are published which make the task of locating information quick and easy.

### **Reference Sources/ Books:**

Some of the books in the library are only intended for quick and easy access to certain types of information. This book is called a Reference book. These books are not meant to be read in their entirety. Moreover, they are used only to obtain certain types of information or references. They are usually in alphabetical order. And at the end, instructions are also given. These kinds it easy to find the information you need.

Reference books are generally used to find any kind of information or to get references. In which the book is structured in a specific way. They are used only to find specific references or information. Such tools are called reference books.

Reference books are of many kinds depending upon the information they contain and the way present and describe it. The more well-known Reference books are Indexes and Bibliographies, Encyclopaedia, Dictionaries, Yearbooks, Almanacs, Who's Who Directories,

Gazetteers, Maps, and Atlases. Even standard publications on a subject field can be used as reference books. Apart from such types of books, Periodicals, Pamphlets, Charts, Diagrams, Films, Film-strips, Micro-films Gramophone records, etc. are often invaluable sources of information and reference.

**The types of reference books are as follows:**

- Dictionary
- Encyclopaedia
- Biographical sources
- Yearbooks
- Directory
- Handbook
- Statistical Sources
- Gazetteer
- Bibliography
- Index and Abstract

**Dictionary:**

A dictionary is a collection of words in any language. The dictionary gives the alphabetical meaning of words, pronunciation, and spelling. The words in the dictionary are usually structured according to the sequence. But in some dictionaries, it is found to be done by the subject.

The word 'dictionary' is derived from the Latin word 'diction'. The dictionary is used for words used in different languages, their spelling, the meaning of nouns, interpretation, pronunciation, place in grammar, synonyms, antonyms, etc. A dictionary is also alternatively called a Glossary, Thesaurus, or Lexicon.

The dictionary is used to get further information.

- The meaning of the word
- To check the correct spelling of words
- To know the grammatical position of a word
- To Use of the word in a sentence
- To trace the history of the word including its origin, derivation
- Proverbs and phrases formed from words
- Another alternative word to word
- To see synonyms and antonyms
- Abbreviation of the word

- Etymology and history of words
- The full form of the abbreviation, signs, symbols, etc.

Examples of dictionaries:

1. Oxford Dictionary.
2. Webster's New World Dictionary of American English. 3rd College ed. 1988.
3. Advanced Learners Dictionary of Current English.

### **Encyclopaedia:**

An encyclopaedia is a storehouse of knowledge. The encyclopedia contains information on all the branches of knowledge in writing. The subject of each article is independent. All such articles (topics) are arranged alphabetically. Each article contains pictures, maps, and sketches of notable people where necessary. References are made to move from one article to another so that the necessary information in the articles can be found immediately. In addition, at the end of each article is a bibliography or reference list. Encyclopaedias are in one or more volumes.

Encyclopaedias are used to get further information.

- An encyclopaedia is used to provide basic or background information on any subject.
- Defines specific concepts or terms.
- Information about an incident.
- Location information.
- Information about a well-known organization or well-known person.
- Information about a territory
- Information of a period.

Examples of encyclopaedia:

1. Encyclopaedia Britannica
2. McGraw Hill Encyclopaedia of Science and Technology
3. McGraw Hill Concise Encyclopaedia of Science and Technology
4. Encyclopaedia of Library and Information Science

### **Biographical sources:**

While researching, you may need information about experts in your field. At such times biographical sources are useful to you. Biographical sources contain descriptive information about individuals who have performed or performed remarkable tasks in all areas of life. Biographical sources are publications listing biographical details of eminent people. Such sources cover biographies of world leaders, people holding key positions in international organizations, and people with outstanding performance in sports, music, dance, acting, and other professional fields like science & technology, medicine, etc.

The Biographical sources are used to get further information.

- To get the full names and addresses of the nominees in your area (subject).
- To get educational information about specific people in your area.
- To get information about the work done by a specific person in your area.
- To find out about books written by specific people in your area.
- To find out about the awards and degrees that special people in your field have received.

Examples of biographical sources:

1. International Who's Who. London: Europa Publications, 1935- annual.
2. Who's Who in America. Chicago: Marquis, 1899-.
3. India Who's Who. New Delhi: INFA.
4. Who's Who in Commerce and Industry, Chicago: Marquis. 1936-.

### **Year books:**

Yearbooks are published every year. The yearbook provides information on events and developments in various fields over the past year. This information is summarized and provided in the form of statistics where necessary. The information given in the yearbooks covers a wide range of topics, and it is updated and published annually, i.e., every year. It can be of great use to you from a research point of view. Yearbooks are published nationally, internationally, on specific topics, or at the level of certain organizations. The structure of their information and their instructions make it easy to find information.

Examples of Yearbooks:

1. India: A Reference Annual
2. Manorama Yearbook
3. Maharashtra Current Affairs Yearbook
4. McGraw-Hill Year Book of Science & Technology
5. Statesman's Who's Who

### **Directory:**

The list of organizations or individuals is called Directories. The 'telephone directory is an example of a directory. The organization's directory contains the name of the organization, its structure, functions, objectives, addresses, executives, members, etc. For example, directories of universities, factories, banks, etc. The person's directory contains the person's name, address, educational qualifications, professional information, affiliation with the organization, etc. E.g. Directory of doctors, lawyers, engineers, etc. The order of the entries in the directory is usually alphabetical.

The directory is used to get further information

- Address of specific organization/individual;
- Addresses and information of branches of a particular organization;
- The work of a particular organization/individual;
- Names and addresses of members of a particular organization;
- Addresses of office bearers of a particular organization;
- Telephone number of a specific organization/individual;
- Address of specific University / College.

Examples of Directory:

1. Universities Handbook
2. The Europa World of Learning

### **Handbook:**

A handbook is a small book that gives detailed information about all kinds of matters in a particular subject and discusses the knowledge currently available in that subject instead of new developments. It is called Handbook because it is easy to handle and manageable.

Examples of Directory:

1. The Guinness Book of World Record; 1955.
2. Marks Mechanical Engineer's Handbook
3. Handbook of Chemistry and Physics, 1920.

### **Statistical Sources:**

Statistical sources are published by the government or other organizations. Because they are special, the information they provide is considered reliable. Therefore, they are widely used by researchers researching in different fields.

Examples of Statistical Sources:

1. Census of India

### **Gazetteer:**

The Gazetteer is a very useful reference source for those who want to do geographical research. The Gazetteer contains complete information about the locations of a particular terrain. Such a terrain belongs to the whole country, individual, nation, or region of the world. They are arranged alphabetically according to the place name.

The Gazetteer is used to get further information.

- Exactly where a place is.
- What is the weather like in a place?
- What crops grow in a terrain
- The dress of the people of a land.

Examples of Gazetteer:

1. Maharashtra State Gazetteers
2. Gazetteer of India -The Indian Union
3. Merriam-Webster's Geographical Dictionary
4. The World Book Atlas, 1972.
5. Rand McNally Commercial Atlas and Marketing Guide, 1876

### **Bibliography:**

The bibliography is a list of published books. This list gives you an idea of what books have been published on your research topic. The bibliography is current or past tense. The Bibliography is used to get further information.

- To get the details like name, publisher, price, etc. of books written by a particular author.
- To find out who is the author of a particular book.
- How many and which books have been published on a particular subject.

Examples of Bibliography:

1. British National Bibliography, British Library Bibliographic Services Division, British Library, Boston Spa, 1950.
2. Cumulative Book Index, H.W. Wilson, New York, 1898.
3. Forthcoming Books, R.R. Bowker, New York, 1966.
4. Indian Books in Print, New Delhi, 1967.

### **Conclusion:**

Various types of reference books are available in the library. Its types, structure, uses, etc. can be known. The specific information required by readers or researchers can be found in these reference books. Based on this information, appropriate knowledge can be obtained using context.

### **References:**

1. Gidwani, N. N. (1968). *Foundation of Library Science*. Bombay: Huns Publication.
2. Ranganathan, S. R. (1992). *Reference Service* (2<sup>nd</sup> ed.). Bangalore: Sarada Ranganathan Endowment for Library Science.
3. Sharma, J. S. and Grover, D. R. (1992). *Reference Service and Sources of Information*. New Delhi: Ess Ess Publications.
4. Krishna Kumar (1987). *Reference Service* (3<sup>rd</sup> ed.). New Delhi: Vikas Publication.

## **EXPERIENTIAL LEARNING IN ACCOUNTANCY EDUCATION FOR COMMERCE STUDENTS**

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### **Abstract:**

In India, ages ago, Gurukul imparted education, through various experiences under the supervision of the Guru. Guru and the disciples interacted in a natural environment, which created a lively atmosphere for learning by experience. Experiential learning is a process of learning wherein students learn by doing.

Teaching-learning process of accountancy has been more challenging in this dynamic business environment. The major objective of this process is to enable learners to cope up with the challenging business world. The constant changes must be continuously adopted by the teachers and learners. These learners are the future practitioners of accounting in various businesses hence proper application of knowledge in accounting is equally important. Here, experiential learning plays vital role.

The present teaching learning process of accountancy is restricted to classroom teaching. Although it has incorporated information and communication technology, it has limitations to develop the employability skill sets of students.

This study highlights the benefits of experiential learning in accountancy. This paper presents various modes of experiential learning for enhancement of accountancy education at undergraduate level. Furthermore, it is an attempt to bring forward the obstacles in experiential learning in accountancy.

**Keywords:** Experiential Learning, Accountancy, Role Play, Internship, Student Teaching, ServiceLearning, Research

### **Introduction:**

In the current era of globalization, business expectations from accounting professionals have increased tremendously. The skills required for that are changing and increasing day by day. The accounting world has experienced a journey from single entry system to double entry system. The accounting world has changed even more since the introduction of e-commerce. Digital technology has revolutionized the skills and knowledge of accounting professionals. In all such changing business environment, accounting education does not seem to have changed to that extent. The new education policy being implemented in India, with emphasis on experiential learning, is a harbinger of change. Experiential learning is not new in India, it is traced back to

the old Gurukul system. In the new age, there is a gradual change in the structure of education according to the new courses and the demands of the business world. Many occupations necessitate vocational experience to learn the knowledge, skills, judgment, and values demanded by respective job. Doctors need clinical experience, Lawyers get experience through moot courts, Engineers learn through the workshops and labs. In the same way, accounting demands such experiential learning for students entering the profession. This paper presents various modes of experiential learning (EL) for accountancy education with special reference to B. Com. (Bachelor of Commerce) students.

**Objectives of the study:**

- To review scope for EL in-accountancy syllabus of University of Mumbai
- To suggest various modes of EL for enhanced teaching-learning process of accountancy with reference to B. Com. Syllabus of University of Mumbai.

**Hypothesis:**

Experiential learning is beneficial for accountancy education.

**Methodology:**

This study is based on descriptive data. The secondary data used for this paper is various journals, online research articles, research agency reports, etc. The study is applicable to the Accountancy syllabus of B. Com. (Regular) 100 marks pattern of University of Mumbai.

**Review of Literature:**

Rafiuddin Ahmed has assessed empirical evidence on experiential learning in the accounting education context in light of Kolb's (1984) experiential learning theory (EL) to evaluate its status within the EL pedagogy in teaching and learning. He found that EL is evolving as an excellent platform to build students' personal and professional skills, recommended by the accounting profession and other accounting education stakeholders (1). Donald W. Gribbin brought forward the importance of field trip for learning accountancy and making the accounting education interesting with increased involvement of students, faculty and other stakeholders (2). Ramon-Dangla et.al. determined the effects of the application of a role play in the subject of Financial Accounting in the Tourism Degree. They concluded that the role-playing game brings benefits for the students in relation to satisfaction and academic achievement (3). Susanne et.al. examined the impact of exposing students to the complex constructs of auditing by engaging them in a role-playing exercise on the first day of class. The exercise was designed to demonstrate the value-added nature of the audit process and the nature of evidence gathering. The results indicated that after the role-play, students better understood the audit environment (4). María Del Carmen Conesa Pérez analyzed the efficiency of experimental and experiential learning in the area of accounting, by applying a business simulation game to two groups of students of the Degree in Business Administration. Their

results confirmed the effectiveness of these techniques in the acquisition of skills for accounting. Timothy G. Bryan *et. al.* denoted best practices for implementing an experiential learning component into an accounting curriculum in order to provide multiple experiential learning opportunities that are “for credit.” Further, they recommended implementing an on-campus alternative that would provide students the experiential learning opportunity they need through the Volunteer Income Tax Assistance Program (VITA) for course credit (5). The perusal of literature indicates that use of EL in accountancy teaching-learning process is beneficial for learners and strengthen the teaching-learning process. It ensures efficacy of accounting education for coping with global business environment.

### **Discussion:**

The American Institute of Certified Public Accountants has identified three types of competencies a) Accounting competencies, b) Business competencies c) Professional competencies. Accounting competencies include the technical competencies of the profession that add value to business and contribute to a prosperous society. Business competencies are required for business environment in which accounting professionals work. Professional competencies are related to skills, attributes, and behaviors of accounting professionals. Accounting curriculums should be revised regularly considering the workplace requirements to ensure that the knowledge and other capabilities of the students remain pertinent. Accountemps conducted a survey of 1000 accounting employees, out of those, 59% respondents have experienced a mishap when starting a position. 39% respondents have suffered from technology issues when they start the job (6). This suggest the gap between the accounting curriculum and professional expectations. In order to bridge this gap, the curriculum should be incorporated with experiential learning practices. The Accounting Education Change Commission’s (AECC) Position Statement No. 1 states that: Students must be active participants in the learning process, not passive recipients of information (7). Introducing EL will enable teachers to increase involvement of learners.

### **Scope for EL in B. Com. accountancy curriculum**

The accountancy curriculum for B. Com. Degree (a three-year degree programme) is mainly based on in campus classroom teaching. The curriculum includes accounting theory and problem solving. However, the problem solving is restricted to classroom activity. B. Com. Syllabus includes four courses on Accountancy and Financial Management (Paper I, II, III and IV) and six courses on Financial Accounting and Auditing (Paper V, VI, VII, VIII, IX and X) and two courses on Direct and Indirect Taxation. It incorporated theoretical knowledge and problems of accounting related to Sole Proprietary concerns, Partnership Firms, Companies and Limited Liability Partnership and taxation. Moreover, it includes Cost Accounting, Management Accounting and Auditing knowledge. There is a wider scope for EL in these courses of

accounting. EL practices should be introduced in first year B. Com incorporating visits to manufacturing propriety concerns, departmental stores and inventory stores, branches of enterprises to learn their accounting and experience relevant environment. For second year B. Com. role plays and field trips should be included in curriculum for experiencing partnership accounting and companies. For third year B. Com. hands on training can be included for experiencing digital accounting environment. Furthermore, university should incorporate EL with internship in accounting at undergraduate level.

### **Modes of EL for Accounting Education**

This paper offers various modes of EL to incorporate in Accounting Curricula for enhanced teaching-learning experience and to develop required competencies for business environment.

- 1. Role Play/Simulation/Gaming:** Accountancy can be best taught to students through games. This increases children's involvement and can also increase concentration. There are games available for teaching accounting and business skills like Monopoly, Cashflow 101, Acquire, Accounting Quiz Games on Google Play Store apps, Zapitalizam, Bank on it, Ledger Mania, Accounting for Empires and Faux Accounts.
- 2. Internship:** Internship is a learning experience in a professional set up, where students can get valuable knowledge of accounting through the work. Students can be sent for internship to the local employers for work experience and understanding business terms in reality.
- 3. Field Trips:** Physical and virtual field trips should be organised for better understanding of business operations and accounting relevant to these operations. Field visit to accounting firms also can be conducted to interact with accounting professionals.
- 4. Hands on Training:** For overall understanding of accounting knowledge, hands on experience is quite useful and enable students to acquire various accounting skills, especially accounting with the use of computers.
- 5. Service Learning:** Accounting students can volunteer with non-profit organizations and apply their accounting knowledge for community development. They can be engaged with direct services like tutoring accountancy lessons, conducting audit projects of NGO or indirect services like a fundraising event.
- 6. Student Teaching:** Student teaching allows the learners to put together everything they have learnt and to put the accounting knowledge into action. For preparation of lesson plans, they have cleared their doubts with the mentor teacher and practice the teaching skills, too. It also gives an experience to deal with unexpected questions from the students.
- 7. Research:** Including a research element along with a strong theory base of accounting will enable the students to develop critical thinking skills, oral and written communication skills. They will learn application of the theory; they have learnt into the classrooms. They

can conduct various surveys of business enterprises and analyze the responses to get a deeper understanding of financial decisions.

**Conclusion:**

It is need of hour to bring accounting education out of the traditional framework. Accountancy can be taught outside the classroom through various means of EL. University and Board of Studies should take initiative for this meticulous endeavor. While executing Nations Education Policy in India, all the higher education stakeholders should take combined efforts for introducing EL in accounting education. While incorporating EL in-accounting teaching-learning process, the obstacles should be addressed. Furthermore, Accountancy teachers need to acquire the necessary skills to impart experiential learning along with classroom teaching. New assessment and evaluation strategies to be developed for feedback and outcome of EL in accountancy learning. In conclusion, there is no substitute for experiential learning if student-centered education is to be imparted, all stakeholders must accept the fact and act accordingly, for coping with highly changing business environment.

**References:**

1. Rafiuddin Ahmed (2019). Experiential Learning in Accounting Education: What is Known, What Needs knowing?, Proceedings of the 19th Asian Academic Accounting Association (FourA) Annual Conference 2019 24-26 November 2019, Seoul, Korea, available online at <https://www.foura.org/>
2. Donald W. Gribbin (2005). How to Conduct a Successful Accounting Field Trip, *Management Accounting Quarterly*, Fall 2005, Vol.7 (1), pp 44-50
3. Ramón-Dangla Remedios, Rico Gómez María L., Ponce Gea Ana I (2021). Evaluation of the use of role play in financial accounting, *Education*, Vol. 42 (07) 2021, Art. 3, ISSN: 0798-1015 DOI: 10.48082/espacios- a21v42n07p03 available online at <https://www.revistaespacios.com>
4. Susanne O'Callaghan, Raymond J Elson, John P Walker (2012). Using Role Play as an Experiential Learning Tool to Introduce Students to Auditing, *ABD Journal*, Volume 4 Number 2, 2012, available online at <https://www.ship.edu/>
5. Timothy G. Bryan, Mark A. McKnight, Brett L. Bueltel, Andrew T. Dill, Jamie L. Seitz (2021). Incorporating Experiential Learning Into The Accounting Curriculum: Best Practices And Lessons Learned From A Recently Implemented Curriculum, *Global Journal of Accounting and Finance*, Volume 5, Number 1, 2021, pp. 75-86 available online at <https://mds.marshall.edu>
6. <https://press.roberthalf.com/2019-11-18-Survey-6-In-10-Workers-Met-With-Mishaps-When-Starting-A-New-Job>
7. [https://www.ijbhtnet.com/journals/Vol\\_3\\_No\\_3\\_March\\_2013/1.pdf](https://www.ijbhtnet.com/journals/Vol_3_No_3_March_2013/1.pdf)

## **AN OVERVIEW OF CURRENT MARKETING TRENDS**

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### **Abstract:**

In the world of globalisation every business has to fight for customer attraction, increase market share and growth of business. In this case marketing plays important role in increase number of company clientele. The concept of marketing is starts with manufacturing and ends with sales, but mainly focused on advertising of product. Marketing management creatively design strategies for growth of company.

Before invention of internet business used traditional media like Print, radio, billboards etc. for marketing, after invention of internet business use new media for marketing like websites, social media, apps etc. and the concept of marketing change with digital marketing or E-marketing. It has escalated during the time of Covid-19 as everyone has turned to the online mode. Currently every business uses digital marketing for the promotion of product because it is very beneficial to business. The findings of the paper are expected to help us understand the current trend in marketing.

**Keywords:** Internet, Marketing, E-marketing, Customer, Business.

### **Introduction:**

Marketing is a process of sharing information about product and services to the potential customers. It includes determining target audience, market research, understanding customer behaviour, promoting product and customer relationship etc. when the human being are started trading various product and services between each other they realise the importance of marketing. Marketing concept is started with production concept which includes only production of goods and services, after that it includes advertising / promotion of a product or services, and today it mainly focused on customer expectation and satisfaction. So marketing is a dynamic process it changes with the market trends.

The last few decades traditional method is used for marketing like Print, radio, billboards etc. but it is very costly and time consuming. After the invention of internet, it takes drastic change in marketing. Because of internet various options are available for advertising of products or services like websites, social media, apps etc. and it is very beneficial for business. In the current scenario every business uses this modern marketing techniques for promoting products

and services. So, in the marketing concept one more concept include which is Digital marketing / e-marketing.

### **E- marketing:**

E-Marketing is a process of marketing products and services using the internet. It includes various technologies to communicate with the customers. In simple words e marketing refers to the application of marketing principles and techniques via electronic media or internet. The terms e- marketing, internet marketing, online marketing and digital marketing are frequently interchange.

In traditional marketing methods there are various limitation to communicate with the customer but in e- marketing we can communicate any time when the customer is free. There were approx. 658.0 million internet users in India in 2022. So, business can communicate with 658.0 million people at the same time. In e marketing promoting message is communicate with creative things, in that we can use audio, video, animation and so many things in advertising and it is useful for attraction to prospective customers towards company. In e marketing we have various options for advertising like websites, social media, apps etc.

Another reason for boost e marketing is the cost effectiveness. In e marketing we can promoting our product in very low cost. Via e marketing one can communicate with so many customers at same time. So, it reduce cost of advertising. Therefore, many companies have to integrate e marketing with their marketing programme.

### **Tools of online marketing:**

#### **1. SME- Search Engine Marketing**

Search engine marketing is a process of promoting your website, business or any other content by using various methods like paid advertisement, unpaid advertisement, or combination of both. In this method business focuses on purchasing ads which appear on the result pages of search engines such as google, yahoo etc. This method is very cost effective. By using SME business can increase the traffic on their websites. It is beneficial to reach more customer at the same time.

#### **2. PPC- Pay Per Click**

PPC advertising method is offered by search engines to advertiser for advertise their product on search engine result page. In this method business provide their ads. To search engines for publishing their ads in result page, when customer click on these specific ads. Advertiser need to pay to search engine. The payment for per click is depend on the result page popularity and contract. This method is useful for accurate targeting, also it is cost effective because when customers click on specific ads. Then payment is required.

### **3. SEO- Search Engine Optimisation:**

This technique is used for promoting websites on search engine. In this method high ranking of websites is done on search engine using key words. When website is getting high rank on the search engine, customer traffic on website is increase because when customer search for specific key words our website is display in top of the search engine. So this techniques is very cost effective and beneficial to advertiser for promoting business.

### **4. Affiliate marketing:**

In this method others website is used for promoting our business also used our websites for promoting others business. In short in affiliated marketing the advertisement of our business display on others websites, so the traffic of their sites is attracted towards our product, for that you need to pay some amount to the website owners.

### **5. Email Marketing**

This is a direct marketing technique. In this method company send emails to a general public for promoting his business. In simple words company send promotional materials like sales offers, product information, advertisement etc. to prospective customers via email. It is also cost-effective method because by using emails company can directly communicate with customers.

### **6. Social Media Marketing**

After invention of internet there are various social media platforms are available like whatsapp, Facebook, twitter, Instagram, LinkedIn etc. using this media people can easily communicate with each other's from anywhere, also sharing various data to each other's in short period of time. Company gets the advantages of these features for promoting there products. Advertiser send advertising messages to prospective customers via social media. It is also direct marketing techniques because in this advertiser directly contact to customers.

This are the various tools use for e-marketing. Each and every media have some advantages so there are various advantages of e-marketing are as follows:

#### **Advantage of e- marketing:**

1. E-marketing is cost effective rather that traditional media.
2. It is two-way communication between advertiser and customer.
3. It helps to reach multiple people at the same time
4. It helps to expand business worldwide.
5. It is available for 24 X 7 and 365 days.
6. It also helps to gain trust and confidence of the customers.
7. It provides creativity and innovation in marketing.

**Conclusion:**

As we discourse above there were approx. 658.0 million internet users in India in 2022 and number of user increase day by day. So in future use of internet is increase in every sector of economy. In future each and every person use digital media for his daily transaction. Social media helps people to make purchasing decision. During Covid-19 people use digital platforms for buying and selling of a product. It has adopted according to the time. This is representing that for reaching towards customers e-marketing or digital marketing is a best way. Right implementation of e-marketing helps advertiser to increase customer reach and growth of a business. We can conclude that in future e-marketing or digital marketing make a drastic change in a marketing field.

**References:**

1. <https://blog.hubspot.com/marketing/marketing-trends>
2. <https://emeritus.org/in/learn/top-7-digital-marketing-trends-in-2022/>
3. <https://www.wordstream.com/search-engine-marketing>
4. <https://www.wordstream.com/ppc>
5. <https://www.wordstream.com/social-media-marketing>
6. <https://neilpatel.com/what-is-social-media-marketing/>
7. <https://mailchimp.com/marketing-glossary/email-marketing/>

## **A STUDY ON PREFERRED INVESTMENT AVENUES AMONG SALARIED PEOPLE WITH REFERENCE TO DEVGAD, SINDHUDURG, MAHARASHTRA**

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### **Abstract:**

An investment is the employment of funds with the aim of getting returns on it. It is the commitment of funds which have been saved from current consumption with the hope that some benefits will receive in future. An investment is essentially an asset that is created with the intention of allowing money to grow. The action or process of investing money for benefit. The wealth created can be used for a variety of objectives such as retirement planning, children education, tax saving, increase high standard of living, create an estate. Investment is an activity in that people can save money. People invest their savings in various part of avenues. There are variety of investment avenues such as postal services, real estate, gold, mutual fund, bank deposits, stock market, Public Provident Fund (PPF), LIP & so on. People are investing their money with the different objectives such as future security, good returns, liquidity, capital appreciation, tax saving, children career & so on. Researcher has studied the different avenues of investments as well as the factors while selecting the investment with the sample size 80 salaried employees by conducting the survey through questionnaire in Devgad, Sindhudurg, and Maharashtra. The study is based on personal interviews with salaried people using a structured questionnaire. The study is related on primary sources of data which are collected by distribution of a close ended questionnaire. The data has been analyzed using percentage. The researcher has analyzed that salaried employees consider the safety as well as good return on investment on regular basis.

**Keywords:** Investments, Avenues, salaried employee, Commitment.

### **Introduction:**

The concept of economic investment means additions to the capital stock of the society. The financial investment is an allocation of monetary resources to assets that are expected to yield some gain or returns. The economic and financial investment are related to each other because investment is part of the savings of individual which flow into the capital market. Investment refers to invest money in financial physical asset and marketable assets. Major

investment feature such as risk, return, safety, liquidity, marketability conceal ability, capital growth, purchase power, stability and the benefits.

**Salaried Investors:** The respondent of research study consist only those people who earning fixed Income as salary so the study included only salaried group of people. The Investment pattern of the salaried employees is different due to safety, regular flow of income, tax saving benefits, security, Retirement benefits rather than professionals & businessman.

**Investment Option Available:** In India there are lot many Investment avenues are available. The following figure is pretty self-explanatory regarding investment options. Investments are broadly classified into five categories i.e. Equity, Debt, Real Estate, Commodities and Miscellaneous.

**Equity:** Equity investments represent ownership in a running company. There is no fixed returns. It is considered as a risky investment but at the same time they are most liquid investment due to presence of stock market.

**Mutual Funds:** A mutual fund is a professionally managed investment scheme, usually run by an asset management. Company that brings together a group of people and invest their money in stock, bonds and other securities. The biggest advantage of investing through a mutual fund is that it gives small investors access to professionally manage.

**Debenture or Bonds:** Debentures or bonds are long term investment options with a fixed stream of cash flows depending on the quoted rate of interest. They are considered relatively less risk such as government securities, savings bonds, public sector units bonds and debentures of private sector companies.

**Public provident Fund:** PPF is a saving –cum-tax-saving investment in India. The aim of scheme is to mobilize small savings by offering an investment with reasonable returns combined with income tax benefits.

**National saving Certificate:** NSC is an Indian Government saving bond, primarily used for small savings and income tax savings investment in India. It is a part of postal saving system of Indian Postal Services. These are issued for five- and ten-year's maturity and can be pledge to banks as collateral availing to loans.

**Real Estate:** An investment in real estate is considered as the best form of investment but it is very expensive in metros.

**Gold:** Gold is best option for investing money. After investing in gold, it gives more return from this investment.

**Post Office Savings:** Post office recurring deposit is a low risk saving instruments. This scheme is available in any post office in whole of the nation. This scheme is fixed interest scheme.

**Sukanya Samriddhi Yojana:** This scheme is benefited for girl child only. The scheme encourages parents to invest money for girl for future education and marriage expenses.

**Significance of the study:**

Salaried people have fixed income and their investment patterns are different. I will try to find out preferred investment avenues in Devgad, Sindhudurg, and Maharashtra. This study is beneficial to people for investing their money in best avenues. People will have aware about investment avenues witch are low and high risk avenues. The research paper is fruitful for Scholar and students also.

**Objectives of the study:**

The key objectives for the present study are set up as under.

1. To understand and analyze the preferred investment avenues among the people.
2. To understand the various investment avenues available for people to make an investment.
3. To understand and analyze the factors considered for making an investment.
4. To understand the awareness level of the people about various investment avenues.

**Hypotheses of the study:**

**H1** – There is significance difference between the income level and selecting the avenues for investment.

**H2** - There is effect of educational qualification while selecting the investment avenues.

**Research methodology:**

The study is planned to be carried out with the help of primary data and secondary data for the purpose to analyze and understand the preferred investment avenues by the people and factors considered for investment

**1. Data Collection**

The present study is mainly based on primary data and secondary data. The required data were collected through

Questionnaire and documents, certain web sites and other online data bases etc.

**2. Sources of Data**

Primary data was collected through questionnaire and Secondary data was collected from the reports, articles, journals, documents, printed literatures, certain web sites and other online data bases etc.

**3. Tools of Analysis**

Various tools are used for the analysis and interpretation of data. Data gathering tool-questionnaire. Data representation through charts.

#### 4. Sample Size

The study has taken around 80 respondents who are the salaried people in Devgad, Sindhudurg, and Maharashtra. The investors are selected by convenient sampling method.

#### Limitations:

1. There is time limitation while preparing the research paper.
2. There is limited data for preparing research paper.
3. The study has been restricted to only in Devgad.

#### Results and Discussion:

##### Awareness about the Investment Avenues

A survey was made among the respondents about their knowledge on various investment avenues and the result of that have been presented in the following table.

**Table 1: Awareness about the investment avenues (Source: Primary data)**

Sr. No.	Awareness about Investment avenues in India	No. of Respondent	%
1	Yes	78	97.5%
2	No	02	2.5%
	Total	80	100%

Above table shows that out of 80 investors 97.5% are aware about the investment avenues whereas 2.5% are unaware.

**Table 2: Factors influencing while selecting investment avenues (Source: Primary data)**

Sr. No.	Factors	No. of Respondent	Percentage
1	Safety	77	41.39
2	Liquidity	29	15.60
3	Tax Saving	27	14.52
4	Diversification	26	13.98
5	Simplicity	11	5.91
6	Affordability	16	8.60
	Total	186	100

Note: Since some of the investors have mentioned more than one response, the responses are outnumbered the respondents.

The above table shows that 41.39 percentages of the respondents are to invest their money in particular investment for the purpose of safety. I.e. higher percentage of respondent's

mindset for safety. People are invested money for liquidity. 14.52 percent respondents are thought about tax saving scheme. Rest of respondents are thought about diversification, simplicity, affordability in percentage of 13.98, 5.91, and 8.60 respectively.

**Table 3: Objectives of the investment (Source: Primary data)**

Sr. No.	Objectives	No. of Respondent	Percentage
1	Future Security	73	37.25%
2	Good returns	50	25.52%
3	Liquidity	15	7.65%
4	Capital Appreciation	10	5.10%
5	Tax savings	19	9.69%
6	Children career	19	9.69%
7	Other	10	5.10%
	Total	196	100%

Note: Since some of the investors have mentioned more than one response, the responses are outnumbered the respondents.

The above table shows that 37.25 percent respondent focused on Future security. They invest for future security. The goal of 25.52 percent respondent in good returns. 9.69 percent respondent thought about tax saving. They invest in various types of tax saving schemes .as like PPF, LIC, and KVP. Rest of the respondent are thought about capital appreciation, children career and other i.e. 5.10, 9.69 and 5.10 percent respectively.

**Table 4: Source of motivation (Source: Primary data)**

Sr. No.	Sources	No. of Respondents	Percentage
1	Self-Awareness	66	48.53%
2	Financial Advisor	27	19.86%
3	Broker's Advisor	3	2.20%
4	Friends or relative	30	22.05%
5	Media	10	7.36%
	Total	136	100%

Note: Since some of the investors have mentioned more than one response, the responses are outnumbered the respondents.

The above table shows that 66 respondents are self-aware i.e. 48.53 percent. 30 respondents are taken opinion of friends and relatives as a 22.05 percentage. There is less

respondent for taking broker's advisor i.e.2.20 percent. Rest of the respondent are motivated from financial advisor and media i.e. 19.86% and 7.36 % respectively.

**Table 5: Investment preferences (Source: Primary data)**

Sr. No.	Options	No. of respondent	Percentage
1	Stock Market	33	17.28%
2	Bank deposit	28	14.66%
3	Real estate	21	10.99%
4	Mutual fund	24	12.57%
5	Metals	08	4.22%
6	Commodity	1	0.52%
7	Insurance	47	24.62%
8	Tax saving scheme	15	7.86%
9	Debt market	4	2.08%
10	Others	10	5.20%
	Total	191	100%

Note: Since some of the investors have mentioned more than one response, the responses are outnumbered the respondents.

The above table shows that the respondent preferred the option i.e. Insurance. 24.62 percentages.

The respondent are thought for the option of stock market and bank deposits 17.28 percentage and 14.66 percent respectively. Respondent are preferred the option of real estate, mutual fund, metal, tax saving , debt market i.e. 10.99 percent, 12.57 percent, 4.22 percent, 7.86 percent, 2.08 percent and 5.20 percent. The respondents are not satisfied to do investment in commodity i.e. 0.52 percent.

**Findings:**

1. In the study researcher has find out that 80 respondents from Devgad, Sindhudurg. & it reveals that 98 percent respondent are aware about investment avenues whereas 2% respondent are unaware.
2. In this study researcher has concluded that there is difference between income level and their choices of investment avenues.
3. In this study researcher has concluded that future security and good returns are important part while selecting the investment avenues.
4. After analyzing and interpretation of data it is concluded that most of the respondents are not invest in stock market, bond, equity market, debt market etc.

5. Bank deposit and insurance sectors are the first preference given by the investors for investment as the percentage is 14.66% and 24.62%.

**Suggestions:**

1. The awareness program has to be conducted by stock broking firms, because of most of the people unaware about the investment avenues like share market, stock, bond, debenture, commodity market etc.
2. NGOs should be take a part for promoting and aware for people in whole of devgad related to tax saving scheme and all.
3. Educational institutes like colleges, schools should be conduct program for people to promote about Investment avenues.
4. Local government authority like Gram panchayat, Nagar panchayat should take a part for promoting awareness program for people.

**References:**

1. Patil, Sonali and Kalpana Nandawar (2014): "A Study on Preferred Investment Avenues among Salaried People with Reference To Pune, India" IOSR Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, p-ISSN: 2321-5925. Volume 5, Issue 2. (Sep.-Oct. 2014), PP 09-17.
2. Sellappan R., S. Jamuna & Tnr. Kavitha (2013): Investment Attitude of Women towards Different Sources of Securities - A Factor Analysis Approach. Global Journal of Management and Business Research Finance Volume 13 Issue 3 Version 1.0 Year 2013 Type: Double Blind Peer Reviewed International Research Journal Publisher: Global Journals Inc. (USA) Online ISSN: 2249-4588 & Print ISSN: 0975-5853.
3. Joseph, Ashly Lynn, M. Prakash (2014): International Journal of Management and Commerce Innovations ISSN 2348-7585 (Online) Vol. 2, Issue 1, pp: (120-129), Month: April 2014 - September 2014.
4. <http://www.investfunds.in/investing-funds/10-best-investment-options-in-india>
5. <https://wikifinancepedia.com/finance/avenues-investment>.
6. <https://www.cheggindia.com/earn-online/different-investment-avenues>

## **USE OF PESTICIDES IN MANGO CULTIVATION IN DEVGAD: A SURVEY**

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### **Abstract:**

Devgad is a taluka in sindhudurg district of Maharashtra consisting of 98 Villages. Devgad is known globally for its export of locally grown Alphonso mangoes. Mango grows over here are characterized by their distinct aroma, Smooth exterior, thin skin and thick saffron pulp. In order to make benefits out of mango production local peoples add and spray's harmful type of pesticides as well as Fertilizers. India is the largest producer of mango in the world, although it exports less than one percent of its total production. United States, Japan, Australia and New Zealand have previously prohibited import of mango from India. In order to sustain in the global market India has to develop such programs of pest management like integrated pest management which are favorable to the environment, and encourage organic farming.

**Keywords:** Pest, Pesticides, Mango, Survey, Effect, Devgad.

### **Introduction:**

Alphonso variety of mango cultivated in Devgad region have great demand in many countries, Devgad soil is rich in Al, Fe, Zn etc. And favorable climate with ample sunlight and humidity. All these factors impart a unique aroma and flavor to its mango. Devgad is situated in a radius of 12 km from coastal belt which responsible for attractive golden yellow colour and its sweet taste. About 20 km area of Devgad from sea shore is covered with basalt plateau which is responsible for early yield unlike those from Dapoli, Ratnagiri and other places which have great demand in market.

### **Uniqueness of Devgad alphonso mango**

Devgad mango has less fiber, high percentage of sugar, thin skin. attractive color, sweet taste, easily digestible perisibility therefore it is famous, and commercial cultivation of mango with intension of getting high income therefore large area of Devgad is under mango cultivation (18,211ha) (Regional Fruit Research Center Vengurle, and University Diary, 2008)

In Konkan region, the Sindhudurg district is popular for mango production having an area of about 22498 hectares and production is about 63634 M.T. (Srinivasan, 2005). Devgad mango is grown on an area of 45,000 acers and reaches a production of about 50,000 tons in a year of decent production

### **Practices followed to increase the production of Mango**

Local people of Devgad get employment in agriculture only for four months and remain unemployed for eight months during the year and have to go to Mumbai or other cities for earning their bread and butter. In order to make benefits out of mango production local peoples spray's different type of pesticide as well as Fertilizers. Fertilizers are intended to fortify the soil for the raising of crops, but incidently may add Heavy metals in soil. To provide adequate N, P, K for crop growth, large quantities of these fertilizer are regularly being added to Soil. The compound used to supply these elements contain trace number of heavy metals as impurities which after continued fertilizer application may significantly increase their content in the soil. Certain phosphatic fertilizer frequently contain trace amount of Cadmium.

The pesticide has an indirect role in agricultural production because it protects the plants from insects, pests and diseases. in modern agriculture farmers are intensively using pesticide to ascertain high yield but it adversely affects on environmental conditions by creating resistance in pest, producing new pest, death of non target organisms' biological magnification and impact on human health etc. The crop valued more than 7 crores are damaged due to pest. In India 70% of pesticides used are insecticides 12 -15% fungicides and 4 to 5% weedicides.

Farmers of Alphanso mango make use of pesticide and Fertilizer and growth hormones for maximum production. Farming of mango is done for five months normally after rainy season from October to March. Soon after the rainy season they add fertilizer to the soil along with some fungicide. After every 2- 3 week they spray pesticides along with fungicide and growth hormones for the maximum production. This process continues for 5 months. The spraying of Insecticide, Fungicides 10 times per season may be harmful to the human beings as well as ecosystem. The spraying may alter the composition of Soil and ecological conditions. This pesticide may be lead arsenate, calcium arsenate, weed Killer like sodium arsenate, cattle dip like arsenic trioxide Feed additives e.g., arsanillic acid and, Food preservatives like arsenic trioxide. These harmful pesticides are used to kill different pests of Mango such as Mango hopper, Mango shoot borer, Mango stem borer, Fruit fly, Mango stone weevil, Mealy bug, Red ants, Leaf gall, Powdery mildew of Mango, Anthrcnose of Mango and Red rust of Mango.

In Konkan region of Sindhudurg Farmer of alphanso cultivation normally make use of certain Insecticide such as Spinosad Rs 13000/ Liter) Derish Rs (1400/ L) Sucking pest. Cyper Methrin and Fenobucarp to kill insects like hopper, Thrips. Fenobucarp is carbamated insecticide used to disturb the life cycle of insects. Fenobucarp is a pale yellow or pale red liquid insoluble in water, used as an agricultural insecticide on rice and cotton and and toxic for humans. Beside insecticides Fungicides and growth regulator and promoters are also used Growth hormone like

Gibberlic acid Paclbutrazol 23% (Cultar) and Fungicide such Copper Oxychloride, Micobutanil, Mancozeb, Carbendenzim, Sulphur 80%, Tilt and Propinel 70%, score-Difenoconazole, Amystar (Rs4000/L) are used.

Cancer cases and death in Maharashtra have gone up by 11,306 and 5,727 respectively a collective increase of around 8% in the past 3 years, a recent survey shows. The data by National centre for Disease information and research- National Cancer Registry Programme (NCDIR-NCRP). According to the study, 9 % of the total cases of cancer in the country were recorded in Maharashtra.

Due o the accumulation of these heavy metals like copper arsenic, lead, Cadmium, Zinc, iron year after lead to soil pollution and their transformation rate at different levels. i.e Accumulation at root, stem and fruit. when these Fruits of mango were consumed by local people from April to June, so there may be probability of getting disease of Cancer due to the high dose of insecticide, fungicide and use of growth hormones

Considering following risk, a survey is done in Devgad region and use of chemicals during the season according to the survey present work has been carried out in Devgad.

**Material and Methods:**

For the above work randomly sites of Mango plantation were selected throughout the Devgad tehsil like Vijaydurg, Vada, Manche, Waghotan, Jamsande, Dabhol, Kunkeshwear, Morve, Shirgoan Harpid, Devgad and Dahiwav. For survey few questionnaires were prepared and were asked to the farmers. Along with farmer’s interview, few Krushi seva Kendra were also visited. from December to March. Data were collected and observation table is prepared based on interview and Visits.

**Table 1: Survey of farmers (1 to 15: No. of Farmers)**

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Common pest</b>															
Insects															
1. Hoppers	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Pesticides															
cypermethrin		√			√	√		√				√		√	√
Endosulphan		√		√			√		√	√	√		√		√
carbaryl			√			√			√						
Imidacloprid	√	√		√			√	√	√	√	√		√		√
Quinalphos	√		√		√				√		√	√		√	√

phosalone		√		√		√				√				√	
Dimethoate	√		√		√		√	√		√	√	√	√		√
Monocrotophos	√			√	√	√	√	√			√	√	√	√	
2.Shoot borer (Pesticides)	√	√	√	√	√		√		√	√	√	√	√	√	
Dimethate	√		√		√					√				√	
Monocrotophos	√	√		√					√		√		√		√
Endosulfan		√			√		√			√		√			√
Glyphosate			√	√							√			√	
3.Thrips	√	√			√	√	√	√	√	√		√	√	√	√
Monocrotophos					√		√						√		√
Carbaryl						√				√					
Endosulfan		√				√		√				√			
Cypermethrin	√						√		√					√	
Neem 1000 ppm															
4. Mealy Bugs		√		√			√				√			√	
Monocrotophos										√					
Quinalphos		√					√								
Dimethoate				√										√	
5.Mites		√	√	√			√	√		√		√	√	√	√
Ethion		√		√				√		√				√	
Chlorpyrifos							√			√		√			√
Deltamethri		√	√				√	√					√	√	
Disease															
1. Red rust	√	√		√	√		√	√	√		√	√	√		√
Sulphur powder							√						√		
Mancozeb	√			√					√		√			√	
Propiconzol					√						√				
Carbendazin +Methezeb		√						√							
2. Anthrcnose	√		√	√		√		√		√	√		√	√	√
Crabendazim	√		√	√				√					√	√	√

Copper oxychloride						√				√	√					
3.Powdery mildew		√			√				√				√			
Hexconzol									√							
Crabendazin		√			√								√			
Other Pest																
1. Loranthus	√	√			√			√			√			√		
Cutter	√	√			√			√			√			√		
2.Weed	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
By weeding	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Herbicide													√			
<b>Pesticides taken from</b>																
Krishi seva kendra	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√
Panchayat samiti	√			√							√	√	√		√	
Amba utpadak Sanstha		√			√		√		√	√	√		√	√		
Agent			√		√			√							√	
Information Collected																
1.Agril officer	√			√	√	√					√	√	√	√	√	
Amba Utpadak Sanstha		√					√	√		√		√		√	√	
Krishi seva Kendra	√	√	√						√		√		√		√	
Villagers			√	√	√			√	√						√	
<b>Aware about impact of Pesticides on environment</b>																
yes	√	√									√		√		√	
No			√	√	√	√	√	√	√		√		√		√	
Effect on fruit																
Yes	√				√	√							√			

No		√	√	√			√	√	√	√	√	√		√	√
Other Chemicals															
1. Cultar	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Pest are increasing															
Yes	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Past Practices															
Minimum use of pesticides	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Use of Ash	√					√			√	√			√		

### **Result and Conclusion:**

Based on Survey from the farmers and data collected from few krushi seva kendra following result can be withdrawn:

1. Common pest of mango in Devgad region are Hopper, shoot borer, thrips, mites and Anthracnose and Red rust
2. Pest population is increasing year after year/day by day
3. Minor pest like thrips and mites are becoming major pest
4. 80% of the pest are controlled by chemical pesticides
5. 100% of the farmers accept that many years ago there was minimum use of pesticides
6. 100% of the farmer use cultar i.e growth inhibitor for regular bearing
7. Proper precautions are not taken during spraying of pesticides.
8. 34 % of the farmers are aware and 66% are unaware about impact of pesticides on environment and human being.
9. Even the survey of Krushi seva kendra show most of the pesticides available is chemical pesticides and availability of Biopesticides is very few in number
10. Pesticides like Endosulfan, Monocrotophos, Quinalphos, cypermethrin, Sulphur Powder, and mancozeb are sold in large amount by the Shopkeeper.

The use of different agricultural chemicals causes the effect of Phytotoxicity, pollen sterility, pollution and developmental obstruction. Therefore, now the chemicals should be use in the special conditions only after recommendation when other methods of pest control become failure any single methods of pest control have never been proved effective and permanent solution. Therefore, the need has to develop such programs of pest management which are favorable to the environment and able to control the pest damage like the integrated pest

management in which all the different pest control measures are integrated and are planned to minimize crop damage without disturbing the ecological system, because neither the eradication of pest is possible nor it is beneficial because conservation of natural enemies of pest are compulsory.

Government has to enforce existing laws and regulation to regulate the use, production, sale, import, transportation and distribution of pesticides Banning on dangerous pesticides having dangerous compound like Endosulfan, develop less dangerous and safer pesticides, control advertisement of harmful pesticides, encourage to biological control measures, use of pheromones, attractant and repellents.

**References:**

1. Balyan, K., Kumar, S., Chahal, V. P., and Kumar, S. (2015). Dynamics of Indian fresh mango export. *The Indian Journal of Agricultural Sciences*, 85(11): 1466 – 1471.
2. Fulekar, M. H. (2010). *Environmental Biotechnology* Publisher: Oxford & IBH Publishing Company Pvt. Ltd.
3. Jogdand, S. N. (2010). *Environmental Biotechnology*, Himalaya Publishing House.
4. Patil, S. L. (2014). *Export of Important fruit crops of Maharashtra, Volume I*, Lulu Publisher
5. Srinivasan, N. (2005). Development initiatives by NABARD for promotion of mango export. In consultation workshop of mango Export Projects of Indian mangoes held on 23rd February, 2005 at Mumbai.
6. University Dairy (2008). Dr. B. S. K. K. V., Dapoli, Record of Taluka Agriculture officer, Regional Fruit Research Centre Vengurla.

## **ETHNOBOTANICAL STUDY OF FEW MEDICINAL PLANT IN DEVGAD**

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### **Introduction:**

There are hundreds of medicinal plants that have long history of curative properties against various diseases. Over 90% of medicinal plants are commercially used and harvested from the wild in an unsustainable manner. This is one of the reasons why close to 200 species of such plants according to the Swiss based International Union for Conservation of Nature are under threat in the wild. Around 1000 different species are under various degrees of threat across the different biographic regions in the country.

Every animal existing around us depends upon other plants and animals for its food. Similarly, it also depends for its health on the same. There are several evidences of different animals who seek for different plants as their medicine when they suffer from a particular disorder. Ex.: When a cat or dog has problems of digestive track, we know that they eat a particular type of grass. After some time, they vomit their contents of digestive tract and get rid of the problem. Similarly, mongoose is also known to eat some typical grass to get cured from the snake poison.

Human being also does the same. Right from prehistoric period when the man was in very initiating stages of evolution, he observed all the things happening in his surrounding and started to use various plants around him to cure or to heal the disorders he faced. Through observations of animals and through the various trials and errors and experimentation, he obtained knowledge about the healing properties of various plants around him. He gradually obtained knowledge of naturally occurring drugs. At first, this knowledge was transmitted from one generation to another generation in an oral manner. Later on this information was written on leaves, parchments and papers. Modern methods of spread of information include various ways including computerized systems.

In India, the knowledge of plants and their caring properties is equally old as the human culture. In said to be the doctors of 33 crores of gods our Gods, Lord Dhanvantari and Ashwinikumaras existing in our religion. Lord Dhanvantari is taken as an incarnation of Lord Vishnu itself in some places. After that, the knowledge of plant origin drugs came to earth and

spread through the mouths of a large number of Rishis and Munis existing at that time. If literature evidences are concerned, Ayurveda is the biggest and historic source of the knowledge regarding curative properties of various plants and their contents which play a vital role in healing. Almost every existing plant has been described with reference to its curative properties in the ayurveda of India. The mentions of curative properties of drugs of plants occur predominantly in the 'Suktas' of Rigveda in 3500-1500 B. C.

### **Material and Methods:**

Frequent field visits were undertaken in order to study the inhabitants of the area. Collection of the native medicinal plants was done. Information regarding the medicinal plants was obtained in meetings with the people who practiced indigenous medicine. In many cases, it was first necessary to gain a good rapport with those people including the traditional healers in order to win over their confidence. Most of the information included in this study was gathered from elderly and experienced practitioners who are very knowledgeable about the medicinal plants found in and around. Our field notebook delineates all the usage procedures adopted by these tribals. The gathered data was crosschecked for reliability and accuracy by interacting with different groups of the people from different habitats to confirm the use, mode of administration and dosage differences of the herbal materials, if any. After eliciting detailed information regarding the wild medicinal plants the collected material was carefully brought to the laboratory for further study.

### **Topology:**

Devgad Taluka is situated in Sindhudurg district of Maharashtra State of India. It is a peninsular place situated 38km away from the NH-17. It is situated on west coast of Maharashtra. The climatic conditions of the place are drastically influenced by ocean. Its temperature ranges between 26° C-34°C. Average humidity is about 80% per annum. It is a hot and humid climate over here causing heavy rainfall with an average of 140 inches per year. Average elevation of this Taluka is 100-300 meters from the Sea level.

It has been observed that there are about 200-300 different medicinal plants existing in the natural as well as cultivated habitats of Devgad Taluka. They exist in forests, sacred groves, ghat section, foothills, plains as well open arid lands of the Taluka. Some of them grow around the fresh water bodies and estuarine coasts. But at present, there is no any collective data or reference available at hand about those plants which particularly occur in this Taluka with geographical differences and characters.

### **Observation:**

During the course of prescribed study area, following medicinal plants were found. The recent work depends upon Vaidus interviews. During studies ethnomedicinal survey and information of Vaidus and traditional healers were collected and documented. During

investigation and study about 30 medicinal plants was noted and collect information through 10 local vaidus. We observed during studies majority of Vaidus are given treatment same plant for similar diseases. Treatment given by vaidus to patients are old, traditional method to cure diseases. Vaidus are used different plant part with different mode of preparation mode of application to given treatment process are somewhat similar in region but parts used by them are different in some cases.

<p>1. Name of vaidu: Ramesh Laxaman Teli Age: 34 Occupation: Vaidu/ Farmer: Farmer Address: AT- At-po- Dabhole- teliwadi Taluka Devgad. Information about medicinal plants and its uses Plants Used: Takala. Antmool Kurdu, Safed musli. Common name: Safed musli Scientific name: <i>Chlorophytum borivalianum</i> Family: Liliaceae Part used: Tubers. Used on disease area: Sex tonic. Laxative. Availability of plant: easily available Common name: Antamool. Scientific name: <i>Tylophora asthamatica</i>. Family: Asclepidaceae Part used: Roots. Used on disease area: asthma. Cough and Cold. Availability of plant: Rare. Common name: Kurdu Scientific name: <i>Celosia argentia</i> Family: Amaranthaceae Part used: seeds, tendrils Used on disease area: asthma, anticancer Availability of plant: Eaisly</p>	<p>2. Name of vaidu: Mahadev vasudev joil Age: 73 Occupation: Vaidu/ Farmer: Farmer Address: AT- At-po-katwan Mitbav Taluka Devgad. Information about medicinal plants and its uses Part Used: Ghotvel Ranwangi Gorakhmundi. Punarnava. Common name: Punarnava. Scientific name: <i>Boerhavia diffusa</i>. Family: Nyctaginaceae Part used: Roots. Used on disease area: Laxative. Jaundice. Availability of plant: Easily Available Common name: Gorakhmundi Scientific name: <i>Sphaeranthus indicus</i> Family: Asteraceae. Part used: Flowering buds. Used on disease area: psoriasis. Antifungal. Availability of plant: Easily available. Common name: Bimli Scientific name: <i>Cyperus rotundus</i> Family: Cyperaceae Part used: Tubers Used on disease area: psoriasis. Hair tonic. Availability of plant. Easily available.</p>
<p>3. Name of vaidu: Gurunath Dattaram kulkar Age: 38 Occupation: Vaidu/ Farmer: Farmer Address: AT- At-po- Dabhole- teliwadi Taluka Devgad. Information about medicinal plants</p>	<p>4. Name of vaidu: Sanjay Vitthal Tari Age: 48 Occupation: Vaidu/ Farmer: Farmer Address: AT- At- pokharbav, poDhabhole Information about medicinal plants and its uses</p>

<p>and its uses Plants Used: Kajara. Korphad. Pivala dhotra. Common name: Palas Scientific name: <i>Butea monosperma</i>. Family: Fabaceae. Part used: roots. Bark. Seeds. Used on disease area: purgative fever. Availability of plant: Easily available Common name: Kajara. Scientific name: <i>Strychanus-Nux-vomica</i> Family: Logniaceae Part used: seeds. Used on disease area: Digestive. Availability of plant: Easily Common name: pivala dhotra. Scientific name: <i>Argemon maxicana</i> Family: papaveraceae Part used: seeds.Latex Used on disease area: Skin diseases. Availability of plant: Easily</p>	<p>Plants Used: Satwin. Kirayata. Shatavari. Balamool. Common name: satwin. Scientific name: <i>Alstonia schloaris</i> Family: Apocynaceae Part used: Bark Used on disease area: Diabetic. Stomach problem Availability of plant: Easily available Common name: Kirayata. Scientific name: <i>Andrographis paniculata</i>. Family: Acanthaceae Part used: Whole plant. Used on disease area: Cough and Cold. Fever. Jaundice. Availability of plant: Available in Monsoon Common name: Balamool Scientific name: <i>Sida cordifolia</i> Family: malvaceae Part used: Whole plant. Used on disease area: Cough and Cold. Immunobuster Availability of plant: Available in Monsoon</p>
<p>5. Name of vaidu: Prakash shantaram waingankar Age: 42 Occupation: Vaidu/ Farmer: Farmer Address: AT-At-po- kunkeshwar Taluka Devgad. Information about medicinal plants and its uses Plants Used: Karvat. Umber. Shisav. Kandara. Common name: karvat Scientific name: <i>Ficus hispida</i> Family: Moraceae Part used: Fruits. Used on disease area: Purgative. Nutritional food. Availability of plant: Easily available</p>	<p>6. Name of vaidu: Dilip Vishnu Rane Age: 58 Occupation: Vaidu/ Farmer: Farmer Address: AT-At-Ranewadi, po- Hindale Information about medicinal plants and its uses Plants Used: Anant mool. Kokam. Chandurda. Common name: Chandurda. Scientific name: <i>Macaranga peltata</i>. Family: Euphorbiaceae. Part used: Stem, Gum resin. Used on disease area: Wound healing. Availability of plant: Easily available Common name: Anantmool. Scientific name: <i>Hemidesmus indicum</i></p>

<p>Common name: Shisav Scientific name: <i>Dalburgia isoo</i>. Family: Fabaceae Part used: Bark Used on disease area: Stimulant. Leprosy. Availability of plant: Easily available. Common name: Malkangani Scientific name: <i>Celastrus paniculata</i> Family: celastraceae Part used: Seeds Used on disease area: brain tonic Availability of plant: Easily available in monsoon.</p>	<p>Family: Asclepidaceae Part used: Roots. Used on disease area: Digestive. Blood purifier. Availability of plant: Rare. Common name: Kokam Scientific name: <i>Garcinia indica</i> Family: Myrtaceae Part used: Fruits. Used on disease area: Digestive. Weight loss. Availability of plant: Eaisly</p>
<p>7. Name of vaidu: Satyawan Gangaram Ghadi Age: 50 Occupation: Vaidu/ Farmer: Farmer Address: AT- At-po-Munage-sadewadi Information about medicinal plants and its uses Plants Used: Manjista. Ashok. Biba. Common name: Biba. Scientific name: <i>Semicarpus anacardium</i>. Family: Anacardiaceae. Part used: Seeds. Used on disease area: Antiseptic. Skin diseases Availability of plant: Easily available Common name: Sita ashok Scientific name: <i>Saraca indica</i>. Family: Leguminosae. Part used: Bark. Used on disease area: Digestive. Ladies problem Availability of plant: Easily. Common name: Manjishta Scientific name: <i>Rubia cordifolia</i> Family: Rubia cordifolia Part used: Roots</p>	<p>8. Name of vaidu: Rohan Prakash Golatkar. Age: 25 Occupation: Vaidu/ Farmer. Farmer Address: AT- At-Wareri, Post- talebazaar Information about medicinal plants and its uses Plants used: Gulvel. Kalijiri. Ashwagandha. Common name: kaljiri. Scientific name: <i>Vernonia anthalmintica</i>. Family: Asteraceae. Part used: Seeds. Used on disease area: Anthelmintic. Tonic. Availability of plant: easily available Monsoon. Common name: Gulvel. Scientific name: <i>Tinospora cordifolia</i>. Family: Menispermaceae. Part used: Stem. Satva. Used on disease area: fever, cough, digestive, jaundice. Availability of plant: Easily available Common name: Ashwagandha Scientific name: <i>Withania somnifera</i> Family: Solanaceae Part used: Tuberous roots.</p>

<p>Used on disease area: Digestive. Blood purifier. Availability of plant: Easily.</p>	<p>Used on disease area: Sex tonic, immunity buster. Availability of plant: Easily available.</p>
<p>9. Name of vaidu: Tukarm N. Joil Age: 60 Occupation: Vaidul Farmer: Farmer Address: AT- At-po- Katwan Taluka Devgad. Information about medicinal plants and its uses Plants Used: Adakai.Lendi pimpali. Lal chitrak. Gokharu Common name: Gokharu Scientific name: <i>Tribulus terrestris</i> Family:Zygophyllaceae Part used: Fruits Used on disease area: Urinary problem Availability of plant: Market available Common name: Lal Chitrak. Scientific name: <i>Plumbago rosea</i>. Family: Plumbaginaceae Part used: Roots. Used on disease area: Blood treatment. Ladies problem. Availability of plant: Rare. Common name: Adrak Scientific name: <i>Zingiber officinalis</i> Family: Zingibaraceae Part used: Tubers Used on disease area: Blood treatment. Cough and cold. Availability of plant: Easily.</p>	<p>10.Name of vaidu: Tukaram Babu Ghadi Age: 85 Occupation: Vaidu/ Farmer: Farmer Address: AT- At-po- Naringre- Jogwali Information about medicinal plants and its uses Plants used: Rui. Bharangi. Safed musli. Common name: Safed musli. Scientific name: <i>Chlorophytum borivalianum</i> Family: Liliaceae Part used: Tubers. Tender Leaves Used on disease area: Health buster. Purgative Availability of plant: easily available in monsoon. Common name: Rui Scientific name: <i>Calotrophis gigantia</i>. Family: Asclepidaceae. Part used: Whole plant Used on disease area: Respiratory disorder. Fever. Availability of plant: easily available. Common name: Safed musli Scientific name: <i>Chlorophytum borivalianum</i> Family: Liliaceae Part used: Whole plant, tuber Used in diseases area: Immunobuster Availability of plant: easily available.</p>

### **List of Vaidus in Devgad, Sindhudurg**

<b>Sr. No.</b>	<b>Name of Vaidu</b>	<b>Age</b>	<b>Disease</b>
1	Ramesh Laxman Teli	34	Laxative, Asthma, cough and cold, Anticancer
2	Mahadev Vasudev Joil	73	Jaundice, Laxative, Psoriasis, Antifungal, Hair tonic
3	Gurunath Dataram Kulkar	38	Digestive, Skin disease
4	Sanjay Vittha Tari	48	Diabetic, Stomach problem, Cough and cold, Fever, Immunobooster
5	Prakash Shantaram Waingankar	42	Purgative, Nutritional Food, Stimulant, leprosy, brain tonic
6	Dilip Vishnu Rane	58	Wound healing, Digestive, Blood purifier, weight loss
7	Satyawan Gangaram Ghadi	50	Antiseptic, Skind disease, Digestive, ladies problem
8	Rohan Prakash Golatkar	25	Anthelmintic, Tonic, Fever, Cough, Jaundice
9	Tukaram N Joil	60	Urinary problem, Blood treatment, legislation problem
10	Tukaram Babu Ghadi	85	Health booster, Purgative, Respiratory disorder

### **Result and Discussion:**

Throughout the prescribed period of the project, various possible habitats in the study area were explored so as to take an account of the present status of medicinal plants. Many local users of the medicinal plants available in the area as well as various traditional healers were interviewed for the various aspects of the medicinal plants in the selected area. Type of the disorders, dosage pattern and the part of the plant used for the healing was taken into account during such discussions. Besides, information about the present status of the plants in their natural habitat as well as the cultivation practices was also taken into account.

As per the observations and interviews, it was concluded that most of the available medicinal plants in the study area are widely used in various healing practices of different diseases. But there is no any proper method practiced for their cultivation and conservation. They are collected from the natural habitats by a crude method. Hence most of the available natural resources are under the threat of extinction. Most of them are already endangered and many have been likely to be threatened. It is a matter of fact that many of the plants in this list are endemic and grow at a very slow rate. In addition to that, a rapid growth of civilization is

also producing its hazardous effects on the sustenance of the medicinal plants. Changing global climate is also creating its influence as the plants are most sensitive to the climatic changes and respond them quickly.

If all the above facts are concerned, it must be essentially emphasized here that it is quite much necessary to establish special nurseries of the medicinal plants in different parts to protect as well as to conserve them. It is also necessary to take firm steps to conserve their natural habitats. For that, a detail scientific study of their natural habitats should be done. Besides, participation of the local common people for their conservation is quite much necessary; hence their education towards the problem is necessary. It could be done by campaigning as well as local meeting with the local dignitaries and exhibitions of the collections so as encourage the interest towards conservation. School level campaigning may also come to the help for the purpose.

Besides, the milestones of the Indian lines of treatment and healing in historical period were the two big Granthas known as 'Charaksamhita' written by an ancient healer known as Charak and the other one known as 'Sushrutsamhita' written by and ancient Surgeon as well as healer known as Sushruta. In Sushurtsamhita, he has described even some operations that can be carried out to cure certain diseases. Besides these, there are several references of curative plants available in 'Manusmriti' written by an ancient ruler known as Manu. In later periods, a book titled as 'Materia medica of India' was written by Ainslie 1813. In 1868, an encyclopedia known as Pharmacoeopia of India was published by Waring.

Besides, similar type of knowledge was also being discovered in different parts of the world also. In 1815, German scientist Seydler introduced the term 'Pharmacognosy' in his work 'Anolecta Pharmacognostica'. The term is derived from the two greek words as- 'Pharmakon' meaning drug or medicine and 'Gignosco' meaning to acquire the knowledge of. Thus it literally means the knowledge of drugs.

At present, the healing and curing properties of plants are still widely used all over the world along with the other new trends of medicinal sciences like Allopathy, Naturopathy, Homeopathy, Unani medicines and others. The use of medicines of plant origin is a still having a respect and faith among the common man all over the world. Hence, not only in India but also the people from Germany, Egypt, China and so many other countries deeply believe in drugs of plant origin. Besides, according to new investigations, European countries are also found to be getting attracted towards that.

Medicinal plants are those plants which are used for curing the diseases. The early man revealed the importance of plants in his surroundings for the healing and curing the diseases; those caused to him and started to use them as medicinal plants for the purpose. This revealed to the modern man about their utility as a medicinal source combating one or more diseases and

ailments. Several of the wild medicinal plants used by the early man were domesticated by growing and rearing them by evolving human civilizations during their fixed settlements. The considerable part of knowledge of early man about utility of plants has been continued to the present days and has been consistently utilized by traditional healers as well as medical sciences. Nowadays, use of medicinal plants by traditional healers is being more emphasized by the common people as well as researchers and medical practitioners because of their perfect utility in curing the diseases but without any phytochemical analysis of the same. Ex: There are several traditional healers in Konkan region who cure the Jaundice and Hepatitis very effectively in a short period of One or two days by using plants in their surrounding but don't know which factor of the plants cures the disease.

One more very significant fact about these medicines is that they have almost no side effects or negligible side effects as compared to the allopathic line of treatment.

**Conclusion:**

There is always a hunt for rich ethnobotanical knowledge for ethno botanical studies of medicinal plants. The local uses of medicinally important plants which were interviewed among 10 local people of Devgad taluka. The traditional healers are the main source of knowledge on medicinal plants. In Devgad taluka, many local people are going for agriculture and sustainable harvesting of plants with medicinal value which helps not only in conservation of these traditional medicinally important plants but also in marketing of these plants and their products for economic growth of the people. Plant-based traditional knowledge has become a recognized tool in search for new sources of drugs and nutraceuticals. The traditional use of plants has declined due to the scarcity of species, which is caused by human activities and over grazing by animals.

The new educational policy should include field work, minor research project, major research project, nature conservation, in undergraduate and postgraduate courses.

**References:**

1. Almeida, S. M. (1990). Flora of Sawantwadi, Vol. 2, Scientific Publications, Jodhpur
2. Kirtikar K. R. and Basu B. (1935). Indian Medicinal Plants; Vol. I and II, Archaeological Survey of India, New Delhi
3. Bhattacharjee, S. K. (2001). Handbook of Medicinal Plants. Revised edition, Pointer Publication, Jaipur.
4. Farooqi Azhar Ali and B. S. Sreeramu (2004). Cultivation Of Medicinal and Aromatic Crops. Universities Press.
5. Reddy K. Janardhan, Bahadur Bir, Rao M. L. N. (2007). Advances in medicinal plants, Universities Press.

## नविन शैक्षणिक धोरण - एक चिकित्सा

अविनाश विनायक बापट

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### आकृतीबंध:

नविन शैक्षणिक धोरणाला २०२० मध्ये केंद्राकडून मंजूरी मिळाली. तब्बल ३४ वर्षांनी शैक्षणिक धोरण बदलण्यात आले. केंद्रीय मनुष्यबळ मंत्रालयाचे नामकरण होऊन आता ते शिक्षण मंत्रालय झाले आहे. २०२३ सालापासून या धोरणाची अंमलबजावणी होणार आहे.

३ ते १४ वयोगटातील विद्यार्थी हक्काचे शिक्षण या कार्यक्षेत्रात आले आहेत. पूर्वी हा वयोगट ६ ते १४ होता. आणि १०+२+३ हे सूत्र होतं पण आता ५+३+३+४ हे सूत्र असणार आहे. ९ वी ते १२ वी या सेमिस्टर परीक्षा असणार आहेत. १० वी चे बोर्ड परीक्षा जाऊन आता १२ वी चे बोर्ड परीक्षा असणार आहे. ५ वी पासून मातृभाषा व स्थानिक भाषा तसेच इंग्रजी माध्यम आहे. सिंधुदुर्गची स्थानिक भाषा मालवणी आहे त्यामुळे या जिल्ह्यात एखादा विषय मालवणी बोलीभाषेतून लागल्यास आश्चर्य वाटणार नाही.

शालेय शिक्षणाबरोबरच इयत्ता ९ वी पासून कौशल्य विकसित करता येणारा कोर्स करता येणार आहे उदा. कारपेंटर, इलेक्ट्रिशियन वगैरे.

### महाविद्यालयीन पॅटर्न:

मी महाविद्यालयातील प्राध्यापक असल्याने शेवटच्या टप्प्यावर जे शैक्षणिक धोरण असणार आहे त्यावर आपण चर्चा करू. पूर्वी महाविद्यालयीन पदवी ३ वर्षांची होती. आता ती ४ वर्षांची करण्यात आली आहे. M.phil. पूर्णतः रद्द करण्यात आली आहे.

महाविद्यालयीन पदवी ३ व ४ वर्षांची कशी ते पाहू. पदवीच्या पहिल्या वर्षात उत्तीर्ण झाल्यावर प्रमाणपत्र मिळेल. दुसरे वर्षात उत्तीर्ण झाल्यावर गॅज्युएट डिप्लोमा (पदविका) असा प्रमाणपत्रावर उल्लेख असेल. तिसऱ्या वर्षी उत्तीर्ण झाल्यावर डिग्री (पदवी) मिळेल.

यापुढे नोकरीच्या जाहिराती येताना शैक्षणिक अहर्ता निश्चित सांगितली जाणार आहे. उदा. पदविकावाले उमेदवार अर्ज करू शकतात किंवा पदवीवाले उमेदवार अर्ज करू शकतात.

चार वर्षांचा अभ्यासक्रम पूर्ण केल्यावर पी.एचडी. साठी विद्यार्थी पात्र ठरणार आहे. पूर्वी पी.एचडी. साठी मास्टर्स डिग्री आवश्यक होती. चार वर्षांचा अभ्यासक्रम पूर्ण केल्यावर गॅज्युएट रिसर्च असा विद्यार्थ्यांच्या प्रमाणपत्रावर (सर्टिफिकेट) उल्लेख असणार आहे. हे शिक्षण घेताना विद्यार्थी आपल्या

आवडीनुसार दुसरा एखादा कोर्स करू शकतात. एखादा करत असलेला कोर्स पहिल्या किंवा दुसऱ्या वर्षी थांबून अन्य आवडणारा कोर्स ही करू शकतो.

बी.ए, बी.कॉम, बी.एस्सी या शाखा बंद करण्यात आल्या आहेत. विषय निवडीचे बंधन असणार नाही. म्हणजेच मल्टीडिसीप्लीनरी अभ्यासक्रम निवडता येणार आहे. उदा. एखाद्या विद्यार्थ्याला सायन्स अभ्यासक्रम निवडताना मानसशास्त्र किंवा कॉमर्स असे विषय तो विद्यार्थी निवडू शकतो ही एक चांगली सुविधा मिळणार आहे. काही अभ्यासक्रम आभासी पध्दतीने शिकवले जाणार आहेत.

**NETF (राष्ट्रीय शैक्षणिक वैज्ञानिक मंच)** यामार्फत आपण शास्त्रज्ञ, विज्ञान क्षेत्रात उच्च गुणवत्ता घेऊ शकता. एक परदेशी भाषा शिकता येणार आहे उदा. जॅपनीज, स्पॅनीश. कायदा व मेडिकल सोडले तर इतर सर्व शिक्षण एका छताखाली घेण्यात येणार आहे.

### NEP धोरणापुढील आव्हाने

- १) यात बहुभाषिक शिक्षणाचा वापर करता येणार आहे. सबब मराठी, गुजराती, कन्नड अशी कुठलीही भाषा विद्यार्थी माध्यम म्हणून निवडू शकतो. काही अभ्यासक्रमांची पुस्तके (MBBS, B.Pharm.) इंग्रजीतच आहेत. ती त्या त्या भाषेत उपलब्ध करून द्यावी लागतील. महाराष्ट्र शासनाने MBBS अभ्यासक्रम मराठीत निर्माण करण्याची तयारी सुरु केली आहे. शिक्षक भरती करताना बहुभाषिक शिक्षक भरती करावी लागेल.
- २) ५ वीपर्यंत स्थानिक भाषेत शिक्षण (काही विषय) विद्यार्थी शिकू शकतो. उदा. मालवणी या भाषेत पुस्तके व अभ्यासक्रम साहित्य निर्माण करावे लागेल. सिंधुदुर्गची बोलीभाषा मालवणी आहे परंतु मालवणी न समजणारे शिक्षक अधिक आहेत त्यांना ती भाषा आत्मसात करावी लागेल.
- ३) महाविद्यालयांमध्ये विद्यार्थी वर्गाच्या मनाप्रमाणे विषय द्यायचे ठरले तर परम्युटेशन कॉम्बिनेशन वाढली जातील. आधीच ग्रामीण महाविद्यालयात (जवळ जवळ महाविद्यालय झाल्यामुळे) विद्यार्थी संख्या रोडावत चालली आहे. विषय संख्या वाढली जाण्याची शक्यता आहे. विद्यार्थी संख्या एखाद्या विषयाला पुरेशी नाही ही सबब पुढे करून विद्यार्थी वर्गाला हवा तो विषय मिळेलच याची शक्यता नाही. शिक्षक नेमणे हेसुद्धा परवडणारे असणार नाही. त्यामुळे विद्यार्थ्यांना विषय निवडीला बंधने येऊ शकतात.
- ४) प्रत्येक ठराविक कालखंडात एक लाट येते उदा. काही वर्षांपूर्वी आर्ट्स शाखेला विद्यार्थी जायचे बी.एड., डी.एड होऊन त्यांना नोकरी मिळायची. परंतु हे दिवस बदलले व बँकिंग व अन्य जॉब डोब्यासमोर ठेवून कॉमर्स शाखेला जाणाऱ्या विद्यार्थ्यांचा ओढा वाढला.

- ५) १२ वी सायन्स नंतर बरेच मार्ग निवडण्याचे पर्याय विद्यार्थ्यांसमोर आल्याने प्लेन बी.एस्सी करताना केमेस्ट्री विषय सोडला तर ग्रामीण भागातील महाविद्यालयात फिजिक्स, बॉटनी हे विषय आज अगदी अत्यल्प विद्यार्थी संख्येवर चालले आहेत नवीन अभ्यासक्रमांमध्ये विषय निवडीच्या अधिक संधी असल्याने एखाद्या किंवा काही विषयांची लाट आली तर बी.एस्सी. फिजिक्स, बॉटनी हे विषय बंद पडतील व या विषयांसाठी लाखो रुपये खर्च करून उभारलेल्या लॅब व आतील साधने धूळ खात पडतील तेथील प्राध्यापक बेकार होतील किंवा अन्य महाविद्यालयात पाठविले जातील.
- ६) आताचे विना अनुदानित क्षेत्रातील सर्वच विषय चालतील असे होणार नाही व कित्येक वर्षे शिकवत असणाऱ्या प्राध्यापकांना घरी बसण्याची पाळी येईल.
- ७) मुंबईसारख्या शहरामध्ये अत्यल्प विद्यार्थी असणारे विषय त्या महाविद्यालयातून तो विषय बंद करून नजीकच्या इतर महाविद्यालयात पाठवले जाईल परंतु सिंधुदुर्गसारख्या ग्रामीण जिल्ह्यामध्ये असे करणे शक्य होणार नाही.
- ८) एखाद्या महाविद्यालयात एकदम वेगळ्या विषयाला विद्यार्थ्यांची मागणी वाढली तर त्या विषयासाठी इन्फ्रास्ट्रक्चर व अन्य सुविधा पुरविताना (अनुदान नसेल तर) संस्था मेटाकुटीला येतील.
- ९) २०२३ सालापासून प्रत्यक्ष अंमलबजावणीस सुरुवात झाल्यावर कितीतरी वादग्रस्त मुद्दे उपस्थित होतील व त्यावेळी येणाऱ्या अडचणी सोडविणे क्रमप्राप्त ठरेल. काही असले तरी ३४ वर्षांनी आलेल्या नवीन अभ्यासक्रमाचे मी स्वागतच करीत आहे !

संदर्भसूची:

१. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/nep/2020/MARATHI.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/nep/2020/MARATHI.pdf)
२. <https://www.shikshanmitra.com/2021/09/New-Education-Policy-2020-in-Marathi.html>

## नविन राष्ट्रीय शैक्षणिक धोरण 2020 - मूलभूत विज्ञान शाखेतून उच्च शिक्षण

चंद्रकांत दत्तात्रय भेंकी

श्री स. ह. केळकर कला, वाणिज्य व विज्ञान, महाविद्यालय, देवगड, जि. सिंधुदुर्ग

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### मूलभूत विज्ञान संकल्पना:

मूलभूत विज्ञान हे मराठीतील शब्द जरा समजायला कठीण वाटतात पण बेसिक सायन्स हे शब्द सोपे वाटतात व अर्थ लगेच कळतो. बेसिक सायन्स म्हणजेच मराठीतून मूलभूत विज्ञान. शालेय व माध्यमिक स्तरावर जे विषय शिकवले जातात. उदा. भौतिकशास्त्र, रसायनशास्त्र, वनस्पतीशास्त्र, प्राणीशास्त्र व गणित इ. मूलभूत विज्ञानाचे विषय आहेत.

निसर्ग, निसर्गातील नियम त्याचा पध्दतशीर अभ्यास हा मूलभूत विज्ञानामध्ये केला जातो. पदार्थ विज्ञान हा विषय घेऊन जर उच्च शिक्षण घ्यायचे असेल तर त्यामध्ये पदार्थ, गती, अवकाश व काल यांचा अभ्यास केला जातो. रसायनशास्त्र हा विषय घेऊन उच्च शिक्षण घ्यायचे असेल तर त्यामध्ये पदार्थाचे गुणधर्म, त्याचा उपयोग, पदार्थाचे स्रोत, पदार्थाचे प्रकार, त्यांचे उपयोग, त्यामध्ये होणारे बदल, त्याची कारणे यांचा एकत्रित अभ्यास केला जातो. वनस्पती शास्त्रामध्ये वनस्पतींचा अभ्यास प्रयोगशाळेत तसेच वनस्पती व पर्यावरण यांचा अभ्यास केला जातो. प्राणीशास्त्रामध्ये प्राण्यांची माहिती, प्रयोगशाळा तसेच त्यांच्या नैसर्गिक वसति स्थानात जाऊन त्यांची उत्पत्ती, जीवनपध्दती यांचा अभ्यास केला जातो. वनस्पतीशास्त्र व प्राणीशास्त्र या जीवशास्त्राच्या शाखा आहेत, परंतु उच्च शिक्षण घ्यायचे असेल तर उच्च शिक्षणासाठी वनस्पती शास्त्र किंवा प्राणीशास्त्र हे स्वतंत्र विषय निवडावे लागतात. गणित हा विषय घेऊन उच्च शिक्षण घेताना त्याचा उपयोग विज्ञानातील इतर विशयांसाठी सुध्दा कसा होतो हे समजून घेणे महत्वाचे आहे. गणित घेऊन उच्च शिक्षण पूर्ण केल्यावर काही वेगळी करिअर क्षेत्रे उपलब्ध असतात.

### विज्ञान शाखेमध्ये उच्च शिक्षणातील अभ्यासक्रम:

बारावी विज्ञान शाखा पूर्ण केल्यानंतर विद्यापिठ, महाविद्यालय किंवा संस्था मधून विज्ञान शाखेतील पदवी, पदव्युत्तर पदवी व संशोधनातील पदवीचे जे शिक्षण दिले जाते, ते उच्च शिक्षणाशी संबंधीत आहे. बारावी विज्ञान शाखेतून पूर्ण केल्यावर बी.एस्सी. तीन वर्षे व बी.एस्सी. (Honorr/Research) चार वर्षे असा अभ्यासक्रम असणार आहे. नविन राष्ट्रीय शैक्षणिक धोरणानुसार बी.एस्सी. मधून कोणात्याही वर्षी बाहेर पडण्याचे मार्ग आहेत. त्या त्या वर्षाचा अभ्यासक्रम यशस्वीरित्या पूर्ण केल्यानंतर प्रमाणपत्र मिळण्याची सोय आहे. बी.एस्सी तीन वर्षांचे पूर्ण केल्यानंतर एम.एस्सी दोन वर्षांत पूर्ण करता येईल. बी.एस्सी. चार वर्षे पूर्ण केल्यानंतर एम.एस्सी. एक वर्षामध्ये पूर्ण करता येईल. ज्या संस्थामध्ये, विद्यापीठामध्ये, महाविद्यालयामध्ये 2022-2023 मध्ये राष्ट्रीय शैक्षणिक धोरणाची अंमलबजावणी होईल अशा ठिकाणी खाली दिलेल्या तक्त्याप्रमाणे अभ्यासक्रम पूर्ण करता येतील.

### Duration of Programmes:

The Undergraduate programmes shall extend over for academic years (eight semesters) with multiple entry and multiple exit options. The students can exit after the completion of one academic year (Two Semesters) with the certificate in a discipline or a field; Diploma after the study of two academic years (four semesters) and Bachelor degree after the completion of three academic years (six semesters). The successful completion of Four Years Undergraduate Programme would lead to Bachelor Degree with Honors/Research in a discipline/ subject. Each semester shall consist of study with a minimum of 90 working days (excluding the time spend for the conduct of semester-end examination).

**Table 1: Undergraduate Programme**

Level	Programme Name	Accademic Year	Eligibility
Level 5	Undergraduate Certificate (One Year or Two Semester)	2022-23	12 <sup>th</sup> Science
Level 6	Undergraduate Diploma (Two Year or Four Semester)	2023-24	Undergraduate Certificate
Level 7	Bachelor's Degree (Three Year or Six Semester)	2024-25	Undergraduate Diploma
Level 8	Bachelor's Degree With Honor's / Reserch (Four Year or Eight Semester)	2025-26	Bachelor's Degree

**Table 2: Postgraduate Programme**

Level	Programme Name	Academic Year	Eligibility
Level 8	Postgraduate Diploma (One Year or Two Semester)	2025-26	Bachelor's Degree (Three Year or Six Semester)
Level 9	Master Degree (Two Year or Four Semester)	2026-27	Bachelor's Degree (Three Year or Six Semester) or Post Graduate Diploma (One Year or Two Semester)
Level 9	Master Degree (One Year or Two Semester)	2026-27	Bachelor's Degree Honor's / Research

### Criteria:

- 1) **Level 5:** The students who have successfully completed Grade 12 School Leaving Certificate or its equivalent course shall be eligible for admission to the first year degree Programme.
- 2) **Level 6:** The students who have successfully completed level 5 of undergraduate programme.

- 3) **Level 7:** The student who have successfully complete level 6 of undergraduate programme.
- 4) **Level 8:** The students who have successfully complete level 7 (Bachelor degree of three years or six semesters) of undergraduate programme.
- 5) **Level 9:** The students who have successfully complete level 8 (Bachelor degree of Four years or eight semesters) of undergraduate programme or level 8 (One year or two semesters) of post – graduate of this university.
- 6) Master's Degree Programmes will be of one Academic Year (Two Semesters) for the Four Years Honors Degree holders and it will be of Two Academic Year (Four Semesters) for the three years Degree holders.
- 7) Two Years Master's Degree programmes will have exit option at the end of One Academic Year (Two Semesters) with the Post-graduate Diploma in the respective disciplines.

### नामांकित शिक्षण संस्था व विद्यापिठे:

मूलभूत विज्ञानातून उच्चशिक्षण घ्यायचे असेल तर त्यासाठी राज्यामध्ये व देशभरामध्ये अनेक महाविद्यालये व राज्य आणि केंद्रीय विद्यापिठामधून सोयी उपलब्ध आहेत. पूर्वी एम. एस्सी. सारख्या शिक्षणाची सुविधा हि विद्यापीठ किंवा शहरातील संस्था मध्येच उपलब्ध असायची. सध्या ग्रामीण भागामधून सुध्दा तालुका स्तरापर्यंत या सुविधा उपलब्ध आहेत. आंतरराष्ट्रीय संस्था उदा. इन्स्टिट्यूट ऑफ सायन्स ही संस्था बंगलोर, कर्नाटक येथे आहे.

टीआयएफआर (TIFR : Tata Institute of Fundamental Research) हि संस्था महाराष्ट्रात मुंबई येथे आहे. आयआयटी हि संस्था मुंबई येथे आहे की जेथून एम. एस्सी. व पीएच. डी. चे उच्च शिक्षण घेता येते. केंद्रसरकारने गेल्याकाही वर्षांमध्ये आयसर (IISER : Indian Institute of Science Education & Research) सारख्या आंतरराष्ट्रीय दर्जाच्या संस्था देशभरामध्ये सुरु केल्या आहेत. त्यापैकी एक संस्था, मूलभूत विज्ञानाची पदवी, पदव्युत्तर पदवी व पीएच. डी. चे शिक्षण देणारी महाराष्ट्रात पुणे येथे आहे. या नामांकित संस्थानामधून प्रवेश घ्यायचा असेल तर त्यांच्या प्रवेश प्रक्रियेमधून जाण्याची आवश्यकता आहे.

### उच्च शिक्षणातील फेलोशिप:

सद्यस्थितीमध्ये मूलभूत विज्ञानाची पदवी घेऊन करिअर करणे यासंबंधीचा माहितीचा अभाव असल्यामुळे विद्यार्थी बी. एस्सी. ला प्रवेश घेण्याचा कल कमी असतो. दहावी, बारावीतील हुशार, मेरिटचे विद्यार्थी विज्ञानशाखेकडे यावेत, मूलभूत विज्ञानातील एखादा विषय घेऊन त्याने उच्च शिक्षण पूर्ण करावे, यासाठी केंद्रसरकारच्या डिपार्टमेंट ऑफ सायन्स अँड टेक्नोलॉजी (DST: Department of Science and Technology) या विभागाने बाराबवीपर्यंतच्या विद्यार्थ्यांसाठी अनेक शिश्यवृत्ती योजना तयार केल्या आहेत. त्यांपैकी इन्स्पायर प्रोग्रॅमच्या माध्यमातून काही योजना राबविल्या जातात. जर विद्यार्थ्यांने बी. एस्सी., एम. एस्सी.; इंटिग्रेटेडध्द अशा कोर्सला प्रवेश घेतला तर त्याला प्रतिवर्षी ऐंशी हजार रुपये फेलोशिप मिळते. किषोर वैज्ञानिक प्रोत्साहन (KVPY : Kishor Vaigyanik Protsahan) हि योजना सुध्दा या विभागाकडून राबविली जाते. ही योजना अकरावी, बारावी विज्ञान शाखेत शिकत असणा-या विद्यार्थ्यांसाठी आहे. त्यांनी जर बी. एस्सी. ला प्रवेश घेतला तर प्रतिमहिना विद्यार्थ्यांला पाच हजार रुपये फेलोशिप मिळते. इथे स्पर्धा असते. फेलोशिपसाठीचे सर्व निकश पूर्ण करावे लागतात दहावी बारावीतील टॉलेंट मुलामुलींनी विज्ञान शाखेकडे आकर्शित व्हावे,

मूलभूत विज्ञानातील एखादा विषय घेऊन उच्च शिक्षण व संशोधन करण्यासाठी त्यांना शाळा स्तरावरच प्रोत्साहित प्रेरित करणे हा या योजनेचा उद्देश आहे.

उच्च शिक्षण पूर्ण झाल्यावर जर विद्यार्थ्याला पीएच. डी. करायचे असेल व तो जर सीएसआयआर (CSIR-JRF: Council of Scientific and Industrial research-junior Research Fellowship) हि परिक्षापात्र झाला तर प्रति महिना त्याला एकतीस हजार रुपये फेलोशिप मिळते. याशिवाय एम. एस्सी. भाग 1 व भाग 2 मध्ये शिक्षण घेणा-या विद्यार्थ्यांसाठी मराठी विज्ञान परिशदेची फेलोशिप प्रतिवर्षी रुपये दहा हजार मिळते. त्यासाठीचे त्यांचे निकश पूर्ण करणे आवश्यक आहेत. मूलभूत विज्ञानावततुन उच्च शिक्षण घेण्यासाठी या योजना म्हणजे प्रोत्साहन, प्रेरणा आहेत.

दर्जेदार विज्ञान शिक्षणासाठी सुविधा आणि करिअरच्या संधी शालेय स्तर, माध्यमिक स्तर व कनिष्ठ महाविद्यालयातील अकरावी, बारावी विज्ञान शिक्षणाची गुणवत्ता सुधारण्यासाठी शाळा, कॉलेज स्तरावरून विज्ञान केंद्रे निर्माण करण्याची गरज आहे की ज्यामध्ये आयसीटी (ICT) सुविधा, सुसज्ज ग्रंथालय, सुविधायुक्त विषय निहाय प्रयोगशाळा व प्रशिक्षणाची सोय असेल. देश परदेशातील शास्त्रज्ञांची, पुरस्काराची, फेलोशिपची ओळख याची माहिती विद्यार्थ्यांना शाळा स्तरावरच मिळणे आवश्यक आहे.

विद्यार्थ्याला स्वतंत्ररित्या व काही प्रयोग गुपमध्ये करता येतील. संशोधनाशी संबंधित छोटे छोटे प्रकल्प पूर्ण करता येतील अशा सुसज्ज प्रयोगशाळांची गरज आहे. विज्ञानाशी संबंधित टी. व्ही. त्याचबरोबर इंटरनेटच्या इतर माध्यमावरील कार्यक्रम मुलांना दाखविण्याची सुविधा हवी. प्रशिक्षित व गुणवत्ता धारक विज्ञान शिक्षकांची आवश्यकता आहे. रेजोनन्स - जर्नल ऑफ सायन्स एज्युकेशन, सायन्स रिपोर्टर, मराठी विज्ञान परिशद यासारख्या दर्जेदार नियतकालिकामधून विज्ञान क्षेत्रातील संशोधन, फेलोशिप इ. सारख्या माहितीचा प्रसार केला जातो.

पहिली ते बारावीपर्यंतच जर मूलभूत विज्ञान शिक्षणाचा जागृती व प्रसार केला गेला तर उच्च शिक्षणातील मूलभूत शिक्षणाचा दर्जा नक्कीच सुधारेल. विज्ञान प्रदर्शन, विज्ञानाशी संबंधित स्पर्धा यामधील सहभाग आणि गुणवत्ता वाढविण्यासाठी आर्थिक तरतूद आवश्यक आहे. त्याचबरोबरच अध्ययन अध्यापनाचा दर्जा सुधारण्यासाठी मूलभूत विज्ञान शिक्षणाच्या सोयी सुविधा निर्माण करण्यासाठी राज्य व केंद्र शासनाने पायाभूत सुविधा व शिक्षक, विद्यार्थी यांचेसाठी प्रशिक्षण कार्यक्रम राबवण्यासाठी धोरणात्मक निर्णय घेऊन निधीची तरतूद करणे आवश्यक आहे. विविध योजना तयार करून त्याची प्रभावी पारदर्शक अंमलबजावणी झाली तर शाळा कॉलेज स्तरावरच मूलभूत विज्ञान शाखेतून उच्च शिक्षण घेण्यासाठीचे मार्गदर्शन मिळेल. त्यामुळे उच्च शिक्षणाचा दर्जा निश्चित सुधारेल.

विज्ञान विषय घेऊन उच्च शिक्षण पूर्ण केले तर माध्यमिक, उच्चमाध्यमिक, सिनिअर महाविद्यालय, विद्यापिठामध्ये शिक्षक, प्राध्यापक होता येते. सरकारी व खाजगी कंपन्यांमध्ये शास्त्रज्ञ, कंपनी व्यवस्थाकापर्यंत संधी मिळू शकते. देशामध्ये तसेच परदेशामध्ये संशोधनाच्या आणि कामाच्या मुबलक संधी उपलब्ध आहेत.

### संदर्भसूची:

१. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/nep/2020/MARATHI.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/nep/2020/MARATHI.pdf)
२. <https://www.greaterkashmir.com/todays-paper/op-ed/school-science-education-and-nep-2020>
३. [https://dsert.kar.nic.in/nep/7\\_Science\\_Education.pdf](https://dsert.kar.nic.in/nep/7_Science_Education.pdf)

## इतिहास आणि नवीन शैक्षणिक धोरण २०२२

सचिन शांताराम दहिबावकर

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### सारांश:

नवीन शैक्षणिक धोरणातर्गत वेगवेगळ्या विद्याशाखांमधील वेगवेगळे विषय एकाच वेळी शिकता येतील याची तरतूद करण्यात आली आहे. त्याचा अवलंब इतिहास या विषयात कसा करता येईल याचा विचार प्रस्तुत शोधनिबंधात केला आहे. या विषयांच्या सहाय्याने इतिहासाचे अध्ययन योग्य रीतीने होईल. त्याचबरोबर इतिहास संशोधनालाही चालना मिळेल. इतिहास विषयातून पदवी प्राप्त करणाऱ्या विद्यार्थ्यांसाठी करिअरचे एक नवीन दालन खुले होईल.

### प्रस्तावना:

नवीन शैक्षणिक धोरण हे Outcome base असावे यावर भर देण्यात आला आहे. सध्या भारतातील शिक्षण प्रणाली हि Outcome base नाही. विद्यार्थ्यांना माहिती देण्यावर या शिक्षण प्रणालीचा भर आहे. कला शाखेचा विचार करता कला शाखा Outcome base बनवणे हे आव्हानात्मक आहे. कला शाखेतून करियरच्या संधी दिवसेंदिवस मर्यादित होत चालल्या आहेत. त्यामुळे विद्यार्थीसंख्याही घटत चालली आहे. सध्याच्या शिक्षण प्रणालीमध्ये एकाच शाखेतून पदवी प्राप्त करता येते. अजूनही आंतरविद्याशाखीय दृष्टीकोन विकसित झाला नाही. आंतरविद्याशाखीय अभ्यासक्रमांमुळे कौशल्यांचा विकास होऊन त्याची सांगड रोजगाराशी घालता येईल. नवीन शैक्षणिक धोरणातील कौशल्य विकास हा हेतूही यातून साध्य होईल. प्रस्तुत शोधनिबंधात कला शाखेतील इतिहास हा अभ्यासविषयातील आंतरविद्याशाखीय दृष्टीकोन मांडला आहे.

### इतिहास आणि अन्य विषयातील अन्योन्य संबंध

कोणताही विषय हा स्वतंत्रपणे आणि एकाकीपणे विकसित होऊ शकत नाही. त्यासाठी त्याला इतर विषयांचे सहाय्य आवश्यक ठरते. परंतु सध्याच्या शैक्षणिक व्यवस्थेत तशी सोय नाही. नवीन शैक्षणिक धोरणात आंतरविद्याशाखीय दृष्टिकोनाचा अवलंब करून हि त्रुटी दूर करण्याचा प्रयत्न सुरु केला आहे. या शोधनिबंधात इतिहास या विषयाच्या विकासासाठी आणि पर्यायाने कौशल्यविकासासाठी इतिहासबरोबरच इतर विषयांच्या अभ्यास करण्याची आवश्यकता मांडली आहे. यातील काही विषयांना इतिहासाची सहाय्यकारी शास्त्र म्हणता येईल.

### इतिहास आणि पुरातत्वशास्त्र

पुरातत्वशास्त्र काही काळापूर्वी इतिहासाची एक शाखा मानली जात होती. परंतु आता पुरातत्वशास्त्र याचा एक स्वतंत्र विषय म्हणून अभ्यास केला जातो. पुरातत्वशास्त्राखेरीज इतिहास अपूर्ण आहे. इतिहासलेखनासाठी साधनांची आवश्यकता असते. हे पुरावे गोळा करण्याचे कार्य पुरातत्वशास्त्र करते. इतिहास

आणि पुरातत्वशास्त्र हे दोन्ही विषय कला शाखेचे असले तरी त्यांचा एकत्रित आणि परस्परपूरक अभ्यासक्रम उपलब्ध नाही. यासाठी इतिहास विषयातील पाठांतर पद्धती दूर करून त्याची सांगड पुरातत्वशास्त्र या विषयाशी घालता येऊ शकते. पुरातत्वशास्त्र अभ्यासताना तो केवळ वर्गात न अभ्यासात त्याचे प्रात्यक्षिक करणेही शक्य आहे. भारतात अनेक ठिकाणी ऐतिहासिक स्थळांचे उत्खनन सुरु असते. त्यात इतिहास विषयाच्या विद्यार्थ्यांना सहभागी करून घेता येईल. इतिहासाबरोबरच विद्यार्थ्यांना प्रत्यक्ष इतिहासाच्या साधनांचा अभ्यास करण्याची संधी यातून प्राप्त होईल. सध्या भारतात पुरातत्व तज्ञांची आवश्यकता आहे. मात्र त्यांची संख्या पुरेशी नाही. पुरातत्व शास्त्र या विषयाचे ज्ञान नसल्याने इतिहास अभ्यासात विकास करता येत नाही. त्यामुळे इतिहासाच्या आणि पुरातत्वशास्त्राच्या अभ्यासाबरोबरच विद्यार्थ्यांना पुरातत्वशास्त्राचे प्रात्यक्षिक ज्ञान मिळण्यासाठी नवीन शैक्षणिक धोरणात विचार करता येईल. पुरातत्वशास्त्रात शिलालेखशास्त्र, मानवंशशास्त्र, भूगर्भशास्त्र, स्थापत्यशास्त्र, शिल्पशास्त्र या शास्त्रांचा समावेश होतो.

### इतिहास आणि नाणकशास्त्र

नाणकशास्त्र हे इतिहासलेखनासाठी अतिशय उपयुक्त आहे. इतिहासाच्या अभ्यासक्रमात नाणकशास्त्र या विषयाची जोड देणे महत्त्वपूर्ण आहे. भारताचा प्राचीन इतिहास समजण्यासाठी नाणकशास्त्र या ज्ञानशाखेचे बहुमुल्य योगदान आहे. मात्र विद्यापीठीय अभ्यासक्रमात याला फारसे महत्त्व देण्यात आलेले नाही. प्राचीन भारताचा अभ्यास करत असताना नाणकशास्त्र या शाखेचा अभ्यास जर विद्यार्थ्यांने केला असेल तर त्याचे ज्ञान हे पुस्तकी न राहता त्याला पुराव्यांची जोड मिळेल. अनेकदा प्राचीन अथवा मध्ययुगीन नाण्यांचे कायदेशीर/ बेकायदेशीर व्यवहार होताना दिसतात. त्यावर अंकुश ठेवण्यासाठी नाणकशास्त्र विषयाच्या तज्ञांची आवश्यकता आहे. पण असे तज्ञ अभ्यासक फार कमी संख्येने आहेत.

प्राचीन नाण्यांमुळे विविध राजघराणी, राजांच्या वंशावळी, राजांची बिरुदे, त्यांचे कालखंड, दागदागिने, राज्याच्या सीमा अशी राजकीय माहिती मिळते. नाण्यांवर असलेल्या प्रतिमांमुळे त्याकाळाचा पेहेराव, केशभूषा यांची माहिती मिळते. नाण्यांसाठी वापरलेल्या धातूंचा अभ्यास केला असता, आर्थिक परिस्थितीचा अंदाज बांधता येतो. व्यापाराची प्रगती समजते. तत्कालीन अर्थव्यवस्थेच्या अभ्यासासाठी नाणकशास्त्राचा अभ्यास उपयुक्त ठरतो. नाण्यांवरील निरनिराळ्या देवतांच्या देवदेवतांच्या प्रतिमा धार्मिक चिन्हे यावरून तत्कालीन धार्मिक स्थितीचा अंदाजही बांधता येतो. यासर्व बाबींमुळे इतिहास विषयाच्या अभ्यासक्रमात नाणकशास्त्र या शाखेचा समावेश उपयुक्त ठरतो.

### इतिहास आणि लिपीशास्त्र

प्राचीन भारतीय इतिहासात प्रामुख्याने शारदा लिपी, ब्राम्ही लिपी, खरोष्ठी लिपी आणि काही प्रमाणात अरेमाईक लिपीचा वापर झालेला दिसतो. प्राचीन भारतीय शिलालेख हे प्रामुख्याने ब्राम्ही आणि खरोष्ठी लिपीत कोरलेले आहेत. ब्राम्ही हि भारतातील सर्वात प्राचीन लिपी होय. या लिपीपासून अनेक प्रादेशिक लिपींचा उगम झाला. भारताच्या वायव्य भागात खरोष्ठी लिपीचा वापर होत होता. खरोष्ठी लिपीतील सर्वात जुने लेख हे अशोकचे आहेत. या लिपीच्या ज्ञानामुळे भारतीय इतिहासाचे यथार्थ ज्ञान मिळण्यास मोठेच सहाय्य होते.

अनेकदा इतिहासिक तथ्यांबाबत वाद होतात. यावर निर्णय घेणे हे कठीण होते अश्या वेळी लिपिशास्त्राचा अभ्यासक यात निर्णायक भूमिका बजावू शकतो. भारतात आजही अनेक शिलालेख नव्याने सापडतात. त्यांचे वाचन झाल्यास भारतीय इतिहासात मोठीच भर पडेल.

महाराष्ट्रापुरता विचार केला तर मराठेशाहीच्या कालखंडात मोडी लिपीचा वापर लिखाणासाठी होत असे. काही कागदपत्रांचे देवनागरी लिपीत लिप्यंतर झाले आहे. मात्र अजूनही पेशवे दफ्तरातील मोडीलिपीतील जवळपास ३ कोटी कागदपत्रे लिप्यंतराच्या प्रतीक्षेत आहेत. अनेक ठिकाणी जमिनीच्या मालकीसंबंधीची कागदपत्रे हि मोडी लिपीत आहेत. तहसीदार कचेरीतील जुनी कागदपत्रे मोडी लिपीत आहेत. दिवाणी न्यायालयातील अनेक खटल्यात मोडी कागदपत्रांच्या लिप्यंतराची आवश्यकता असते. अश्यावेळी इतिहासाबरोबरच मोडी लिपी शिकवली गेली तर त्यातून महाराष्ट्राच्या जात इतिहासात भर पडेलच, त्याचबरोबर सरकारी कार्यालये, दिवाणी न्यायालये येथील लिप्यंतराच्या कामामुळे रोजगार निर्मितीही होईल.

### इतिहास आणि भाषाशास्त्र

भारतीय इतिहासात अनेक भाषांचा उगम, विकास आणि वापर झाला. प्राचीन कालखंडापासून ते समकालीन भारतापर्यंत हि प्रक्रिया निरंतर चालू होती. उदा. बुद्ध काळात पाली, अर्धमागधी; प्राचीन काळात, संस्कृत, प्राकृत; मध्ययुगीन काळात फारसी, उर्दू या भाषांचा वापर केला जात होता. याखेरीज मध्ययुगात भारतात युरोपीय सत्तांचे आणि प्रवाश्यांचे आगमन झाले. त्यामुळे पोर्तुगीज, डच, इंग्रजी, फ्रेंच, इटालियन या युरोपीय भाषांमधून भारतीय इतिहासाची साधने निर्माण झाली. भारतीय इतिहासाचे यथार्थ ज्ञान होण्यासाठी या भाषांचे ज्ञान आवश्यक आहे. ब्राम्ही, खरोष्ठी लिपींचे ज्ञान मिळवले तरी जोपर्यंत पाली, अर्धमागधी भाषांचे ज्ञान मिळत नाही तोवर प्राचीन भारताच्या इतिहासाचे अध्ययन करणे शक्य नाही. गोवा १९६० साली पोर्तुगीज वसाहतवादापासून मुक्त झाला. त्यानंतर गोवा दफ्तरातील कागदपत्रे अभ्यासकांना उपलब्ध झाली. लिस्बन येथेही अनेक पोर्तुगीज कागदपत्रे उपलब्ध आहेत. या सर्व कागदपत्रांचा अभ्यास करण्यासाठी पोर्तुगीज भाषेचे ज्ञान आवश्यक ठरते. हीच बाब फारसी, उर्दू, डच, इंग्रजी, फ्रेंच, इटालियन या कागदपत्रांना लागू होते. यासाठी महाविद्यालयीन स्तरावर पहिल्या वर्षापासून या भाषांचा समावेश अभ्यासक्रमात करणे हे इतिहासलेखनाच्या दृष्टीने आवश्यक ठरेल. त्याचा उपयोग हा व्यावहारिक जीवनातही होईल. इंग्रजी व्यतिरिक्त आणखी एक परदेशी भाषा शिकल्यास करिअरच्या दृष्टीनेही ते उपयुक्त ठरेल.

### इतिहास आणि पर्यटनशास्त्र

कोणतेही ऐतिहासिक स्थळ, वास्तू दुर्लक्षित राहिल्यास त्याला अवकळा प्राप्त होते. या वास्तू सुस्थितीत राहण्यासाठी येथे लोकांची वहिवाट असणे आवश्यक ठरते. इतिहास आणि इतिहासातील घटना याबद्दल लोकांना एक प्रकारचे कुतूहल असते. अश्या स्थळांना भेट देण्यास लोक उत्सुक असतात. किल्ले, युद्धभूमी, ऐतिहासिक स्मारके, लेणी, मंदिरे, ऐतिहासिक राजधान्या अशी ठिकाणे साधारतः पर्यटनस्थळे म्हणून विकसित करता येतात. सांस्कृतिक पर्यटन, धार्मिक पर्यटन असे पर्यटनाचे प्रकार होत. पर्यटन करत असताना आजही बहुधा ऐतिहासिक स्थळांना प्राधान्य दिले जाते. भारतात खूप मोठा सांस्कृतिक वारसा आहे. प्राचीन काळापासून

ते आधुनिक काळापर्यंत अनेक महत्वाच्या घटनांचे साक्षीदार असणाऱ्या वास्तू भारतात आहेत. इतिहास विषयाच्या अभ्यासक्रमात पर्यटनशास्त्राचा समावेश केल्यास आपल्या सांस्कृतिक वारश्याचे जतन आणि पुनरुज्जीवन होईल. याचबरोबर परदेशातही भारतीय संकृतीबद्दल माहिती होऊन भारताबद्दलचा आदर वाढीस लागेल. स्थानिक पातळीवर रोजगार निर्मिती होईल. इतिहास आणि पर्यटनशास्त्र या विषयांचा सहसंबंध जोडल्यास त्यातून दोन्ही विषयांचा विकास होईल.

**इतिहास आणि रसायनशास्त्र**

नवीन शैक्षणिक धोरणात एकाच वेळी दोन वेगवेगळ्या विद्याशाखेतील विषय अभ्यासता येण्याबाबत शिफारस केली आहे. ती इतिहास आणि रसायनशास्त्र या विषयांच्या अभ्यासासाठी उपयुक्त आहे. वरवर पाहता हे दोन्ही विषय व त्यांच्या विद्याशाखा वेगवेगळ्या दिसत असल्या तरी रसायनशास्त्र हे इतिहासाला अतिशय उपयोगी ठरणारे शास्त्र आहे. ऐतिहासिक वस्तू, कागदपत्रे यांचे जतन करण्यासाठी अनेक रसायनांचा उपयोग होतो. उदा. उत्खननात सापडलेल्या धातूच्या वस्तू रसायनांचा वापर करून स्वच्छ कराव्या लागतात. त्या पाण्याने स्वच्छ करता येत नाहीत. तसेच मातीची भांडी, खापराचे तुकडे स्वच्छ करण्यासाठी विशिष्ट रसायनांचा वापर करणे आवश्यक ठरते. अनेक ऐतिहासिक चित्रांचे, मूर्तींचे जतन करण्यासाठी त्यावर विशिष्ट रसायनांचा लेप दिला जातो. यामुळे त्याचे आयुष्य वाढण्यास मदत होते. कागदपत्रांचे जतन करण्यासाठी Phyridine, potassium Perborate, Petrol इत्यादी रसायनांचा वापर केला जातो. इतिहासकारांना याचे ज्ञान असणे आवश्यक आहे. ज्यामुळे कागदपत्रांचे जतन सहजपणे होऊ शकते.

**निष्कर्ष:**

नवीन शैक्षणिक धोरणात इतिहास या विषयापुरता विचार केल्यास त्याची सांगड अनेक विषयांची घालता येईल. दोन विद्याशाखेतील विषयांचा एकत्रित अभ्यास करण्याबाबत धोरण हे याबाबत उपकारक ठरेल. अभ्यासक्रमाबाबत लवचिकता ठेवल्यास नवीन शैक्षणिक धोरणात इतिहासासोबतच नवीन विषयही शिकता येतील. त्यामुळे इतिहास या विषयाच्या विकासात भर पडेल. यातील अनेक विषयांच्या अभ्यासाखेरीज इतिहास विषयाच्या अभ्यासाला अर्थच राहत नाही. यासाठी हे विषय, भाषा यांचा अभ्यासक्रमात समावेश होणे आवश्यक ठरते. नवीन शैक्षणिक धोरणात तशी संधी आहे.

**संदर्भसूची:**

१. नवीन शैक्षणिक धोरणाबाबत भारत सरकार आणि महाराष्ट्र शासनाचे अहवाल.
२. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/nep/2020/MARATHI.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/nep/2020/MARATHI.pdf)

## राष्ट्रीय शैक्षणिक धोरण - २०२० व शिक्षणविषयक योजना

संजय भास्कर तायडे

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### प्रस्तावना:

राष्ट्रीय शैक्षणिक धोरण २०२० च्या मध्ये मानवाला आपल्या पूर्ण क्षमता वापरता येण्यासाठी समान न्याय आणि न्याय समाज विकसित करण्यासाठी तसेच राष्ट्रीय विकासाला चालना देण्यासाठी शिक्षण हा पाया आहे. नवीन शैक्षणिक धोरणाचा हेतू मोठा आहे. भारताच्या सातत्यपूर्ण प्रगतीचा विचार करित असताना सामाजिक न्याय आणि समता या गोष्टीकडे लक्ष देणे गरजेचे आहे.

### संशोधनाची उद्दिष्टे

- १) भारतातील नवीन शैक्षणिक धोरण २०२० चा आढावा घेणे.
- २) नवीन शैक्षणिक धोरणात प्राथमिक व माध्यमिक शिक्षणाचा योजनांची माहिती घेणे.

### संशोधन पध्दती

प्रस्तुत शोध निबंधासाठी संशोधकाने दुय्यम स्रोतांचा आधार घेतला आहे. त्यासाठी विविध संदर्भ ग्रंथ, मासिके, नियतकालिके याचबरोबर विविध अहवाल व संकेतस्थळांचा आधार घेण्यात आला आहे.

### नवीन शैक्षणिक धोरणाची माहिती

भारतातील बहुसंख्य लोकांना उच्च गुणवत्तेचे शिक्षण उपलब्ध करून देण्यासाठी नवीन शैक्षणिक धोरण २०२० हे आणलेले आहे. विद्यार्थ्यांमध्ये मानवी हक्क, शाश्वत विकास, ज्ञान, कौशल्य मूल्य आणि विशेष म्हणजे स्वभाव विकसित करणे जेणेकरून ते विद्यार्थी खऱ्या अर्थाने वैश्विक नागरिक बनतील ही दूरदृष्टी या शैक्षणिक धोरणाची आहे. कुठल्याही राष्ट्राचा विकास दर वाढविण्यामध्ये त्या राष्ट्राचे शैक्षणिक धोरण अत्यंत महत्त्वाचे आहे.

नव्या शैक्षणिक धोरणाच्या विद्यार्थी केंद्रीत उद्दिष्टांमध्ये विद्यार्थ्यांमध्ये शिकण्याची जिज्ञासू वृत्ती घडविण्याबरोबरच गंभीर समस्यांचे निराकरण आणि सर्जनशीलता या गुणांचा विकास होण्यास वाव आहे.

नवीन धोरण भारताला ज्ञानक्षेत्रातील जागतिक महासत्ता म्हणून घडविण्याच्या दृष्टीने परिपूर्ण आहे. जागतिक दृष्टीकोन बाळगणारे हे धोरण भारत केंद्रीत सुध्दा आहे. विद्यार्थ्यांच्या विचारातच नव्हे

तर आत्मा, बुद्धी आणि कृतीत ही भारतीय असण्याचा अभिमान खोलवर रुजवणे हा या धोरणाचा हेतू आहे.

### अभ्यासक्रम आणि अध्यापन शास्त्राची फेररचना

धोरणाची उद्दिष्टे आणि ध्येये साध्य करण्यासाठी उदारमतवादी शिक्षण पध्दतीचे अनुसरण करून NEP-२०२० मध्ये शालेय आणि उच्च शिक्षण या दोन्ही टप्प्यांमध्ये विद्यमान अभ्यासक्रम आणि अध्यापनशास्त्राची फेररचना विचारात घेतली आहे. या धोरणात सध्याच्या १०+२ या शिक्षण रचनेत ५+३+३+४ असा बदल करण्याची शिफारस केली आहे.

विद्यार्थी, शिक्षक आणि संस्थांच्या क्षमता उभारणीवर महत्त्वपूर्ण जोर देण्यात आला आहे. विविध शास्त्रीय असल्याने संस्था आपल्या अध्यापनशास्त्राची फेररचना करतील, विद्यार्थ्यांना विषय निवडीसाठी अधिक वाव देतील. २०३५ पर्यंत टप्प्याटप्प्याने संलग्न महाविद्यालये बंद होत जाऊन बहुशाखीय विद्यापीठे आणि महाविद्यालयांचा मार्ग मोकळा केला जाईल. एनईपीने शिक्षकांना ही स्वतःमध्ये सुधारणा घडविण्याची आणि त्यांच्या व्यवसायातील ताजे संशोधन आणि प्रगतीची माहिती घेण्याची सातत्याने संधी दिली जायला हवी अशी शिफारस केली आहे. रचना, नियमन आणि प्रशासन यासह सध्याचा कल पाहून त्यानुसार शिक्षकांच्या शिक्षणासाठी संधीही व्यापक केली आहे.

सन २०३० सालापर्यंत शालेय शिक्षणाचे प्रमाण १००% करणे आणि २०३५ सालापर्यंत उच्च शिक्षणाचे (५०%) प्रमाण ५०% करणे.

### नवीन शैक्षणिक धोरणातील शालेय शिक्षण रचना

#### टेबल १: नवीन शैक्षणिक धोरणातील शालेय शिक्षण रचना

वय	३-६ वर्ष	६-८ वर्ष	८-११ वर्ष	११-१४ वर्ष	१४-१८ वर्ष
वर्ग	नर्सरी व केजी	वर्ग १ व २	वर्ग ३-५	वर्ग ६-८	वर्ग ९-१२
संवर्ग	बेसिक	पूर्व प्राथमिक	प्राथमिक	माध्यमिक	उच्च माध्यमिक

पूर्व प्राथमिक शिक्षण म्हणजे प्राथमिक शिक्षणाची सुरुवात होण्यापूर्वी बालकांना दिले जाणारे शिक्षण. बालकांचा सर्वांगीण विकास होण्यासाठी हे शिक्षण महत्त्वाचे आहे. सध्या अंगणवाडी, बालवाडी कार्यक्रमांतर्गत हे शिक्षण दिले जाते. स्वातंत्र्यपूर्व काळात मॉन्टेसरी बाईनी या शिक्षणाचा पाया घातला. पूर्व प्राथमिक शिक्षण व प्राथमिक शिक्षणात बालकांचा विकास, पोषण, आरोग्य शारीरिक मानसिक नैतिक भावनिक व सामाजिक इत्यादी विकासाच्या बाबतीत बालसंगोपन व बालशिक्षण यांना अग्रक्रम देण्यात आला आहे. प्राथमिक शाळांतील गळती थांबविण्यासाठी विशेष प्रयत्न केलेले दिसून येतात. कोणत्याही

देशाच्या विकास हा शिक्षणाच्या माध्यमातून होत असतो. नवीन शैक्षणिक धोरणात ३ व्या वर्षानंतर मुलं नर्सरीत प्रवेश घेणार आहे. पंधरा वर्षापर्यंत त्याचे शिक्षण सतत चालू राहणार आहे. व्यक्तीचा ८५% मेंदूचा विकास हा ३ ते ६ वर्षापर्यंत होत असतो. या पंधरा वर्षात विद्यार्थ्यांना चांगल्या सामाजिक सवयी लागतात. यानंतर विविध क्षेत्रात विद्यार्थी आपला ठसा उमटवू शकतात. कला,वाणिज्य,विज्ञान,संगीत इत्यादी क्षेत्रात विद्यार्थी जाऊ शकतात. पुढील शिक्षण हे विविध शाखीय असल्याने उच्च शिक्षण संस्थांना आपल्या अध्यापनशास्त्राची फेररचना करावी लागेल.

### शासनाच्या विविध शिक्षण योजना

- १) वस्ती शाळा योजना: १ ली ते ४ थी मधील १५ विद्यार्थ्यांसाठी एक वस्ती शाळा असते ग्राम शिक्षण समिती/ग्रामपंचायती मार्फत वस्ती शाळा चालविली जाते. या योजनेचे स्वरूप अनौपचारिक असून ती स्थानिक लोकांची शाळा आहे.
- २) महात्मा फुले शिक्षण हमी योजना: ग्रामीण भागातील शेती, पशुसंवर्धन, साखर कारखाना या विविध ठिकाणी काम करणारे बालमजूर व मजुरांची मुले या योजनेचा लाभ घेतात. १० ते २० मुलांकरिता एक केंद्र सुरु करण्यात येते.
- ३) पुस्तक पेढी योजना: या योजनेतर्गत अनुसूचित जाती, अनुसूचित जमाती, विमुक्त जाती व भटक्या जमाती या समाजातील आणि इतर दुर्बल समाज घटकांतील विद्यार्थ्यांना क्रमिक पुस्तकांचे संच पुरविले जातात.
- ४) शैक्षणिक उठाव योजना: या योजनेतर्गत प्रत्येक शैक्षणिक वर्षात शिक्षकांनी पैसे व वस्तू स्वरूपात गावात फिरून शाळेतील भौतिक सुविधांमध्ये सुधारणा करणे.
- ५) विद्यार्थ्यांसाठी पोषण आहार: विद्यार्थ्यांची शाळेतील उपस्थिती वाढविण्यासाठी विद्यार्थ्यांना आहार पुरविण्याची पूर्णतः केंद्र पुरस्कृत योजना आहे.
- ६) सेतू शाळा: ज्या मुलांनी मधूनच शाळा सोडली आणि ते शाळेपासून दूर गेल्याने त्यांच्या शिक्षणात खंड पडला अशा विद्यार्थ्यांसाठी सेतू शाळा आहे.

१) अनिवासी सेतू शाळा

२) निवासी सेतू शाळा

### निष्कर्ष:

- १) विविध शाखीय शिक्षण असल्याने विद्यार्थ्यांना आपली आवड व योग्यतेनुसार शिक्षण घेता येईल.
- २) विद्यार्थ्यांच्या मुल्यांकनाची चौकट सुधारित केल्यामुळे परीक्षेचा ताण कमी होईल.
- ३) ग्रामीण भागातील विद्यार्थ्यांमध्ये विविध कौशल्ये निर्माण होतील.

- ४) शिक्षणविषयक योजनांमध्ये केंद्र व राज्य शासनाला बदल करावे लागतील.
- ५) शैक्षणिक धोरण किती ही चांगले असले तरी त्यास पूरक सोयी सुविधांमध्ये वाढ करावी लागेल.
- ६) विविध कौशल्ये मिळविण्यासाठी प्रशिक्षित शिक्षक व इतर सोयी वाढल्या पाहिजेत.
- ७) ग्रामीण व आदिवासी भागातील शैक्षणिक पायाभूत सोयीकरिता पुरेसा निधी उपलब्ध झाला पाहिजे.
- ८) स्थानिक साधनसंपत्ती व त्यावर आधारित कौशल्ये विकसित केली पाहिजेत.

**संदर्भग्रंथ:**

१. राज्यसेवा मुख्य परीक्षा सामान्य अध्ययन स्टडी सर्कल: प्रकाशन
२. सामान्य क्षमता चाचणी स्टडी सर्कल: डॉ.आनंद पाटील
३. योजना: फेब्रुवारी २०२२
४. युनिव्हर्सिटी न्यूज - सप्टेंबर २०२२
५. युनिव्हर्सिटी न्यूज - नोव्हेंबर २०२२
६. युनिव्हर्सिटी न्यूज - ऑक्टोबर २०२२
७. युनिव्हर्सिटी न्यूज - मे २०२२

## नवीन शैक्षणिक धोरणातून जगण्याशी जोडणारे शिक्षण आवश्यक

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### सारांश:

कोणत्याही धोरणाबरोबरच त्याची अंमलबजावणी तेवढीच महत्वाची असते. नवीन शैक्षणिक धोरणात रोजगाराभिमुख शिक्षणाला प्राधान्य देण्यात येणार आहे. सर्वसामान्य नागरिकांच्या मुलभूत गरजा अन्न, पाणी, निवारा, रोजगार या आहेत. कोरोना साथ, जागतिक तापमानवाढ या पार्श्वभूमीवर या मुलभूत गरजा भागविता येतील अशा बाबींचा अभ्यासक्रमात समावेश करणे आवश्यक ठरेल. अन्न सुरक्षा साठी शैक्षणिक संस्थांमध्ये परसबाग शिक्षण, मॅडलचे सुरूवातीचे प्रयोग, नैसर्गिक युरिया, बहुपयोगी बायोचार, वाया जाणारे अन्न व फळे वाचविणे, शेतकरी आत्महत्या थांबविण्यासाठी उपाययोजना, अल्पखर्ची पाषाण तलाव, बांधकाम तसेच पर्यावरण पुरक घर बांधकाम यांच्या अभ्यासक्रमातील समावेशामुळे मुलभूत गरज भागून रोजगार निर्मितीही होऊ शकेल.

### प्रस्तावना:

शासनाने नवीन शैक्षणिक धोरण जाहीर केले आहे. यात कौशल्य विकासाला प्राधान्य देण्यात येणार आहे. शिक्षण जगण्याशी जोडणे नितांत आवश्यक असते. अन्यथा भविष्यात तशा शिक्षणाचा व्यवहारीक उपयोग होत नाही. ही वस्तुस्थिती नाकारता येणार नाही. मी बालभारतीच्या इ. 9 वी व 10 वी च्या जलसुरक्षा विषयाच्या अभ्यासगटात कार्यरत आहे. विशेषतः 10 वी च्या पाठ्यपुस्तकात मी सुचविलेल्या 21 व्यवहारोपयोगी सुचनांचा समावेश झाला आहे. यशवंतराव चव्हाण विकास प्रशासन प्रबोधिनी (यशदा) मध्ये मी 4 विषयांचा अतिथी व्याख्याता म्हणून काम करतो.

कौशल्य विकासाचा पुरक विषय शिकवण्यात येणार आहे. परंतु महाराष्ट्रातील स्थानिक परिस्थितीचा विचार करून नियमित पाठ्यपुस्तकातही अन्न, पाणी, निवारा, व रोजगार साठी कौशल्य विकास, आर्थिक बचत व मुल्यवर्धन याबाबतच्या बाबी शिकविणे आवश्यक आहे, असे माझे मत आहे. माझे काही अनुभव तसेच अभ्यासक्रमात समाविष्ट करावयाच्या संभाव्य बाबी नमुद करत आहे.

बरोजगारीची समस्या: मी विविध शासकीय पदांसाठी दहा हजार पेक्षा जास्त उमेदवारांच्या मुलाखती घेतल्या आहेत. यातून सतत बेरोजगारीचे गंभीर प्रश्न समोर येतात. सर्वानाच शासकीय किंवा निमशासकीय नोकरी मिळू शकत नाही. मग या असंख्य बेकार युवकांनी काय करावे ? काय करता येण्यासारखे आहे ? त्यांनी घेतलेल्या शिक्षणाचा काय वापर होऊ शकेल ? पालकांनी व शिक्षकांनी विद्यार्थ्यांना कोणते पुरक ज्ञान द्यावे ? किंवा अभ्यासक्रमात काय बदल करता येईल का ?

सर्वसामान्यांना रोजगार मिळणे अवघड आहे. तेथे दिव्यांग बांधवांनी काय करावे ? असा मी विचार करीत असतो.

दिव्यांग बांधवांसाठी धोरण: यशस्वी अंमलबजावणी: सन 2001 साली शासनाने दिव्यांग बांधवांसाठी धोरण जाहीर केले. त्यावेळी मी रायगड जिल्हा परिषदेत 6 वर्षे कार्यरत होतो. त्यावेळी सर्वांच्या सहकार्याने दिव्यांग बांधवांसाठी 12 नाविन्यपूर्ण उपक्रम सुरु केले व राबविले. यात व्यवसाय प्रशिक्षण व स्वयंरोजगार यावर विशेष भर दिला. याबद्दल रायगड जिल्हा परिषदेला 2010 साली राष्ट्रीय पुरस्कार मिळाला. असा पुरस्कार मिळालेली महाराष्ट्रातील ही एकमेव जिल्हा परिषद आहे. मुंबई जिल्ह्यातील दिव्यांगांच्या 27 शाळांमध्ये रोजगाराभिमुख शिक्षणाला चालना देण्यासाठी मी विविध उपक्रम राबविले.

कौशल्य विकास उपक्रम सद्यस्थिती: सध्या प्रत्येक जिल्ह्यात काही शाळांमध्ये कौशल्य विकासाचे वेगळे अभ्यासक्रम सुरु झाले आहेत. मी मालवण येथील भंडारी हायस्कूल मधील बहुविविध कौशल्य विकास उपक्रमाला आवर्जून भेट दिली. शेती, वेल्डींग, इलेक्ट्रीकल, गृह आरोग्य असे अभ्यासक्रम (MSFC) शिकविले जातात. हे पाहून मी आनंदीत झालो. कारण जे पेटावे ते उगवते. सदर उपक्रमांचे याचे दूरगामी परिणाम फार चांगले होतील.

सध्या कौशल्य विकासाचे चालणारे अभ्यासक्रम हे जिल्ह्याच्या काही मर्यादित शाळांमध्येच आहेत. विद्यार्थ्यांच्या कल्पकतेला चालना मिळण्यासाठी आणि त्यांचा कल समजण्यासाठी या संकल्पनेची व्याप्ती वाढली पाहिजे. अनेक शिक्षकांनी अभ्यासक्रमा व्यतिरिक्त पूरक ज्ञान दिल्याने माझ्या जीवनात फार उपयोग झाला.

आयडियाज रूल्स द वर्ल्ड (Ideas Rules the World): नाविन्यपूर्ण कल्पना जगावर राज्य करतात असे म्हटले जाते. सर्वसामान्य भारतीय माणसातील संशोधकांना नॅशनल इनोव्हेशन फाउंडेशनतर्फे राष्ट्रपतींच्या हस्ते गौरविण्यात येते. त्यांच्या वेबसाईटवर विविध क्षेत्रातील संशोधक व शोध याची माहिती आहे. पाठ्यपुस्तकात महान शास्त्रज्ञांबरोबरच सर्वसामान्य माणसातील संशोधकांनी लावलेल्या शोधांच्या माहितीचा संबंधित पाठात समावेश करावा. त्यामुळे असे संशोधन व रोजगार निर्मिती करण्याबाबत प्रेरणा, जिज्ञासू वृत्ती, कल्पकता व सृजनशीलता विद्यार्थ्यांमध्ये निर्माण होईल.

विविध भागातल्या स्थानिक लोकांनी अनुभवांनी शोधलेल्या काही तंत्राचा (ITK- Indigenous Technology Knowledge) समावेश पाठ्यपुस्तकात करावयास हवा.

विज्ञान व तंत्रज्ञान: विज्ञानाचा व्यवहारातील उपयोग म्हणजे तंत्रज्ञान होय. वनस्पतीशास्त्राचा व्यवहारातील उपयोग म्हणजे शेती होय व प्राणीशास्त्राचा व्यवहारातील उपयोग म्हणजे पशुसंवर्धन होय. त्यामुळे वनस्पतीशास्त्र व प्राणीशास्त्र शिकविताना काही प्रमाणात शेती व पशुसंवर्धनाच्या बाबी शिकविणे अपरिहार्य आहे.

गळती समस्या एक वास्तव: देशाला स्वातंत्र मिळून 75 वर्षे होऊनही शालेय स्तरावर विद्यार्थ्यांची मोठ्या प्रमाणात गळती होते. हे कटू वास्तव आहे. ब-याच वेळेला 10 वी /12वी नंतरच्या अभ्यासक्रमाची पूर्वतयारी म्हणून शालेय अभ्यासक्रमात काही थेंअरीच्या बाबी शिकविल्या जातात. परंतु जे विद्यार्थी शालेय स्तरापर्यंतच शिकतात. त्यांना प्रत्यक्षात याचा व्यवहारात उपयोग होत नाही. याचा वस्तूनिष्ठ विचार करून शालेय अभ्यासक्रमात व्यवहारोपयोगी तसेच रोजगार निर्मितीला चालना देणा-या अधिकाधिक बाबी शिकविल्या पाहिजेत व थेंअरॉटीकल बाबी काही प्रमाणात कमी कराव्यात.

कौशल्य विकास साध्य होण्यासाठी पाठ्यपुस्तकातील संभाव्य बदल व अन्य पुरक ज्ञान- उदाहरणे

( अ ) अन्न सुरक्षा

1. अन्न सुरक्षा - ग्रामीण शेती व शहरी शेती: सन 2020 व 2021 मध्ये कोरोना या रोगाची जगात साथ पसरली. जगात अनेक देशात याचा प्रतिबंध करण्यासाठी लॉक डाउन जाहीर करण्यात आला. भारतात अन्न धान्याची वाहतूक चालू ठेवण्यात आली.परंतु काही देशात याबाबतही अडचणी निर्माण झाल्या. सध्या प्रामुख्याने ग्रामीण भागात शेती केली जाते. हा शेतमाल शहरांकडे पोहोचवण्यात येतो. म्हणजेच शहरे ही खेड्यापाड्यांवर अन्न व जीवनावश्यक बाबीसाठी पूर्णपणे अवलंबून आहेत. कोरोना सारखी किंवा अन्य युद्धजन्य गंभीर स्थिती निर्माण झाल्यास काय करायचे याचे जगात विचारमंथन व प्रयोग चालू झाले आहेत.

या दृष्टीने 5 ते 10 दिवसात अत्यंत कमी जागेत तयार होणारा अल्पकालीन भाजीपाला (मायक्रोगीन) याचे तंत्र सर्व विद्यार्थ्यांना शिकविणे आवश्यक आहे. उदा. मेथी, हरभरा, वाल.

क्युबा देशात गंभीर स्थिती निर्माण झाल्याने शहरी शेतीचा मोठ्या प्रमाणात अवलंब केला आहे. त्यातील विविध तंत्र शिकविणे आवश्यक आहे. उदा. Layer farming, फूड गार्डन आर्किटेक्चर.

क्युबा हा देश म्हणजे एक बेट आहे. हा देश अमेरिकेच्या जवळ आहे. मात्र बऱ्याच वर्षांपासून या दोन्ही देशात वाद आहेत. त्यामुळे सोव्हीएट युनियन (रशिया) व क्युबा या देशांची मैत्री झाली. या दोन देशात अंतर मात्र खुप आहे. क्युबा मध्ये मोठ्या प्रमाणावर उस लावून साखर तयार करण्यात येत असे. ही साखर सोव्हीएट युनियनला पाठवत असत. त्या बदल्यात क्युबाला पेट्रोल, अन्नधान्य, रासायनिक खते व किटकनाशके मिळत असत.

सोव्हीएट युनियन या देशाचे विभाजन झाल्यानंतर त्यांचा क्युबा बरोबरचा व्यापार थंडावला. त्यामुळे 1991 च्या सुमारास क्युबात पेट्रोल, अन्नधान्याची भीषण टंचाई निर्माण झाली. नागरिकांचा पोषक आहार कमी झाला. ट्रॅक्टर चालवायला पेट्रोल मिळत नव्हते. रासायनिक खते उत्पादन थंडावले. अशा परिस्थितीत क्युबाने प्राणी, शेणखत अशा विविध उपलब्ध साधनसामुग्रीचा वापर करून शहरी शेती व सेंद्रिय शेतीमध्ये चांगली मार्गक्रमणा केली. यामुळे हळूहळू नागरिकांना पुरेसे अन्न उपलब्ध झाले. त्याची माहिती करून घेणे आवश्यक आहे.

क्युबाची राजधानी हवाना या शहराची लोकसंख्या सुमारे 22 लाख आहे. आता तेथे 80 टक्के भाजीपाला, फळे हे नाशवंत पदार्थ व अन्य बाबी शहरातच उत्पादित केल्या जातात. हे अन्नपदार्थ लांब अंतरावरून आणावे न लागल्याने इंधनाचीही बचत होते. तसेच ताजा व पौष्टिक भाजीपाला, कोंबडीचे मांस इत्यादी अन्नपदार्थ उपलब्ध होतात.

2. शैक्षणिक संस्थांमध्ये परसबाग: प्रत्येक शाळेत परसबाग सुरू करण्याबाबत केंद्र शासनाने दोन वेळा लेखी सुचना दिल्या आहेत. तसेच सविस्तर माहिती पुस्तिका दिल्या आहेत. या माहितीपत्रीकेत सुरुवातच पुढील पध्दतीने केली आहे.

I Saw a hungry man...

I taught him how to fish.

परसबागेच्या माध्यमातून जिवनोपयोगी कौशल्य प्राप्ती, सकस आहार व कुपोषण दूर करण्यास मदत अशा अनेक बाबींचा उहापोह करण्यात आला आहे.

या शालेय परसबागा ग्रामीण व शहरी शाळातही उपलब्ध जागेत कशा तयार कराव्या याचेही मार्गदर्शन केंद्र शासनाने केले आहे. हा उपक्रम महाविद्यालयातही राबविणे आवश्यक आहे.

3. जीवशास्त्र - मॅडेलचे सुरुवातीचे प्रयोग: अनुवंशशास्त्राचा जनक मॅडेलचे विविध प्रयोग इयत्ता 10 वी पासूनच्या पाठ्यपुस्तकात आहेत. मॅडेलने उंच वाटाण्याची रोपे व बुटक्या वाटाण्याची रोपे यात परागीकरण केले. तेव्हा प्रथम पिढीत त्याला सर्व उंच प्रकारची रोपे मिळाली. यात पुन्हा परागीकरण केले असता त्याला 3 उंच व 1 बुटके या प्रमाणात रोपे मिळाली. यावरून गुणसूत्रांची जोडी असते. त्यातील एक गुणसूत्र प्रभावी असते. हे मी विद्यार्थी असल्यापासून गेली किमान 30 वर्षे शिकविण्यात येत आहे.

मला कित्येक वर्षे हा प्रश्न पडला होता की मॅडेलला सुरुवातीला शुद्ध उंच व शुद्ध बुटकी रोपे कशी मिळाली? कालांतराने त्याचे उत्तर मला मिळाले.

मॅडेलने एकूण 8 वर्षे प्रयोग केले. त्यातील शेवटच्या 6 वर्षांचे प्रयोग वर नमूद केले आहेतच. मात्र सुरुवातीच्या 2 वर्षातील प्रयोगांचाही अभ्यासक्रमात समावेश होणे आवश्यक आहे. मॅडेलने सुरुवातीला दोन वर्षात एक विशिष्ट गुणधर्म असणारी रोपे स्वतंत्ररित्या लावली. उदा. उंच रोपे स्वतंत्र लावली. व त्यातच परागीकरण केले. तर बुटकी रोपे स्वतंत्र लावली व परागीकरण केले. मात्र एखादे रोपे भिन्न प्रकारचे आल्यास ते काढून टाकले. अशा प्रकारे त्याला कालांतराने शुद्ध बियाणे मिळाले. याला शुद्ध बियाणे निवड पध्दत (Pure line Selection) असे म्हणता येईल.

असंख्य शेतकऱ्यांच्या आयुष्यात सकारात्मक बदल होण्यासाठी हे प्रयोग शिकविणे महत्वाचे आहे. शेतकरी स्वतः स्थानिक जातींचे शुद्ध बियाणे तयार करून संवर्धन करू शकतात. त्यांना प्रत्येक वेळी बियाणे विकत आणण्याची आवश्यकता नाही. यामुळे मोठ्या प्रमाणात आर्थिक बचत

होईल. शेती हे केवळ अंग मेहनतीचे काम न रहाता बुद्धीचे काम असल्याचे जाणवेल व शेतकऱ्यांना त्यात अधिक आवड निर्माण होईल . शेतकऱ्यांचे जीवनमान सुधारेल .

सध्या दरवर्षी बियाण्यांच्या खाजगी कंपनीद्वारे सुमारे 38500 कोटी रुपयांची उलाढाल होते. बहुतांश बियाणी ही F1 हायब्रीड प्रकारातील असल्याने पुर्नवापर करता येत नाही. या निवड पद्धतीने काही शेतकऱ्यांनी स्वतः विविध पिकांच्या जाती विकसित केल्या आहेत. उदा. दादाजी खोब्रागडे यांनी निरीक्षण व निवड करून भाताच्या 9 जातींचे संशोधन केले. त्यांना तत्कालीन राष्ट्रपती मा.डॉ.ए.पी.जे.अब्दुल कलाम यांच्या हस्ते गौरविण्यात आले. अशाप्रकारे प्रकाशसिंग रघुवंशी, लक्ष्मीबाई झुलापी, धीरजलाल ठुम्मर, मावंजी पवार व सुनील कामडी इ. यांनी पिकांच्या विविध जाती विकसित केल्या आहेत. या पद्धतीने उत्तम पशुधनही विकसित करता येते. (या विषयावरील माझा सविस्तर लेख विविध वृत्तपत्र व मासिकात प्रसिद्ध झाला आहे.)

4. वनस्पती शास्त्र - संसाधनांचा शाश्वत उपयोग करणे उदा. फणस व कोकम:-

फणस व कोकमची फळे पावसाळ्यात पिकल्याने खराब होतात. पावसामुळे त्याची काढणी व प्रक्रिया अवघड होते. यामुळे कोट्यावधी रुपयांचे नुकसान होते. त्यांच्या बियांची रुजवण शक्ती थोडे दिवस असते. पावसाळ्यातील फळांच्या बियांना पाणी मिळाल्याने ती रुजतात. ही प्रक्रिया वर्षानुवर्षे झाल्याने निसर्गात अशा झाडांचे प्रमाण वाढत आहे. मात्र काही तुरळक झाडांची फळे हिवाळ्यात किंवा उन्हाळ्याच्या प्रारंभी पिकतात. विद्यार्थ्यांच्या सहकार्याने उत्तम झाडे निवडून त्यांची कलमे किंवा बी पासून त्वरीत रोपे केल्यास या समस्येवर मात करता येईल.

5. शेतकरी आत्महत्या वर काही उपाय -

अन्नदाता असणाऱ्या शेकडो शेतकऱ्यांनी कर्जबाजारीपणामुळे व सावकारांच्या जाचामुळे आत्महत्या केल्या आहेत. त्यावर उपाय शिकविणे आवश्यक आहे.

- I. नागरीकशास्त्र - कायदा - सावकारी बाबत शासनाने 2014 साली कायदा केला आहे. त्यानुसार प्रत्येक सावकाराला शासनाकडे नोंदणी करावी लागते. मुद्दल पेक्षा जास्त व्याज घेता येत नाही. व्याजावर व्याज घेता येत नाही. कोऱ्या कागदावर सही घेता येत नाही. जमीन गहाण ठेवता येत नाही. कायद्याचे उल्लंघन केल्यास सावकाराला तुरुंगवास होतो.
- II. गणित - व्याजदर फरक - वार्षिक व्याजदर व मासिक व्याजदर यातील फरक नीट लक्षात न आल्याने शेतकऱ्याची फसगत होऊ शकते. त्यामुळे हा फरक व फायदे तोटे समजावून सांगावे.
- III. इतिहास - शेतकऱ्यांचा सावकारांच्या विरुद्ध सात वर्षे प्रदीर्घ संप- हा इतिहास नमूद केल्यास विद्यार्थ्यांना अन्याया विरुद्ध लढण्याची प्रेरणा मिळेल. चरी गावाच्या सर्व शेतकऱ्यांच्या जमीनी सावकारांनी हडप केल्या होत्या. मूळ शेतकरी कूळ म्हणून राबत होते. सावकारांच्या विविध अन्यायाविरुद्ध चरी ( ता.अलिबाग ) व आजुबाजूच्या 14 गावातील शेतकऱ्यांनी प्रदीर्घ संप

केला. त्याचे नेतृत्व डॉ. बाबासाहेब आंबेडकर, नारायण नागू पाटील, तुकाराम खंडू जाधव, नामदेव पोसू पाटील (स्थानिक शेतकरी ) यांनी केले. सावकार व शेतकरी यांच्यात मध्यस्थी करण्यासाठी तत्कालीन महसूल मंत्री श्री मोरारजी देसाई चरीला आले. त्यांनी शेतकऱ्यांच्या बाजूने निर्णय दिला. कालांतराने खोती रद्द केल्याचा कायदा (Khoti Abolition Act) व कुळ कायदा झाल्याने शेतकऱ्यांना जमिनी परत मिळाल्या. या काळामध्ये शेतकऱ्यांना उपासमार व अनेक हालअपेष्टा सहन कराव्या लागल्या. घरात राहिलेला कोंडा व जंगलातील भोकर नावाची फळे यापासून खापुरला व सांजण असे नवीन पदार्थ शेतकऱ्यांनी खाण्यासाठी तयार केले. अशाप्रकारे उपासमार सहन केली व लढा यशस्वी केला.

6. रसायनशास्त्र/ जीवशास्त्र - नैसर्गिक युरिया: नायट्रोजन हे मुलद्रव्य झाडांना आवश्यक असते. युरियामध्ये नायट्रोजन असल्याने शेतीसाठी मोठ्या प्रमाणात वापरण्यात येतो. कोट्यावधी रुपये खर्चून कृत्रिम युरियासाठी लागणारा कच्चा माल/ इंधन परदेशातून आयात केले जाते. उदा. भारताने नोव्हेंबर 2021 मध्ये एक हंगामासाठी 11500/- कोटी रूपायांचा युरिया आयात केला. सर्वप्रथम युरिया सस्तन प्राण्याच्या मुत्रामध्ये हर्मन बोरहावे या शास्त्रज्ञाला सन 1727 साली आढळून आला. अशाप्रकारे युरियाचा शोध लागला. नंतर 1828 मध्ये फ्रेडरीच वोहलर ने प्रयोगशाळेमध्येने कृत्रिम युरिया तयार केला. गोमुत्रामध्ये नैसर्गिक युरिया असतो. त्यामुळे त्याच्या वापराने वनस्पतीला नायट्रोजन उपलब्ध होते. युरियाच्या आयातीसाठी अब्जावधी रुपये खर्च होतात. नैसर्गिक युरियाचा वापर केल्यास फार मोठी बचत करता येईल. या अनुषंगाने गोमूत्र साठविण्यासाठी किंचीत उतार असलेले गोठे बांधकाम ही संकल्पना शिकवावी.

7. बहुपयोगी बायोचार व सुपीक जमिन:

अत्यंत सुपीक जमीन टेराप्रेटा - जमिनीत दोन टक्के पेक्षा जास्त सेंद्रिय कर्ब असल्यास ती जमीन सुपीक समजली जाते. पण बहुतांश शेतात 1 टक्के पेक्षा कमी सेंद्रिय कर्ब आढळतो. शास्त्रज्ञांना अमेझॉन च्या खोऱ्यात काही ठिकाणी टेराप्रेटा ही अत्यंत सुपीक जमीन आढळली. त्यात त्यांना चक्क दहा टक्के पेक्षा जास्त सेंद्रिय कर्ब आढळला. ही जमीन शेकडो वर्षांपूर्वी येथील स्थानिक शेतकऱ्यांनी तयार केली होती. त्याच्या आजूबाजूच्या जमिनी मात्र नापीक आहेत. या सुपीक जमिनीत प्रामुख्याने बायोचार (सुपीक कोळसा) तसेच मासे व प्राण्यांची हाडे, मातीच्या भांड्यांचे तुकडे, कंपोस्ट खत आढळते. यामुळे बायोचार कडे जगातील शास्त्रज्ञांचे लक्ष वेधले गेले आहे.

कोळशाचे लिग्नाइट, बिट्युमिनस, अँथ्रासाईट हे प्रकार मी अभ्यासक्रमात शिकलो पण बायोचार शिकलो नाही.

बायोचार - बायोचार हा कोळशाचा एक प्रकार आहे. वनस्पतींची पाने, तण, लाकूड इत्यादी पदार्थांचे कमी हवेत पायरोलिसिस या नियंत्रित ज्वलन पद्धतीद्वारे बायोचार तयार होतो. शहरातील पालापाचोळा व

कचऱ्या पासूनही बायोचार करता येतो. बायोचारपासून कांडी कोळसा करून विक्री करता येते. पुणे शहरातील समुचीत इन्व्हायरोटेक या संस्थेमाफत बायोचार व कांडी कोळसा करण्याचे मी प्रशिक्षणही घेतले आहे. हा एक अतिशय अद्भुत पदार्थ आहे.

वैशिष्ट्य - बायोचार सच्छिद्र असतो त्यामुळे कोणतेही द्रव स्वरूपातील खत यात शोषले जाते. ते झाडाला दिल्यास हळूहळू उपलब्ध होते व झाडांची वाढ उत्तम होते. कंपोस्ट, सेंद्रिय खत व जिवाणू खत बायोचार मध्ये जिरवून वापरल्यास जिवाणू ची संख्या वाढते. बायोचार हा विम्लधर्मीय आहे. त्यामुळे आम्लधर्मीय व जांभा दगडाच्या लाल वरकस जमिनीत त्याचे अधिक चांगले परिणाम जाणवतात. . केवळ बायोचार जमिनीत वापरण्यापेक्षा यात अन्य खत जिरवून वापरणे आवश्यक आहे. विशेषतः कर्बनत्र गुणोत्तराचा विचार करता बायोचार मध्ये गोमुत्र जिरवीणे हा सर्वाधीक चांगला पर्याय आहे. नेपाळमध्ये केलेल्या प्रयोगात बायोचार व गोमुत्राच्या पंधराशे किलो मिश्रण वापरल्याने भोपळ्याच्या उत्पादनात 60 हजार किलो एवढी भरिव वाढ आढळली. बायोचार घरगुती चुलीतही तयार होतो. . बायोचार शेकडो वर्षे टिकतो. शेतातील अवशेष जाळल्यामुळे प्रदूषण होते.त्याऐवजी बायोचार निर्माण केल्यास Carbon Sequestration होऊन प्रदुषणाच्या समस्येवर काही प्रमाणात आळा घालता येईल.

(ब ) पाणी हेच जीवन

1. भूगोल - बेसॉल्ट दगडाचा पाषाण तलावासाठी उपयोग: महाराष्ट्रात वेळोवेळी मोठ्या प्रमाणात दुष्काळी परिस्थिती निर्माण होते. महाराष्ट्र (81% भूभाग) व इतर राज्यात सुमारे पाच लक्ष चौ. किमी क्षेत्रात बेसॉल्ट प्रकारचा काळा कठीण दगड आढळतो. बेसॉल्टची पाणी सामावण्याची क्षमता 4% पेक्षा कमी असणे ही मूलभूत नैसर्गिक मर्यादा आहे. यामुळे असंख्य बोअरवेलना पाणी लागत नाही. शेतक-यांच्या पैशाचा अपव्यय होतो व पदरी निराशा येते. मात्र सकारात्मक विचार करता हा दगड तलाव, टाकी खणण्यासाठी अत्यंत उपयुक्त आहे.

छत्रपती शिवाजी महाराजांच्या काळात किल्ल्यावर दगडाचे खोदकाम करून तलाव निर्माण केले जात होते व हाच दगड विविध बांधकामासाठी वापरला जात असे. रायगडावरील गंगासागर तलाव हे याचे उत्तम उदाहरण आहे. या शिवकालीन तंत्रा पासून आपण प्रेरणा घेणे आवश्यक आहे.

• यशस्वी प्रयोग:

(अ) बोरघर हवेली ता. तळा, जि. रायगड येथे समाज कल्याण विभागाचे वसतीगृहात पाणी टंचाई होती. मी सहाय्यक आयुक्त समाज कल्याण, रायगड या पदावर कार्यरत असताना उपाय योजना केल्या. या परिसरातील जुन्या दगडखाणीतील पाणी बागेसाठी वापरले. त्यामुळे 4 पासून 200 झाडे झाली. व परिसर हिरवागार झाला.

(ब) अलिबाग तालुक्यातील बापळे, वळवली आणि पुणे जिल्हयातील राजगुरुनगर तालुक्यात हांडेवाडी, घोटवाडी, पारधेवाडी या गावात पाणी टंचाईवर मात करण्यासाठी दगडामध्ये तलाव/टाक्या खोदल्या आहेत.

रस्ता व विविध बांधकामे यासाठी मोठ्या प्रमाणात दगड लागतो. दगडखाणीतून विक्रीसाठी दगड काढण्यात येतो. या दगडखाणी व्यवस्थित खणल्यास अल्पखर्चात पाषाण तलाव करता येईल.

उदा. ग्रामीण भागातील 1 किमी लांबीच्या 6 इंच जाडीच्या व 10 फूट रुंदीच्या कच्च्या रस्त्यासाठी 160 ब्रास खडी लागते. एवढी मोकळी खडी काढण्यासाठी सुमारे 144 ब्रास (90%) चा खड्डा खणावा लागेल. त्यास सुमारे 4 लाख लीटर पाणी राहते. 5 किमी रस्ता केल्यास खड्ड्यात 20 लाख लीटर या प्रमाणे मोठ्या प्रमाणावर पाणी साठवता येईल.

महाराष्ट्रातील सर्व रस्त्याची एकूण लांबी सुमारे 3 लाख 9 हजार कि.मी. आहे. म्हणजेच तलावात रूपांतर केल्यास अल्प खर्चात जागोजागी सुमारे 1200 कोटी लिटर पाणी साठवता येईल.

## 2. भौतिकशास्त्र - पाण्याचे वहन

श्री. ए. जगदिश यांनी पाण्याच्या पंपात उर्जाबचत होण्यासाठी एक सोपा उपाय शोधून काढला. पाणी जेथे बाहेर पडते तेथे एक फुट लांबीचा 10 अंश कोन असणारा साधारण शंकू आकार असणारा पाईप तयार करून जोडावा. यामुळे दाब कमी होतो. विद्युत उर्जा किंवा डिझेल कमी लागते. त्यांनाही नॅशनल इनोव्हेशन फाउंडेशन तर्फे सन 2001 साली गौरविण्यात आले.

## (क) निवारा

1. भौतिकशास्त्र - घर बांधकाम: काही वर्षांपूर्वी किल्लारी येथे भूकंप झाला. व सदोष बांधकामामुळे असंख्य घरे पडली व मोठ्या प्रमाणात जिवीतहानी झाली. निवारा ही मुलभूत गरज आहे. मजबूत बांधकामासाठी सोप्या व मुलभूत बाबी शिकवल्या पाहिजेत.

अ) घराला स्थैर्य मिळण्यासाठी घराच्या भिंती या पृथ्वीच्या गुरुत्वाकर्षण शक्तीशी समांतर असणे आवश्यक आहे. भिंती रचण्यासाठी विटांचे थर लावण्यात येतात. ते सरळ रेषेत उभे (Vertical) होण्यासाठी ओळंबा हे साधे उपकरण वापरण्यात येते. ब) घर बांधकामात सध्या सामान्यतः विटा, सिमेंट वाळू चा वापर करण्यात येतो. विटा 24 तास पाण्यात बुडवून ठेवाव्यात. ज्यामुळे त्यात पुरेसे पाणी शोषले जाते. क) सिमेंट वाळू व पाणी मिसळल्यानंतर रासायनिक अभिक्रिया घडून येते. हे मिश्रण अर्ध्या तासात वापरणे आवश्यक आहे. ड) बांधकाम झाल्यानंतर पुढील रासायनिक अभिक्रिया व्यवस्थित होण्यासाठी त्यावर पाणी मारावे लागते. काँक्रीटच्या बांधकामाला एक तासानंतर, विट बांधकामाला 4 ते 5 तासानंतर व प्लॅस्टरला एक दिवसानंतर पाणी मारण्यास सुरुवात करावी. इ) 21 दिवसापर्यंत बांधकामावर पाणी मारावे. सुरुवातीचे सात दिवस अधिक पाणी मारावे. कारण त्यावेळी रासायनिक अभिक्रियेचा वेग जास्त असतो. ई) मिश्रणात सिमेंट वाळू याचे योग्य प्रमाण असणे

आवश्यक आहे. 9 इंची विट बांधकामासाठी 1 भाग सिमेंट व सहा भाग वाळू तर 4 इंची विट बांधकामासाठी 1 भाग सिमेंट व 4 भाग वाळू वापरणे आवश्यक आहे.

2. भूगोल- विज्ञान - पर्यावरण पुरक घरः

संध्या जागतिक तापमान वाढ, घरासाठी सिमेंट काँक्रीटचा वापर यामुळे अधिक उकाडा जाणवतो. श्री. मिलींद मुजूमदार व श्री. अनंत फडके यांनी उन्हाळ्यात रात्रीसाठी एअर कंडीशनिंगला स्वस्त पर्याय विकसित केला आहे. उन्हाळ्यात संध्याकाळी, रात्री अनेक गावांमध्ये घराबाहेरचे तापमान घरातील तापमानाच्या मानाने कमी असते. खिडकीला खालच्या बाजूने एक एक्झॉस्ट पंखा लावल्यास बाहेरीत थंड हवा घरात घेता येते. त्याच्या विरुद्ध दिशेला खिडकीच्या वर दुसरा एक्झॉस्ट फॅन लावून घरातील गरम हवा बाहेर फेकावी. यामुळे अल्पखर्चात व कमी उर्जेत घरातील तापमान सुसह्य बनते. व एअर कंडीशनर सारख्या महाग यंत्राची गरज भासत नाही.

लॉरी बेकर या वास्तुविशारदाने पर्यावरणपुरक व कमी खर्चातील घरे बांधण्याचे तंत्र विकसित केले आहे. केरळ राज्यात तसेच आंबेपूर ता. पेण, जि. रायगड येथे या तंत्राने घरे बांधली आहेत. ती मी पाहिली आहेत. त्यांचे रॅट ट्रॅप बॉन्डींग हे एक पर्यावरणस्नेही तंत्र आहे. यात भिंतीमध्ये हवा राहते. त्यामुळे घराबाहेरीत तापमानाचा आत फारसा परिणाम जाणवत नाही. साने गुरुजी राष्ट्रीय स्मारकात आयोजित एका शिबिरात हे तंत्र शालेय विद्यार्थ्यांना मी 15/20 विटांच्या मांडणीद्वारे 10 मिनीटात शिकविले. विद्यार्थ्यांनीही तातडीने अचूक प्रात्यक्षिक करून दाखविले. इतके ते सोपे तंत्र आहे.

3. भूगोल/परिसर विज्ञान/ रसायनशास्त्र - सुधारीत चुलीः

ग्रामीण भागात चुलींचा वापर होतो. घरात प्रचंड प्रदुषण होते व आरोग्यावरही दुष्परीणाम होतात. पाठयपुस्तकात सुधारीत चुलींचीही माहिती द्यावी.

निष्कर्षः

नवीन शैक्षणिक धोरणात अभ्यासक्रमात प्रत्यक्ष जगण्याशी निगडीत बाबी समाविष्ट कराव्या. ही बाब अत्यंत महत्वाची व दिशादर्शक ठरणार आहे. अन्न, पाणी, निवारा या गरजा पूर्ण करण्याची क्षमता निर्माण करणारे रोजगाराभिमुख शिक्षण अत्यावश्यक आहे. प्रत्यक्ष दैनंदिन जीवनाशी जोडणाऱ्या शिक्षणाने निश्चितच सकारात्मक परिवर्तन होईल. यामुळे बलसागर भारताचे स्वप्न पूर्ण होईल.

संदर्भः

1. Sai Bhaskar N. Reddy: Biochar Culture
2. Hans Peter.Schmidt et al. Fourfold Increase in Pumpkin Yield in Response to Low-Dosage Root Zone Application of Urine- Enhanced Biochar to a Fertile Tropical Soil.
3. भुतान आणि क्युबा - लेखक - दिलीप कुलकर्णी
4. लॉरी बेकर - लेखक अतुल देवळगावकर
5. जगातील एकमेव , शेतकऱ्यांचा प्रदिर्घ संप संपादक - बळीराम जाधव

## मातृभाषेचे महत्त्व अधोरेखित करणारे नवीन शैक्षणिक धोरण

हेमश्री किशोर चिटणीस

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माणसाचे जीवन हे दिव्यासारखं असतं आणि विद्या त्या दिव्यातील पेटणा-या वातीसारखी असते, जर माणसाच्या दिव्यासारख्या जीवनात पेटलेली वात नसेल तर ते मानवी जीवन अंधकारमय आहे. शिक्षणामुळे माणसाला त्याच्या क्षमतांची ओळख होते. त्याचे सामर्थ्य समजते. त्याच्या कौशल्यांचा विकास होतो. ओबडधोबड दगडाचे एका सुंदर शिल्पामध्ये रूपांतर होण्यासाठी शिक्षणरूपी छिन्नी, हातोडा अन् शिक्षक रूपी मूर्तिकाराची गरज ही प्रत्येकाला असतेच.

ब्रिटीशांच्या भारतातील आगमनानंतर भारतामध्ये अस्तित्वात असलेली गुरुकुल शिक्षणपद्धती नष्ट झाली. ब्रिटीशांनी आपली व्यवस्था आपल्यावर अक्षरशः थोपवली. स्वातंत्र्यानंतर 1966 ते 1986 या दरम्यान नियोजित शैक्षणिक धोरणांमध्ये नवीन बदल न करता जुन्याच पद्धती कायम ठेवण्यात आल्या. 1986 मध्ये कोठारी आयोगाने या धोरणांमध्ये काही बदल केले. परंतु या आयोगाने तेंव्हा ठरवलेले अनेक मुद्दे या तीस-बत्तीस वर्षात अजूनही पूर्ण झाले नाहीत हे दुर्दैवी वास्तव आहे. देशाच्या विकासामध्ये शिक्षण क्षेत्र महत्वपूर्ण भूमिका पार पाडत असतानाही, जगातील अन्य देशांच्या तूलनेत भारतीय शिक्षणपद्धती ही खूप मागास आहे असेच म्हणावे लागेल. एकूण राष्ट्रीय उत्पन्नाच्या किमान 6 टक्के खर्च शिक्षणावर व्हावा अशी शिफारस कोठारी आयोगाने केली होती परंतु त्याची अंमलबजावणी आजपर्यंत झालेली नाही. जगातील जे देश संरक्षणावर अधिक खर्च करतात त्यात भारताचे स्थान बरेच वरचे आहे. परंतु, शिक्षणावरच्या खर्चात मात्र खूपच खाली आहे. या सर्व पार्श्वभूमीवर दि. 29 जुलै 2020 रोजी नवीन शैक्षणिक धोरण मंजूर झाले.

“सर्वांसाठी सर्वसमावेशक आणि समन्यायी गुणवत्तेचे शिक्षण सुनिश्चित करणे आणि निरंतर शिक्षणाच्या संधीना चालना देणे” असे ध्येय ठेवून नव्या शैक्षणिक धोरणाची निर्मिती झाली आहे. या धोरणामध्ये अनेक मुद्दे नव्याने समाविष्ट झालेले असले तरीही काही मात्र नव्या वेष्टनात जूनेच मुद्दे पुन्हा समाविष्ट करण्यात आले आहेत. केंद्र शासनाने के. कस्तुरीरंगन यांच्या अध्यक्षतेखाली एक समिती स्थापन करून त्या समितीच्या शिफारशींच्या आधारे नवीन शैक्षणिक धोरणाचा मसुदा केंद्र सरकारच्या मंत्रिमंडळाने मान्य केला आहे. नवीन शैक्षणिक धोरणामध्ये काही अमूलाग्र बदल सुचविण्यात आले आहेत. त्यातील सर्वात महत्वाचा म्हणजे आकृतिबंध! कोठारी आयोगाचा 10+2 हा संपूर्ण भारतभर प्रचलित असलेला आकृतिबंध बदलून तो आता 5+3+3+4 असा स्वीकारला गेला आहे. शाळा प्रवेशाचे वय 6 वर्षे होते ते 3 वर्षे करण्यात आले आहे. शाळेमध्ये पोषण आहार तर दिला जात होताच परंतु आता सकाळी न्याहारी सुद्धा दिली जाणार आहे.

मोफत आणि सक्तीचे शिक्षण घेणा-या विद्यार्थ्यांच्या वयोगटात बदल करून तो वय वर्षे तीन ते अठरा करण्यात आला आहे. सध्याची आपल्या देशाची सर्वात दुखरी नस म्हणजे प्रचंड बेरोजगारी... सुशिक्षित बेरोजगारांचे आणि त्यातही कंत्राटी स्वरूपात काम करणा-या शिक्षकांचे प्रमाण लक्षणीय आणि चिंताजनक आहे. याची दखल घेत देशभरातील दहा लाख शिक्षकांच्या जागा भरल्या जाणार आहेत. दहावी आणि बारावी या दोन स्तरांवर आत्तापर्यंत राज्य, माध्यमिक व उच्च माध्यमिक मंडळाकडून मूल्यमापनपर परीक्षा घेतली जायची. परंतु आता मात्र ‘बोर्ड’ ही

संकल्पना मोडीत काढून सत्रांत परीक्षा घेण्यात येणार आहेत. इयत्ता आठवी ते बारावी या स्तरावर या सत्रांत परीक्षेची पद्धत लागू केली जाईल.

बारावीनंतर चार चार वर्षांचे एकत्रित बी.एड्. ही आणखी एक चांगली सुधारणा असे म्हणता येईल. दर दोन वर्षांनी शिक्षण सेवक बनणा-या तरुणांचा लोंढा यामुळे थोडा कमी होईल. मूल्यांकन करण्याच्या बाबतीत काही नवीन नियम विद्यार्थी आणि शिक्षक या दोघांनाही लागू केले जाणार आहेत. राष्ट्रीय शैक्षणिक आयोग या एकाच आयोगामार्फत देशातील शिक्षण विषयक सर्व बाबी सांभाळल्या जातील. नवीन शैक्षणिक धोरण 2020 नुसार शिक्षकांचे मूल्यांकन विशिष्ट पोर्टलच्या माध्यमातून केले जाणार आहे. विद्यार्थ्यांचे मूल्यांकन परीक्षा व सहशालेय उपक्रम या दोघांच्याही माध्यमातून तसेच विद्यार्थी स्वतः, शिक्षक आणि सहविद्यार्थी देखील मूल्यांकन करतील.

नवीन शैक्षणिक धोरणामध्ये शिक्षकांच्या दृष्टीने महत्वाचे निर्णय घेण्यात आले आहेत. त्यामध्ये - शिक्षकांच्या नेमणूकीसाठी, प्रवेश परीक्षा मुलाखत आणि पदोन्नतीसाठीही परीक्षा घेण्याचे नियोजन आहे. शिक्षकांनी नेहमी आपल्या अध्यापनाच्या बाबतीत सतर्क व आधुनिक असावे यासाठी वेळोवेळी प्रशिक्षण संस्था स्थापन करून त्याद्वारे शिक्षकांना जागतिक स्तरावरील अभ्यासक्रमाशी जोडले जाणार आहे.

आजपर्यंत देशातील अनेक जबाबदारीची अशैक्षणिक कामे शिक्षकांकरवी करून घेतली जात. आता मात्र जनगणना, निवडणूका या अशैक्षणिक कामातून शिक्षकांची मुक्तता होणार आहे. शिक्षणामध्ये आधुनिक तंत्रज्ञानाचा वापर करून अध्ययन - अध्यापनामध्ये सुलभता आणली जाणार आहे.

आत्मनिर्भर भारत हे स्वप्न पूर्ण करण्याच्या दृष्टीने विद्यार्थ्यांना इयत्ता आठवीपासून व्यावसायिक शिक्षण दिले जाणार आहे. खाजगी शाळांवर नियंत्रण ठेवल्यामुळे त्यांच्या अवाजवी शिक्षण शुल्कावर निर्बंध लावणे शक्य होईल. आंतरविद्याशाखीय अभ्यासक्रमास मान्यता दिल्यामुळे शास्त्र, कला, वाणिज्य या विद्याशाखांमध्ये शिक्षण घेणा-या विद्यार्थ्यांना आपल्या आवडीप्रमाणे विषय निवडण्याचे स्वातंत्र्य असणार आहे. भारतीय शिक्षणाच्या इतिहासातील हा एक क्रांतिकारक बदल आहे असेच म्हणावे लागेल. परदेशी विद्यापिठांना देशात आपली शाळा स्थापन करण्यासाठी आमंत्रण देण्यात आल्याने आपल्या देशातील तरुणांसाठी जागतिक स्तरावरील शिक्षण देशातच घेण्याची सुवर्णसंधी उपलब्ध होणार आहे.

मातृभाषा आणि व्यक्ती यांचे नाते जन्मापूर्वीपासून असते. मातेच्या गर्भात असल्यापासून अर्भकाच्या कानावर त्याच्या आईची भाषा पडत असते. ती त्याच्या ओळखीची असते. किंबहुना ही भाषाच माता आणि बाळ यांच्यातील ओळखीचा महत्वाचा धागा असतो आणि म्हणूनच मूलाच्या जडणघडणीच्या काळातील मूलभूत बाबींची शिक्षण त्याच्या मातृभाषेतून दिले तर भविष्यातील त्याच्या व्यक्तिमत्त्वाची जडणघडण व्यवस्थित होणे सहजशक्य आहे.

या नवीन धोरणानुसार 3 ते 14 वयोगटातील विद्यार्थी शिक्षणाच्या कक्षेत आले आहेत. पाच वर्षे मूलभूत शिक्षण वयोगट 3 ते 8 वर्षे यांना देण्यात येणार आहे. जन्मापासून पहिली सहा वर्षे मुलांच्या मेंदूची वाढ ही खुप वेगाने होते. हा कालखंड त्यांच्या शारीरिक व मानसिक वाढीसाठी महत्वाचा असतो. त्यातही पायाभूत 5 वर्षांच्या शिक्षणामध्ये कृतीप्रधान अभ्यासक्रम तयार करण्यात आले आहेत. 3 वर्षांचा पूर्वतयारीचा टप्पा हा वय वर्षे 8 ते 11 या गटात इयत्ता तिसरी, चौथी, पाचवी असा आहे. हा तीन वर्षांचा अभ्यासक्रम क्रीडा, शोध आणि कृती यावर आधारित असेल. या स्तरावर अत्यंत सोपी पुस्तके असून अभ्यास विषयांच्या पायाभरणीचे काम होईल. मुलांना पुढील शिक्षणासाठी तयार करणेत आणि त्यांना तणावविरहीत ठेवणे हाच यामागील हेतू आहे. या टप्प्यापर्यंत विद्यार्थ्यांना मातृभाषेतून शिक्षण दिले जाईल. मातृभाषेतून शिक्षण घेतल्यामुळे विद्यार्थ्यांच्या पायाभूत संकल्पना चांगल्या स्पष्ट

होतील. अमूर्त संकल्पना साकार होणे शक्य होईल. ही पूर्वतयारी योग्य झाली की पुढील अध्ययनाची दिशा निश्चित करणे योग्य ठरेल.

उच्च शिक्षणाचा विचार करता वैद्यकीय तसेच अभियांत्रिकीचे अभ्यासक्रम देखील मातृभाषेमध्ये रुपांतरीत करण्यात येणार आहेत. अनेक विद्यार्थी आजपर्यंत या विद्याशाळांमधील इंग्रजी भाषेच्या उच्च काठीण्यपातळीमुळे एकतर तिकडे वळणेच टाळायचे. किंवा आयआयटी, आयआयएमएस सारख्या उच्च शिक्षणाच्या संस्थांमध्ये प्रवेश मिळूनही त्यातील काठीण्य पातळीला कंटाळून अर्ध्यावर सोडून आपल्या आवडीच्या अन्य क्षेत्रात रमायचे.

आतामात्र 'मातृभाषा' ही प्रत्येक विद्यार्थ्याला सहाय्य करणारी ठरणार आहे. मातृभाषेमुळेच व्यक्तिचा सामाजिक, सांस्कृतिक विकास चांगला होऊ शकतो. जगातील अनेक देशांवर इंग्रजांचे राज्य होते. परंतु आज प्रगतिपथावर असणा-या देशांनी इंग्रजी सत्ता आणि भाषा यांचे जोखड फेकून दिले आणि स्वभाषा स्वीकारून विकास केला. 'इंग्रजी' भाषेविषयी असलेल्या न्यूनगंडामुळे अनेक विद्यार्थी प्रगतीच्या प्रवाहाबाहेर पडतात. आता मात्र मातृभाषेतून शिक्षण योग्यप्रकारे दिले गेले तर बहुभाषिक भारतातील प्रत्येक विद्यार्थी आपल्या विकासापासून दूर राहणार नाही. भारतीय भाषांना सन्मान प्राप्त होईल. या भाषा ज्ञानभाषा म्हणून प्रसिद्ध होतील. नवीन साहित्य निर्मिती होऊन जून्या रिती-परंपरा यांचे जतन होणे शक्य होईल. बोलीभाषा, त्या भाषेतील सांस्कृतिक ठेवा कायम जतन केला जाईल.

एकूणच नवीन शैक्षणिक धोरणामधील 'मातृभाषेतून शिक्षण' हा एक महत्वाचा पैलू असल्याचे मला वाटते. मातृभाषा ही व्यक्तीच्या विकासात महत्वाची भूमिका बजावते. परकी भाषा आत्मसात करण्यास काहीच हरकत नाही. कारण काळाबरोबर चालण्यासाठी ती गरजेची आहे. परंतु सुजाण नागरिक म्हणून जडण-घडण होणे, आत्मविश्वासाने वागणे, प्रगती करणे हे मातृभाषेच्या सहाय्याने अधिक सोपे आणि सहज होते. नवीन शैक्षणिक धोरण भारतासारख्या विविधतेने नटलेल्या राष्ट्रात यशस्वीपणे राबविणे हे शासनासाठी आव्हानात्मक आहे. कारण कागदावर चांगली आसणारी धोरणे तितक्याच सक्रीयतेने अंमलात आणण्यासाठी जसे 'मानव संसाधन विकास मंत्रालयाचे' नाव बदलून शिक्षण मंत्रालय करण्यात आले. तसेच आपली मानसिकता बदलून नव्यातील चांगल्याचे स्वागत करून त्याची अंमलबजावणी करण्यासाठी शासन - शालेय प्रशासन - शिक्षक - विद्यार्थी आणि समाज यांनी एकत्रित योगदान देणे ही काळाची गरज आहे. एवढे मात्र नक्की!

### संदर्भसूची:

१. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/nep/2020/MARATHI.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/nep/2020/MARATHI.pdf)
२. <https://pib.gov.in/PressReleasePage.aspx?PRID=1847061>

## सामाजिक सर्वेक्षण: विद्यार्थ्यांमध्ये कौशल्य विकसित करण्याचे एक प्रभावी माध्यम

रतन रा. चौधरी

सामुदायिक विकास व विस्तार

श्रीकृष्णदास जाजू ग्रामीण सेवा महाविद्यालय, पिपरी, वर्धा

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राष्ट्रीय शिक्षण धोरण 2020 अंतर्गत 21 व्या शतकातील नाविन्यपूर्ण बदलांना अनुसरून शिक्षण क्षेत्रात आमूलाग्र बदल करण्यात आले आहेत. या धोरणाचे ध्येय आपल्या देशातील वाढत्या विकासात्मक आवश्यकतांवर उपाय योजना करणे असे आहे. सध्या जगात विविध क्षेत्रात मोठ्या प्रमाणावर परीवर्तन होत आहे. या परीवर्तनाला सामोरे जाण्याकरीता विद्यार्थ्यांमध्ये क्षमता निर्माण करण्याची योजना राष्ट्रीय शिक्षण धोरण 2020 मध्ये आहे. देशाच्या विविध क्षेत्रात विकासाच्या दृष्टीने ज्ञान निर्मिती व संशोधन हे दोन पैलू महत्वाचे आहेत. नागरिकांमध्ये कौशल्ये निर्माण करण्यासाठी व चांगल्या प्रकारचा समाज घडविण्यासाठी तसेच जगाचे नेतृत्व करण्यासाठी भारताला आपल्या संशोधन क्षमता वृद्धींगत करणे क्रमप्राप्त ठरते. या दृष्टीने नविन राष्ट्रीय शिक्षण धोरणात सखोल विचार केलेला आहे. भारतातील संशोधन आणि नाविन्यपूर्णतेतील सध्याची गुंतवणूक जी. डी. पी. च्या फक्त 0.69 टक्के आहे तर अमेरिकेच्या बाबतीत हा आकडा 2.8 टक्के, इस्राईलच्या बाबतीत 4.3 टक्के आणि दक्षिण कोरीयामध्ये 4.2 टक्के आहे (राष्ट्रीय शिक्षण धोरण 2020). यावरून असे स्पष्ट होते की विकसित देशांनी संशोधन क्षेत्रावर अधिक भर दिलेला आहे त्यातुलनेत भारतामध्ये संशोधन क्षेत्रात होणारी गुंतवणूक फार कमी आहे तसेच लोकसंख्येच्या दृष्टीने विचार केल्यास ही गुंतवणूक अतिशय कमी आहे. त्यामुळे राष्ट्रीय शिक्षण धोरण 2020 मध्ये संशोधनावर जास्त भर देण्यात आलेला असल्याचे दिसून येते. संपूर्ण जगात संशोधनाचे वाढते महत्व लक्षात घेता सदर लेखामध्ये पदवी स्तरावर विद्यार्थ्यांमध्ये शास्त्रीय दृष्टीकोन निर्माण करण्याच्या दृष्टीने सामाजिक सर्वेक्षणाच्या माध्यमातून विद्यार्थ्यांमध्ये विविध कौशल्य विकसित करता येतात यावर प्रकाश टाकण्यात आलेला आहे.

सामाजिक संशोधनातील तथ्ये मिळविण्याची एक महत्त्वपूर्ण पध्दत म्हणून सामाजिक सर्वेक्षणाचा उल्लेख केला जातो. मार्क अब्राहम यांच्यानुसार 'समुदायाचे संघटन व क्रिया याबाबत ज्या प्रक्रियेने परिमाणात्मक तथ्ये (आकडेवारी) सामाजिक दृष्टीने गोळा केली जाते, त्या प्रक्रियेला सामाजिक सर्वेक्षण असे म्हणतात. इ. एस्. बोगार्डस यांच्यानुसार 'लोकांची कामाची व जीवन जगण्याची स्थिती याविषयी म्हणजेच एखाद्या समाजातील लोकांविषयी जमविलेली माहिती म्हणजेच सामाजिक सर्वेक्षण होय (नाडगोंडे, 2009).

सिन पाओ यंग यांच्यानुसार 'सामाजिक सर्वेक्षण म्हणजे विविष्ट लोकसमूहाची रचना, क्रिया, राहणीमान यासंबंधी केलेली चिकित्सा होय (कऱ्हाडे, 2018).

तिजारे व किनखेडकर (2015) यांच्यानुसार सामाजिक सर्वेक्षण ही एक शास्त्रीय पध्दती असल्याने त्याचे अध्ययन विशिष्ट क्रमानुसारच करावे लागते आणि त्यामध्ये पुढील टप्पे दर्शविण्यात आले आहेत. या टप्प्यानुसार सामाजिक सर्वेक्षण केले जाते.

1) विषयाची निवड

- 2) उद्देश निर्धारण
- 3) क्षेत्र निर्धारण
- 4) सर्वेक्षण पध्दती
- 5) तथ्यसंकलन
- 6) तथ्याचे वर्गीकरण व विश्लेषण
- 7) विवेचन
- 8) चित्रमय प्रदर्शन
- 9) निष्कर्ष
- 10) सर्वेक्षण अहवाल

या टप्प्यानुसार सामाजिक सर्वेक्षण शास्त्रीय पध्दतीने पुर्ण केले जाते. सामाजिक सर्वेक्षणाचे क्षेत्र अधिक व्यापक स्वरूपाचे आहे. यामध्ये सामाजिक जीवनाचे अध्ययन करून सामाजिक समस्या सोडविण्यासाठी उपाय सुचविण्याचे कार्य करण्यावर भर दिला जातो. सैद्धांतिक मांडणी करण्यासाठी लागणारी माहिती गोळा करण्याच्या कार्यात सामाजिक सर्वेक्षणाचा उपयोग होतो. सामाजिक समस्येमधील कार्यकारण संबंध शोधण्यासाठी सामाजिक सर्वेक्षण उपयोगी ठरते. सामाजिक सर्वेक्षणाच्या माध्यमातून वेगवेगळ्या सिध्दांताचे परीक्षण केले जाते. गृहितकांची निर्मिती आणि परीक्षण सामाजिक सर्वेक्षणाद्वारे केले जाते. सामाजिक समस्यांवर धोरणात्मक निर्णय घेण्यासाठी आणि समाजसुधारणा घडून आणण्यासाठी सामाजिक सर्वेक्षण उपयुक्त ठरते.

बी. ए. ( आर. एस. ) या पदवी स्तरावर अभ्यासाचा एक महत्वपूर्ण भाग म्हणून विद्यार्थ्यांमध्ये सामाजिक संशोधनाबाबत शास्त्रीय दृष्टीकोण निर्माण करण्याचा प्रयत्न केला जातो. सामाजिक सर्वेक्षणाच्या अध्यापनातून व अनुभवाच्या आधारे सामाजिक सर्वेक्षणाच्या माध्यमातून विद्यार्थ्यांमध्ये पुढील प्रकारचे कौशल्ये विकसित केले जातात आणि राष्ट्रीय शिक्षण धोरण 2020 मध्ये सुध्दा अशा प्रकारची कौशल्ये विद्यार्थ्यांमध्ये निर्माण करणे अपेक्षित आहे. त्या अनुशंगाने पुढील प्रकारची कौशल्ये दर्शविण्यात आले आहेत.

**1) प्रश्नावली आणि अनुसूची निर्माण करण्याचे कौशल्य:** विद्यार्थ्यांना सामाजिक सर्वेक्षणामध्ये प्रश्नावली आणि अनुसूची निर्माण करण्याचे कौशल्य प्रदान केले जाते. यामधून विद्यार्थी समस्येला अनुसरून प्रश्न कसे विकसित करायचे, प्रश्नाची पातळी कधी ठेवावी, बंदिस्त प्रश्न म्हणजे काय, मुक्त प्रश्न म्हणजे काय, उद्देशाला अनुसरून प्रश्न निर्मिती करणे अशा प्रकारचे कौशल्ये विद्यार्थ्यांमध्ये विकसित केले जातात. विद्यार्थ्यांना प्रश्नावली आणि अनुसूची मधील फरकाचे आकलन होते तसेच प्रश्नावली मधील प्रश्नांची निर्मिती व अनुसूची मधील प्रश्नांची निर्मिती करण्याचे कसब विद्यार्थ्यांना प्रदान केले जाते.

**2) मुलाखत घेण्याचे कौशल्य:** प्राथमिक तथ्य संकलित करण्याचे मुलाखत एक प्रभावी माध्यम मानले जाते. सामाजिक सर्वेक्षणांतर्गत विद्यार्थ्यांमध्ये मुलाखत घेण्याचे कौशल्य विकसित होते. मुलाखत कधी घ्यावी, रचनात्मक मुलाखत व अर्धरचनात्मक मुलाखत काय असते, मुलाखतीचे नियोजन कसे करावे, मुलाखत घेताना कोणती काळजी घ्यावी अशाप्रकारचे तंत्र विद्यार्थ्यांमध्ये विकसित होतात. याचबरोबर निरीक्षण तंत्र सुध्दा विद्यार्थ्यांना अवगत करून दिल्या जाते. निरीक्षण हे सर्व शास्त्रांचा वास्तविक आधार मानला जातो. या तंत्राचा उपयोग प्राथमिक तथ्य संकलित करण्यासाठी होतो. निरीक्षण करणे हा मानवी जीवनाचा एक भाग आहे.

- 3) **तथ्य संकलन करण्याचे कौशल्य:** प्रत्यक्ष गावात किंवा अध्ययन क्षेत्रात जावून तथ्य संकलन करण्याचे कौशल्य विद्यार्थ्यांना प्रदान केले जाते. तथ्य संकलन कसे करावे, तथ्य संकलन करताना कोणती काळजी घ्यावी, तथ्याची नोंद घेणे, तथ्य पडताळून घेणे अशा प्रकारचे कौशल्य विद्यार्थ्यांमध्ये निर्माण करण्यासाठी विद्यार्थ्यांकडून भूमिका साकार करून घेतल्या जातात आणि प्रत्यक्ष अध्ययन क्षेत्रात जावून तथ्य संकलन केले जाते. विद्यार्थ्यांना प्राथमिक तथ्य संकलन पध्दती व द्वितीयक तथ्य संकलन पध्दती अशा दोन तथ्य संकलन पध्दतीच्या प्रकाराचे आकलन होते.
- 4) **मास्टरशिट तयार करण्याचे कौशल्य:** तथ्य संकलित केल्यानंतर प्रश्नावली किंवा अनुसूची मधील माहिती एकाच ठिकाणी तक्त्याच्या स्वरूपात आणली जाते. जेणेकरून वारंवार प्रश्नावली किंवा अनुसूची पाहण्याचे काम पडत नाही. हे तथ्य कच्च्या प्रकारचे तथ्य असते. थोडक्यात संकलित केलेले तथ्य क्रमबद्ध पध्दतीने एकाच ठिकाणी आणण्याचे कार्य म्हणजे मास्टरशिट. मास्टरशिटमध्ये प्रश्नावली किंवा अनुसूची मधील एकूण-एक तथ्य नमूद केले जाते. म्हणून मास्टरशिट तयार करण्याचे कार्य फार महत्वाचे असते व ते तेवढ्याच लक्षपूर्वक करणे महत्वाचे ठरते. मास्टरशिटच्या आधारावरच पुढील प्रक्रीया करावी लागते. त्यामुळे मास्टरशिट तयार करणे हे सामाजिक सर्वेक्षणातील एक महत्वाचे कौशल्य आहे.
- 5) **तथ्यांचे वर्गीकरण व विश्लेषण करण्याचे कौशल्य:** मास्टरशिट तयार झाल्यानंतर तथ्यांचे वर्गीकरण केले जाते. तथ्यांचे वर्गीकरण काळजीपूर्वक करणे आवश्यक असते. संकलित तथ्यांच्या योग्य वर्गीकरणाच्या आधारे अभ्यासकाला तथ्यांची वैषिष्ट्ये स्पष्ट होतात. तथ्याच्या वर्गीकरणाचा प्रमुख उद्देश तथ्यांना श्रेणीबद्ध करून संपूर्ण सामग्रीस संक्षिप्त रूप देणे हे आहे. तथ्यांचे वर्गीकरण कसे करावे, तथ्याच्या वर्गीकरणाचा शास्त्रीय आधार कसा ठरवावा, श्रेणी कीती ठरवाव्यात या विशयीचे कौशल्य विद्यार्थ्यांमध्ये विकसित केले जातात. तथ्य वर्गीकरणानंतर त्या आकडेवारीचे सारणीकरण केले जाते. त्यानंतर तथ्यांचे विश्लेषण करणे क्रमप्राप्त ठरते. प्रत्यक्ष परिस्थिती, अध्ययन विषय व तथ्य वर्गीकरण विचारात घेवून त्याचा अर्थ लावला जातो. यालाच तथ्याचे विश्लेषण म्हटले जाते. उद्देशासंबंधी निष्कर्ष काढण्याकरीता तथ्यांचे विश्लेषण करणे आवश्यक असते.
- 6) **विवेचन करण्याचे कौशल्य:** तथ्यांची एक दुसऱ्या बरोबर तुलना करून विश्लेषणाचे शास्त्रशुद्ध पध्दतीने विविध घटकांतील परस्पर संबंध दर्शविण्यासाठी विवेचन केले जाते. तथ्याचे विश्लेषण व विवेचन या आधारावर काही ठराविक निष्कर्ष मांडले जातात. या निष्कर्षाच्या आधारावर नवीन ज्ञानाची प्राप्ती होते तसेच सर्वेक्षणाच्या व्यावहारिक उद्देशाचीसुध्दा पूर्ती होते. अचूक व महत्वपूर्ण विवेचन करणे एक वेगळे कौशल्य आहे त्याकरीता अभ्यासकाला अध्ययन विषयाचा सखोल अभ्यास असणे गरजेचे आहे.

### निष्कर्ष:

वरील माहितीवरून असे स्पष्ट होते की सामाजिक सर्वेक्षणाच्या माध्यमातून विद्यार्थ्यांमध्ये पुढीलप्रकारची सहा कौशल्ये विकसित केली जातात, जसे प्रश्नावली आणि अनुसूची निर्माण करण्याचे कौशल्य, मुलाखत घेण्याचे कौशल्य, तथ्य संकलन करण्याचे कौशल्य, मास्टरशिट तयार करण्याचे कौशल्य, तथ्यांचे वर्गीकरण व विश्लेषण करण्याचे कौशल्य आणि विवेचन करण्याचे कौशल्य. याच बरोबर विद्यार्थ्यांमध्ये शास्त्रीय दृष्टीकोन निर्माण केला जातो. पदवी स्तरावर अशा प्रकारचा संशोधन आधारीत अभ्यासक्रम राष्ट्रीय शिक्षण धोरण 2020 ला पुरक असा आहे. यातून

पदवीस्तरावर विद्यार्थ्यांची संशोधनाबाबतची इच्छाशक्ती, कल्पनाशक्ती, आकलनशक्ती, प्रमाणवादी वृत्ती वाढविण्यास मदत होते हे निष्चित आहे.

**संदर्भग्रंथ :**

१. नाडगोंडे, गु. द. (2009) सामाजिक संशोधन पध्दती. फडके प्रकाशन, कोल्हापूर. पान क्र. 201-202.
२. तिजारे बा. वि. व किनखेडकर अ. कि. (2015) सामुदायिक विकास आणि विस्तार शिक्षण. पिंपळापुरे बुक डिस्ट्रीब्युटर्स, नागपूर. पान क्र. 273.
३. कुन्हाडे, बी. एम. (2018) शास्त्रीय संशोधन पध्दती. पिंपळापुरे अँड कं. पब्लिशर्स, नागपूर. पान क्र. 597.
४. राष्ट्रीय शिक्षण धोरण 2020 [https://www.education.gov.in/sites/upload\\_files/mhrd/files/nep/2020/MARATHI.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/nep/2020/MARATHI.pdf)

## आंबेडकरवादी स्त्री लिखित आत्मकथा - एक दृष्टिकोप

अभिता बाजीराव निकम

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सामाजिक इतिहासात उतरंडीच्या तळागाळाशी असलेली आंबेडकरवादी स्त्री दारिद्र्य, अत्याचार, अंधश्रद्धा यांनी पिचलेली होती. तरीही ती दुबळी हातपाय गळून बसणारी कधीच नव्हती. तर ती एक स्त्री म्हणून आणि अस्पृश्य समाजातील स्त्री अशा दुहेरी दडपणाची बळी होती. अस्पृश्य म्हणून समाजाकडून अवहेलना हेटाळणी तुच्छता सहन करत जीवन जगत होती आणि दुसऱ्या बाजूला स्त्री म्हणून कुटुंबातील पुरुषप्रधान संस्कृतीकडून सतत अत्याचार सोसत होती. सतत कष्ट करत, अन्याय अत्याचाराला खंबीरपणे तोंड देत आणि प्रतिकूल परिस्थितीशी सामना करत होती. आंबेडकरवादी लेखिकांच्या लढ्याचा आणि त्यांनी निर्माण केलेल्या आत्मकथनात्मक साहित्याचा मागोवा घेताना ही वास्तवता प्रकर्षाने लक्षात घ्यावी लागते.

डॉ. बाबासाहेब आंबेडकर यांच्या विचारातून आणि प्रेरणेतून आंबेडकरी स्त्रियांना खऱ्या अर्थाने आत्मभान आले. डॉ. बाबासाहेब आंबेडकरांनी स्त्रियांना अन्याय सहन करू नका, त्या विरोधात लढा. पुरुषांच्या गुलाम होऊन जगू नका. त्यांच्या सहचारिणी व्हा. गुलामीच्या आयुष्याला नकार देण्याचं धैर्य दाखवा. आपल्या व्यक्तित्वाला बाधा आणतील असे कपडे दागिने वापरू नका. ह्या शिकवणुकीबरोबरच स्त्री शिक्षण, स्त्री-पुरुष समानता आणि सामाजिक सुधारणांमधील त्यांचा सहभाग यांची जाणीव त्यांच्या मनात बिंबवली. त्यामुळे आंबेडकरवादी स्त्रियांचे नेतृत्व गुण उदयाला आले. डॉ. बाबासाहेब आंबेडकर व महात्मा फुले यांच्या प्रेरणेने अनेक दलित स्त्रिया शिकून सुशिक्षित होत होत्या. आपले अनुभव आत्मकथा, कथा, कविता इ. माध्यमातून मोठ्या प्रमाणावर व्यक्त करू लागल्या होत्या.

१९४२ च्या दलित महिला फेडरेशनच्या अधिवेशनातून फेडरेशनच्या अध्यक्षा सुलोचना डोंगरे यांनी, “सर्व जिल्हा, तालुका, लोकल बोर्डात आमच्या स्त्रियांना प्रतिनिधित्व हवे. विशिष्ट परिस्थितीत घटस्फोटाचा अधिकार हवा. बहूपत्नीत्वाला कायद्याने प्रतिबंध करावा. अस्पृश्य स्त्री शिक्षणासाठी सर्वत्र महिला-वसतिगृहे असावीत”.<sup>१</sup> अशा मागण्या करून स्त्रियांना आपल्या हक्काची जाणीव करून दिली.

स्त्रीचे शोषण, तिचे वास्तविक जीवन, समाजातील तिचे स्थान हे विषय त्या साहित्यातून मांडतात. विसाव्या शतकाच्या अखेरच्या काळात अनेक आंबेडकरवादी लेखिकांनी वास्तवाचे भान ठेवून विषयाचे वैविध्य राखून वैशिष्ट्यपूर्ण आत्मकथा लेखन प्रकार अतिशय सकसतेने हाताळलेला आहे. आंबेडकरवादी स्त्री

साहित्यिकांनी प्रस्थापित पुरूषप्रधान व्यवस्थेतील असमतोल नाकारून त्याठिकाणी मानवतेची निर्मिती करण्याच्या हेतूने आत्मकथा हा साहित्य प्रकार हाताळला.

आत्मकथनात लेखक स्वतःविषयी सांगत असतो. वासुदेव मुलाटे आत्मकथनाची व्याख्या करताना म्हणतात, “स्व’ ला अलिप्त, विकारहीन ठेवून तटस्थतेने स्वतःकडे पाहून वस्तुनिष्ठ भूमिकेतून आत्मकथनकार आत्मानुभव सांगत असतो”.<sup>२</sup> दलित आत्मचरित्रे ही रूढ अर्थाने आत्मचरित्रे नाहीत या संदर्भात प्रा. प्रकाश मेंदाडकर म्हणतात, “दलित लेखकांनी आपल्या आत्मकथनांची जी मनोगते जोडली आहेत, यावरून त्यांची भूमिका आत्मचरित्र लिहिण्याची नसून जे जे भोगावं लागले जगताना जे अनुभव आले ते प्रामाणिकपणे, प्रांजळपणे मांडण्याची दिसून येते”.<sup>३</sup>

मराठी साहित्यात अनेक उच्चवर्णीय स्त्रियांनी आत्मचरित्रे लिहिली आहेत. त्यांच्या आत्मचरित्रातून पुरुषसत्ताक पध्दतीविरुद्ध संघर्ष येतो. मात्र जात-वर्ग-वर्ण भेदभावामुळे त्यांना सोसावे लागलेले चटके येत नाही. आंबेडकरवादी पुरुष लेखकांनी आंबेडकरवादी भूमिकेतून भरपूर आत्मकथने लिहिली आहेत. त्यांच्या आत्मचरित्रात भारतीय समाजात दलित म्हणून येणाऱ्या व्यथा-वेदनेचे चित्रण येते. मात्र पुरुषप्रधान समाज व्यवस्थेतून स्त्रीमुक्ती हा विचारच आलेला दिसत नाही. म्हणजेच दलित पुरुष आणि उच्चवर्णीय स्त्री यांच्या लेखनात दलित स्त्रीचा माणूस म्हणून जगण्यासाठी चाललेला संघर्ष कुठेच चित्रित होताना दिसत नाही.

### **आंबेडकरवादी स्त्री लिखित आत्मचरित्रे:**

जात-वर्ण-वर्ग भेदभाव असलेल्या समाजव्यवस्थेने सर्व हक्क नाकारलेली, दास्यात जीवन जगणारी आणि त्या समाजातील शेवटचा घटक म्हणजे ही दलित स्त्री आहे. दलित स्त्रीचे आत्मकथनातील अनुभव विश्व दलित पुरुषापेक्षा वेगळे आहे त्यामध्ये पहिली दलित लेखिका म्हणून कुमुद पावडे यांचे ‘अतःस्फोट’ अत्यंत अंतरीच्या उर्मिमधून ‘अतःस्फोट’ मधील लेखन केले आहे. त्यात जुलमी जात व्यवस्थेची प्रखर टीकात्मक मांडणी केलेली दिसते.

बेबी कांबळे यांचे ‘जीण आमचं’ (१९८४) आत्मकथनात आपण आपल्या जातीची लाज बाळगता कामा नये. त्याचबरोबर डॉ. बाबासाहेब आंबेडकरांमुळेच आपले आजचे जिणे सुकर झाले. त्यांनी केलेल्या लढ्याचे आणि संघर्षाची आपण नेहमी जाणीव ठेवली पाहिजे; तरच येणाऱ्या तरूण दलित पिढीला संघर्ष करून जगण्याची जिद्द बाळगण्यास शिकवू शकतो, असा विचार आलेला दिसतो.

अत्यंत दाहक अनुभवाचे चित्रण करणाऱ्या आंबेडकरवादी स्त्रियांनी लिहिलेल्या आत्मकथनांमध्ये, मुक्ता सार्वगौड ‘मितलेली कवाडे’, शांताबाई वाणी ‘रात्रंदिन आम्हा...’, शांताबाई कांबळे ‘माज्या जन्माची चित्तरकथा’, जनाबाई कचरू गिन्हे ‘मरणकळा’, विमल गोरे ‘तीन दगडांची चूल’, उर्मिला पवार ‘आयदान’ (२००९), सिंधुताई सपकाळ ‘मी वनवासी’ या आत्मकथनांचा समावेश करावा लागेल.

सर्व दलित स्त्रियांचे आत्मकथा लेखन एका क्रांतिकारी उर्जेने भरलेले आहे. ती उर्जा म्हणजेच डॉ. बाबासाहेब आंबेडकर आणि गौतम बुद्धांचे तत्त्वज्ञान होय. प्रत्येक दलित स्त्रीने आपल्या आत्मचरित्रात रूढी, परंपरा, अंधश्रद्धा, खोट्या धर्मकल्पना, विटाळ कल्पना, स्त्रियांच्या शिक्षणात येणाऱ्या अडचणी, त्यांच्यावर होणारा अत्याचार आणि अन्यायाचे वास्तविक चित्रण केले आहे. ह्या सर्वच आत्मचरित्रांचे स्त्रीवादी साहित्याच्या संदर्भात मोठे योगदान आहे.

आंबेडकरी स्त्रिया स्वतःच्या मनाचे भावनांचे दर्शन घडवितात त्याच बरोबर स्त्री म्हणून भोगावे लागणारे दुःख यातून व्यक्त होते. म्हणजे दलित स्त्री दलित तर आहेच पण दलितांमधील स्त्री असल्याने दुहेरी शोषण दुःख तिच्या वाट्याला आले आहे. माझ्यावर असे निकृष्ट जीवन का लावले गेले? हे सांगण्यासाठी दलित लेखिकांनी आपली आत्मकथा लिहिली आहे. त्यांच्यावर लावले गेलेले जीवन हे वस्तूतः त्यांच्यापुरतेच मर्यादित नाही ते संबंध दलित समाजावरच लादले गेलेले आहे. म्हणून आंबेडकरवादी स्त्रियांनी लिहिलेली आत्मकथने ही फक्त त्यांची एकटीच्या व्यथा, वेदना, संघर्ष यांचे कथन करणारे नसते तर त्या ज्या दलित समाजाच्या घटक आहेत त्या समाजाची ती आत्मकथा ठरते.

दलित स्त्री ही प्रामुख्याने लिंगभेदाबरोबरच जातीयवादी व्यवस्थेची प्रमुख शिकार राहिली आहे. अशा वेळी या आत्मकथनातून व्यक्त होणारी जाणीव ही खऱ्या अर्थाने जातीअंताची जाणीव आहे. जातिअंताचा लढा लढताना रस्त्यावर उतरण्याची भावनाही संघर्षशील वास्तव मांडण्यास योग्य असल्याची आपणास जाणवते. दलित स्त्रियांच्या आत्मकथनातील बाई एक लढाऊ समज असलेली दिसते. ही समज तिच्या सभोवतालच्या जगण्याच्या संघर्षातून तयार झालेली दिसते.

सर्वांगीण शोषण अनुभवणारी आंबेडकरवादी स्त्री तिच्या एकूणच साहित्यामधून मानवमुक्तीच्या संघर्षाची भाषा बोलते. 'एक माणूस एक मूल्य' हा विचार मांडते. आंबेडकरवादी स्त्रियांच्या आत्मकथनातील जाणिव या सातत्याने दलित वर्गाची भूमिका ठामपणे घेणाऱ्या आहेत. त्या जाणिव केवळ सहानुभूतीपोटी आलेल्या नाहीत तर स्वतः जगलेल्या आणि भोगलेल्या जीवन वास्तवाच्या गाथा आहेत. आंबेडकरवादी स्त्रीच्या आत्मकथनातली भाषा संघर्षाची आहे. त्यांनी आपल्या समाजाचे आयुष्यच चिकित्सक नजरेतून समाजापुढे मांडले आहे.

आंबेडकरवादी स्त्रियांचे साहित्य हे व्यापक जीवन जाणीवेच्या अनुभूतीतून आलेले आहे. तळागाळातील मानवाच्या जीवन संघर्षाचे आणि शोषणाचे चित्रण करून भेदक सामाजिक वास्तव प्रदर्शित करणारे हे साहित्य आहे. त्यातून निर्माण होणाऱ्या अभिव्यक्तीच्या सूर्यात क्रांती आहे. मराठी वाचकांना अंतर्मुख होऊन विचार करायला ते भाग पाडते. दलित स्त्रीचे अनुभवविश्व हे भारतीय स्त्रीच्या तुलनेत वेगळे आहे. म्हणूनच त्यांनी लिहिलेल्या आत्मकथा मानवी मनाला स्पर्श करतात.

### काही निष्कर्ष:

- ❖ आंबेडकरवादी आत्मचरित्रातून आपल्याला समाजातली वास्तव परिस्थिती आणि समाजातल्या रूढी-परंपरांकडे पाहण्याचे ऐतिहासिक भान येते.
- ❖ प्रत्येक दलित आत्मचरित्रातली स्त्री तिच्या सभोवतालच्या जगण्याच्या संघर्षातून तयार झाली आहे. आंबेडकरवादी आणि गौतम बुद्धांच्या तत्त्वज्ञानातून तयार झाली आहे.
- ❖ दलित स्त्रीचे आत्मचरित्र लिहिण्यामागची प्रेरणा म्हणजे तिला फक्त स्वतःची व्यक्तिगत कहाणी सांगायची नसून आपल्या समाजाच्या जीवन जाणीवा चिकित्सक नजरेतून समाजापुढे मांडायच्या आहेत.
- ❖ प्रत्येक दलित स्त्रीने आपल्या आत्मचरित्रात त्यांचे शिक्षण, रूढी-परंपरा, अंधश्रद्धा, खोट्या धर्मकल्पना, अन्याय-अत्याचार, विटाळ कल्पना याबद्दल खरे वास्तव अनुभव व्यक्त करून संताप व्यक्त केला आहे.
- ❖ दलित स्त्रीच्या आत्मचरित्रातून एकाच वेळी 'स्व' भान आणि समूहभान यांचा मेळ स्वभाषेची लाज न बाळगता घातलेला दिसतो.

### संदर्भ:

१. धोंगडे अश्विनी दलित स्त्रीच्या आत्मभानाची वाटचाल (लेख), दैनिक 'लोकसत्ता' २६ सप्टेंबर २०१५
२. वासुदेव मुलाटे, 'दलितांची आत्मकथने : संकल्पना व स्वरूप', स्वरूप प्रकाशन, औरंगाबाद, प्र. आ. १९९९, पृ. २१.
३. मेदाडकर प्रकाश, 'मराठी दलित आत्मकथा व मराठी आत्मचरित्रे', अस्मिता दर्श, दिवाळी अंक १९८३

# **PERSPECTIVE: MULTIDISCIPLINARY APPROACH**



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