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## National Education Policy (NEP) in Home Science Curriculum : Implementation Roadmap

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**Abstract:** *The National Education Policy (NEP) 2020 marks a transformative era in Indian education, emphasizing holistic, multidisciplinary and learner-centric approaches. This paper explores the implications of the NEP for Home Science education and presents a roadmap for integrating its principles into the Home Science curriculum. Aligning Home Science with the NEP enables the discipline to evolve in response to societal and learner needs, fostering holistic development and preparing students for the challenges of the 21st century. Implementing the NEP in Home Science begins with understanding its core principles: promoting holistic development, encouraging critical thinking and creativity, integrating vocational and skill-based education and leveraging technology-enhanced learning. The objectives of this integration are multifaceted, aiming to modernize and enhance the quality of Home Science education.*

**Key words:** *National Education Policy (NEP), transformative era, emphasizing holistic, multidisciplinary.*

### Key Objectives-

1. To integrate cognitive, emotional, physical and social aspects of learning, fostering life skills, values and attitudes essential for personal and professional growth.
2. To encourage students to explore diverse areas such as nutrition, textiles, family resource management and community development, enabling a broader understanding of Home Science and its applications.
3. To focus on practical skills and real-world applications, enabling students to demonstrate proficiency in Home Science practices, problem-solving and decision-making.
4. To incorporate vocational education and skill development opportunities, including hands-on training, internships and industry collaborations, to enhance employability.
5. To address diverse learner needs, ensuring supportive, equitable and accessible education for students of different socio-economic, cultural and linguistic backgrounds.
6. To foster inquiry, creativity and research culture, encouraging students and educators to explore new ideas, methodologies and technologies.
7. To utilize digital tools, online platforms and multimedia resources to enrich learning experiences, including virtual labs, interactive simulations and collaborative projects.

**Mapping NEP Goals to Home Science Curriculum-** The first step in adopting the NEP in Home Science is to map its goals and objectives to the existing curriculum. This involves identifying areas where the curriculum can be enriched to align with NEP themes such as experiential learning, interdisciplinary approaches and competency-based education. Educators should explore opportunities to integrate NEP principles into Home Science modules, emphasizing sustainability, gender equity and inclusivity.

#### 1. Holistic Development:

**NEP Goal:** To promote holistic development by integrating cognitive, emotional, physical and social aspects of learning.

**Home Science Curriculum Alignment:** Home Science curriculum will include modules on personal development, life skills and emotional well-being alongside traditional subject matter. Practical activities, such as nutri dense cooking, home decor and textile crafts, will foster physical and sensory development. Social interaction and community engagement projects will enhance social skills and empathy.

**2. Multidisciplinary Learning:** NEP Goal: To encourage multidisciplinary learning experiences across different subject areas.

**Home Science Curriculum Alignment:** Home Science curriculum will integrate knowledge from various disciplines such as Statistics, biology, chemistry, nutrition, sociology and economics. Students will explore connections between these disciplines in areas like food science, textile technology, family dynamics and environmental sustainability.

#### 3. Competency-Based Education:

**NEP Goal:** To shift towards competency-based education, emphasizing practical skills and real-world applications.

**Home Science Curriculum Alignment:** Home Science curriculum will prioritize the development of competencies such as culinary skills, textile design, budget management, problem-solving,



communication and critical thinking. Assessment methods will focus on students' ability to apply knowledge and skills in practical situations.

**4. Promotion of Vocational Education:**

**NEP Goal:** To integrate vocational education and skill development into the curriculum, preparing students for the workforce.

**Home Science Curriculum Alignment:** Home Science curriculum will include vocational training modules in areas such as food processing, garment making, interior decoration and community nutrition. Internships, apprenticeships and industry partnerships will provide students with hands-on experience and exposure to potential career paths.

**5. Inclusivity and Equity:**

**NEP Goal:** To promote inclusivity and equity, ensuring equal access to quality education for all students.

**Home Science Curriculum Alignment:** Home Science curriculum will address the diverse needs of students from different socio-economic backgrounds, cultural contexts and abilities. Teaching methods will be adapted to accommodate diverse learning styles and preferences. Specialized support and resources will be provided for students with disabilities or special needs.

**6. Innovation and Research:**

**NEP Goal:** To foster innovation and research culture among students, encouraging exploration of new ideas and technologies.

**Home Science Curriculum Alignment:** Home Science curriculum will include opportunities for students to engage in research projects, experiments and design challenges. They will explore innovative solutions to contemporary issues in areas such as food security, sustainable living, textile recycling and health promotion.

**7. Integration of Technology:**

**NEP Goal:** To leverage technology for enhanced teaching and learning experiences.

**Home Science Curriculum Alignment:** Home Science curriculum will incorporate digital tools, multimedia resources, and online platforms to facilitate interactive learning, virtual simulations and collaborative projects. Students will learn to use technology for tasks such as recipe development, fabric design, budget planning and nutrition analysis.

**Pedagogical Innovations and Teaching Strategies-** Educators need to embrace pedagogical innovations and teaching strategies that promote active learning and student engagement for effectively implementation of the NEP in Home Science. This may include adopting project-based learning approaches, facilitating hands-on practical sessions and encouraging collaborative learning activities.

S.N.	Teaching Strategies	
1.	Experiential Learning	Implement hands-on, experiential learning activities that allow students to actively engage with Home Science concepts and skills. For example, Creative interior designing projects, recipe specific cooking labs, textile workshops, garment and accessories designing and community nutrition projects provide practical experiences that deepen understanding and foster skill development.
2.	Project-Based Learning	Design project-based learning experiences that encourage students to explore real-world problems and develop solutions using Home Science knowledge and skills. Projects could include designing sustainable meal plans, creating eco-friendly textile products, or developing nutrition education campaigns for local communities.
3.	Interdisciplinary Integration	Integrate Home Science with other disciplines such as biology, chemistry, sociology, and economics to provide students with a comprehensive understanding of complex issues. For example, students could explore the intersection of food science and nutrition, or the relationship between textile design and environmental sustainability.
4.	Technology Integration	Leverage technology to enhance Home Science instruction and learning outcomes. Utilize digital tools, multimedia resources and online platforms for virtual labs, interactive simulations and collaborative projects. Encourage students to use technology for tasks such as recipe development, fabric design and nutrition analysis.



5.	Inquiry-Based Learning	Foster inquiry-based learning by encouraging students to ask questions, conduct research, and explore topics of interest within Home Science. Provide opportunities for independent investigation and experimentation, allowing students to develop critical thinking skills and pursue their own areas of inquiry.
6.	Collaborative Learning	Promote collaborative learning through group projects, peer mentoring and cooperative activities. Encourage students to work together to solve problems, share ideas and learn from one another's experiences. Collaborative learning fosters communication skills, teamwork and empathy.
7.	Inclusiv Teaching Practices	Adopt inclusive teaching practices that accommodate diverse learning needs, preferences, and backgrounds. Provide multiple modes of instruction, differentiated assignments, and accessible resources to ensure that all students can actively participate and succeed in Home Science education.
8.	Assessment for Learning	Use a variety of formative assessment strategies such as performance tasks, portfolios, and self-assessments to monitor student progress and provide timely feedback. Assessment should focus on students' understanding, application of skills, and growth over time rather than simply measuring content knowledge.

By implementing above mentioned pedagogical innovations and teaching strategies, educators can create engaging, student-centered learning experiences that align with the goals and principles of the National Education Policy in the context of Home Science education.

**Creating Learning Environments Conducive to NEP Goals-** To foster holistic development and experiential learning, learning environments should:

- **Support Holistic Development:** Promote intellectual, emotional, social and physical growth.
- **Enable Experiential Learning:** Include hands-on projects, simulations and real-world applications.
- **Encourage Active Engagement:** Facilitate collaborative activities, discussions and problem-solving tasks.
- **Promote Multidisciplinary Learning:** Integrate diverse subjects and interdisciplinary projects.
- **Provide Flexible Spaces:** Adapt to diverse learning styles through technology-rich and adaptable classrooms.
- **Ensure Inclusivity:** Accommodate diverse abilities, backgrounds and learning needs.
- **Engage Communities:** Extend learning beyond classrooms via internships, service-learning and partnerships.

**Assessment and Evaluation Strategies-** In alignment with NEP's outcome-based approach, Home Science assessment should:

- Shift from rote memorization to competency-based evaluation.
- Use formative assessments, portfolios, and project-based evaluation to measure skills, critical thinking, and application of knowledge.
- Provide timely feedback to guide student growth and learning progress.

**Implementation Roadmap-** Effective implementation of the National Education Policy (NEP) 2020 in Home Science requires a systematic, phased and stakeholder-driven approach. The roadmap presented below provides a structured pathway for translating NEP principles into curriculum design, pedagogy, assessment, faculty development and institutional practices within Home Science education.

**Phase I: Planning and Alignment:** This phase focuses on institutional preparedness and alignment with NEP objectives.

- Review existing Home Science curricula across undergraduate and postgraduate programs.
- Identify gaps in relation to NEP priorities such as multidisciplinary learning, competency-based education, vocational integration and digital learning.
- Constitute curriculum review committees involving faculty, industry experts, community stakeholders and policymakers.
- Map NEP goals with Home Science domains (Nutrition, Textiles, Family Resource Management, Human Development and Extension Education).

**Phase II: Curriculum Redesign and Capacity Building:** This phase emphasizes curriculum restructuring and faculty preparedness.

- Redesign curriculum frameworks to include flexible course structures, credit-based modular learning and interdisciplinary electives.
- Integrate skill-based, vocational, and experiential components such as internships, fieldwork and community engagement projects.
- Conduct faculty development programs on NEP philosophy, outcome-based education, digital pedagogy and innovative assessment methods.



- Develop teaching–learning resources including digital content, virtual labs and case-based learning modules.

**Phase III: Pedagogical Transformation and Implementation:** This phase operationalizes NEP-aligned teaching-learning processes.

- Implement experiential, project-based, inquiry-driven and collaborative learning strategies across Home Science courses.
- Strengthen industry, community, and institutional partnerships for hands-on learning and real-world exposure.
- Integrate technology-enabled learning tools such as learning management systems (LMS), virtual simulations and blended learning models.
- Promote student research, innovation, and entrepreneurship in areas such as sustainable textiles, nutrition security and family well-being.

**Phase IV: Assessment, Monitoring and Quality Assurance:** This phase ensures continuous evaluation and improvement.

- Shift from summative, content-heavy assessments to competency-based, formative and performance-oriented evaluation.
- Use portfolios, practical demonstrations, project reports and reflective journals for student assessment.
- Establish feedback mechanisms involving students, faculty, alumni and employers.
- Monitor learning outcomes and graduate attributes aligned with NEP goals.

**Phase V: Scaling, Sustainability and Policy Integration:** This phase ensures long-term institutionalization of NEP reforms.

- Institutionalize best practices through academic regulations and policy documents.
- Encourage research, documentation, and dissemination of NEP implementation models in Home Science.
- Align institutional practices with national accreditation and quality frameworks (NAAC, NIRF).
- Strengthen linkages with national missions related to nutrition, women empowerment, sustainability and skill development.

**Conclusion-** Integrating the National Education Policy (NEP 2020) into Home Science curriculum offers a transformative pathway to learner-centric, inclusive, and innovative education. By adopting NEP principles, pedagogical innovations, faculty development, and modern assessment practices, Home Science education can equip students with the skills, knowledge, and competencies necessary for 21st-century challenges. Through sustained efforts, the discipline can play a pivotal role in shaping holistic, empowered, and socially responsible individuals.

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