

*Guidelines for Position Papers for the
Development of the National Curricular
Framework*

National Education Policy 2020

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1. Purpose of the Guidelines and Expectations for the Position Papers

1.1. Purpose of the Guidelines for the Position Papers

- a. Position Papers developed by the Focus Groups are critical for the development of the National Curriculum Framework (NCF).
- b. Providing Guidelines for the Position Papers ensures that the comprehensive exercise undertaken by the Focus Groups is fully leveraged, through a consistent framework, enabling integration of inputs into the final NCF.
- c. Guidelines provide clear anchors to the vision and principles of NEP 2020, thereby ensuring that the Position Papers reflect the spirit and intent of the Policy. They support the translation of the vision and principles of NEP 2020 into the curriculum framework and consequently into schools and classrooms.

1.2. Major Transitions and Paradigm Shifts in NEP 2020

The paragraphs below outline the major transitions and paradigm shifts in NEP 2020 that should be an integral part of all Position Papers.

1.2.1. Transitioning to a more multidisciplinary and holistic education

- i. The purpose of the education system is to develop good human beings, capable of independent, rational thought and action, with compassion and humaneness, with courage and creative imagination, based on sound ethical moorings and a rootedness in India.
- ii. This requires the holistic development of the child in all capacities - intellectual, social, physical, ethical and emotional. There must thus be strong emphasis in the curriculum on science, social sciences, art, languages, sports, mathematics and vocational education.
- iii. A strong focus on early childhood care and education is critical as is the promotion of multilingualism and the power of language in the classroom.
- iv. There should be no hard separation between 'arts' and 'science' streams, or between 'academic' and 'vocational' streams, or between 'curricular' or 'co-/extra-curricular' activities.
- v. Students will be given increased flexibility and choice of subjects to study across the arts, humanities, sciences, sports and vocational subjects.
- vi. Necessary knowledge and skills that must be learned by all students include scientific temper, aesthetics and art, oral and written communication, ethical reasoning, sustainable

living, Indian knowledge systems, digital literacy and computational thinking, knowledge of country, current affairs, and critical issues facing the world.

1.2.2. Transitioning to an emphasis on critical and analytical thinking rather than rote learning

- i. Students must develop the ability to think analytically, participate in discussions, become adept at speaking, writing and other 21st century skills, and learn how to learn.
- ii. Emphasis must be on learning key concepts, values and life skills, through deeper, experiential learning, analysis and reflection.
- iii. The system of assessment in our schooling system must shift from one that primarily tests rote memorization to one that is more formative, promotes learning and development, and tests higher-order skills.

1.2.3. Transitioning to a new curricular/pedagogical structure

Curriculum and pedagogical approaches should be in line with and responsive to the different developmental stages of the child and thus will be guided by a 5 + 3 + 3 + 4 design with four stages.

- i. Foundational Stage (Three years of preschool + Grades 1-2; Ages 3-8): Flexible, multilevel, play-based learning; in particular, universal access to high-quality Early Childhood Care and Education.
- ii. Preparatory Stage (Grades 3-5; Ages 8-11): Discovery and activity-based learning along with some formal interactive classroom learning in order to lay a solid groundwork in reading, writing, speaking, physical education, art, languages, science, social science and mathematics.
- iii. Middle Stage (Grades 6-8; Ages 11-14): Pedagogical and curricular style of the Preparatory Stage, but with the introduction of some subject teachers for learning and discussion of some of the more abstract concepts in each subject that students will be ready for at this stage across the sciences, mathematics, arts, social sciences, and humanities.
- iv. Secondary Stage (Grades 9-12; Ages 14-18): Four years of multidisciplinary study with subject depth, focus on analytical thinking, attention to life aspirations and flexibility in choice of subjects for students. Enabling structural changes, including eventual transition to semester-long course modules.

1.2.4. Other major transitions and shifts

- i. Emphasis on ensuring Foundational Literacy and Numeracy for all students.
- ii. Integration of vocational education in all stages of education.
- iii. Rootedness in India.

- iv. Criticality of the culture of schools and the system for achieving educational goals.
- v. Centrality of the role of the teacher; transformation of the teacher education system.

1.3. Expectations for the Position Papers

1. Each Position Paper should aim to illustrate how education in that particular curricular area would be transformed from the current reality of today to that envisaged in NEP 2020.
2. The Position Paper should make suggestions for attaining this important transformation that are novel, specific and practical.
3. It will be more important to detail real and creative ways of addressing specific matters rather than necessarily being exhaustive. A few effective specifics would be more valuable to the development of the NCF than a longer list of generalities.
4. Contextual details, references, illustrations, specific experiences, together with innovation and creativity, are strongly encouraged.
5. The Position Paper may discuss problems currently faced in the specific curricular area, the strengths that the State has in the area, and what needs to be done to address/overcome these problems and use these strengths within this new framework for the curriculum.
6. Suggestions for updates to curriculum content, including the latest, cutting-edge global knowledge, research, and innovation, should be included across subjects and across stages as appropriate.
7. Global best practices in curriculum and pedagogy may also be studied for adaptation as appropriate to the Indian context.
8. Position Papers should particularly describe curricular and pedagogical approaches for each school stage, with specific illustrations.
9. Position Papers should address the matter of teacher capacity – including teacher support and teacher education – to enable these transformations.
10. Position Papers should also detail the other enabling conditions required for these transformations (e.g., school leadership, community involvement, improvement of institutions such as SCERT, DIETs, BRCs, etc.).

1.4. How to use the Guidelines

1. Guidelines are laid out separately for each of the 25 Focus Group areas:
 - a. Guidelines for Position Papers on Curriculum and Pedagogy: There are 12 Position Papers in such areas.
 - b. Guidelines for Position Papers on Cross-Cutting Themes: There are 5 Position Papers on such themes. Through mutual consultation, consistency with the Position Papers on Curriculum and Pedagogy should be achieved.

- c. Guidelines for Position Papers on Other Important Areas of NEP 2020: There are 8 Position Papers in these areas. Through mutual consultation, consistency with the Position Papers on Curriculum and Pedagogy and Cross-Cutting Themes should be achieved.
2. The Guideline for each Position Paper has three subsections:
 - a. The vision of NEP 2020: Each Position Paper should be in coherence with this vision.
 - b. Anchors to NEP 2020: This subsection quotes specific paragraphs from NEP 2020 that are relevant to the Position Paper. Where further elaborations are necessary, specific paragraphs from the Draft NEP 2019 (prepared by the Kasturirangan Committee) are also included. The intent of this subsection is to maintain the fidelity of linkages and consistency between NEP 2020 and the content of the Position Papers.
 - c. Responses to questions and references: This section has specific questions that the Focus Group can respond to. The responses to these questions can keep in consideration the vision of NEP 2020 as quoted in the previous two sections. This section is further divided into three or four subsections - responses to questions that are more generic in nature, responses to questions that are stage-specific (whenever applicable), other inputs that the focus group would like to articulate, and a bibliography subsection giving references.
3. It is important to ensure that all Position Papers are in sync with each other - this is a critical matter for achieving the integrated vision of NEP 2020. Focus Groups developing particular Position Papers should discuss and read other Position Papers as well to ensure this coherence and integration. All the Position Papers together should present a cohesive picture of school education as envisaged in NEP 2020.



Position Papers – Curriculum and Pedagogy

2. Position Paper Guidelines - Curriculum and Pedagogy

2.1. Philosophy of Education (including Aims of Education)

2.1.1. Vision of NEP 2020

1. *“Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development.” [NEP 2020, Introduction]*
2. *“The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution.” [NEP 2020, Principles of this Policy]*
3. *“The National Education Policy 2019 envisions an India-centred education system that contributes to transforming our nation sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all.” [DNEP 2019, Vision]*
4. *“This National Education Policy envisions an education system rooted in Indian ethos that contributes to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all, and thereby making India a global knowledge superpower. The Policy envisages that the curriculum and pedagogy of our institutions must develop among the students a deep sense of respect towards the Fundamental Duties and Constitutional values, bonding with one’s country, and a conscious awareness of one’s roles and responsibilities in a changing world. The vision of the Policy is to instil among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen.” [NEP 2020, Vision of this Policy]*

2.1.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read the “Vision” and “Principles of this Policy” in NEP 2020, and “Vision” in DNEP 2019 in detail.

1. *“This National Education Policy 2020 is the first education policy of the 21st century and aims to address the many growing developmental imperatives of our country. This Policy proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the aspirational goals of 21st century education, including SDG4, while building upon India’s traditions and value systems. The National Education Policy lays particular emphasis on the development of the creative potential*

of each individual. It is based on the principle that education must develop not only cognitive capacities - both the 'foundational capacities' of literacy and numeracy and 'higher-order' cognitive capacities, such as critical thinking and problem solving – but also social, ethical, and emotional capacities and dispositions.” [NEP 2020, Introduction, p. 3]

2. *“Education thus must move towards less content and more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields. Pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible, and, of course, enjoyable. The curriculum must include basic arts, crafts, humanities, games, sports and fitness, languages, literature, culture, and values, in addition to science and mathematics, to develop all aspects and capabilities of learners; and make education more well-rounded, useful, and fulfilling to the learner. Education must build character, enable learners to be ethical, rational, compassionate, and caring, while at the same time prepare them for gainful, fulfilling employment.” [NEP 2020, Introduction]*
3. *“The National Education Policy lays particular emphasis on the development of the creative potential of each individual. It is based on the principle that education must develop not only cognitive capacities - both the 'foundational capacities' of literacy and numeracy and 'higher-order' cognitive capacities, such as critical thinking and problem solving – but also social, ethical, and emotional capacities and dispositions.” [NEP 2020, Introduction]*
4. *Fundamental principles of the education system include “recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student’s holistic development in both academic and non-academic spheres;” [NEP 2020, Principles of this Policy]*
5. *“multidisciplinarity and a holistic education across the sciences, social sciences, arts, humanities, and sports for a multidisciplinary world in order to ensure the unity and integrity of all knowledge;” [NEP 2020, Principles of this Policy]*
6. *“no hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams, etc. in order to eliminate harmful hierarchies among, and silos between, different areas of learning;” [NEP 2020, Principles of this Policy]*
7. *“flexibility, so that learners have the ability to choose their learning trajectories and programmes, and thereby choose their own paths in life according to their talents and interests;” [NEP 2020, Principles of this Policy]*
8. *“emphasis on conceptual understanding rather than rote learning and learning-for-exams;” [NEP 2020, Principles of this Policy]*
9. *“creativity and critical thinking to encourage logical decision-making and innovation;” [NEP 2020, Principles of this Policy]*
10. *“ethics and human and Constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice;” [NEP 2020, Principles of this Policy]*

11. *“respect for diversity and respect for the local context in all curriculum, pedagogy, and policy, always keeping in mind that education is a concurrent subject;” [NEP 2020, Principles of this Policy]*
12. *“a rootedness and pride in India, and its rich, diverse, ancient and modern culture and knowledge systems and traditions;” [NEP 2020, Principles of this Policy]*
13. *“promoting multilingualism and the power of language in teaching and learning”. [NEP 2020, Principles of this Policy]*
14. *“The curricular and pedagogical structure of school education will be reconfigured to make it responsive and relevant to the developmental needs and interests of learners at different stages of their development, corresponding to the age ranges of 3-8, 8-11, 11-14, and 14-18 years, respectively. The curricular and pedagogical structure and the curricular framework for school education will therefore be guided by a 5+3+3+4 design, consisting of the Foundational Stage (in two parts, that is, 3 years of Anganwadi/pre-school + 2 years in primary school in Grades 1-2; both together covering ages 3-8), Preparatory Stage (Grades 3-5, covering ages 8-11), Middle Stage (Grades 6-8, covering ages 11-14), and Secondary Stage (Grades 9-12 in two phases, i.e., 9 and 10 in the first and 11 and 12 in the second, covering ages 14-18).” [NEP 2020, 4.1]*

2.1.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.1.3.1. General questions

1. Please respond to the NEP points above on the purpose, aims, and vision, of education, including any suggestions you may have regarding additions or modifications.
2. How can these aims be rooted in the Indian context and heritage while addressing the modern-day needs of the individual and of Indian and global society? What are the broad principles and approaches required to achieve these aims?
3. What aims of education are currently not being achieved? How will the new curriculum address these problems?
4. How can education be made more holistic by addressing not just cognitive goals, but also socio-emotional and ethical development of students?
5. The NEP suggests a shift from an expansive content focus to a focus on analytical thinking, problem solving, and discussion. Which aims of education can be achieved through such a paradigm shift? What measures can be taken in school curriculum and pedagogy towards achieving this goal?
6. Multidisciplinarity and removing “hard separations” are key policy thrusts of NEP 2020. Which aims of education can be achieved through such a paradigm shift, and what measures can be taken in school curriculum and pedagogy towards achieving this goal?

7. Another key policy thrust is flexibility for students to choose their learning pathways, especially in the Secondary Stage. How can the culture of the education system incorporate this paradigm shift, and what changes are needed to achieve it?
8. How can the education system incorporate respect for diversity, respect for national spirit, and respect for local context, and what would be the benefits to overall learning?
9. Given the linguistic diversity of India and the benefits of multilingual education, how can the education system effectively incorporate multilingual education to enhance overall learning?
10. How should Indian knowledge systems, heritage, and traditions be incorporated into the education system, and what would be the benefits to overall learning?

2.1.3.2. Stage-specific Aims of Education

Keeping the above questions in mind, please provide stage-specific aims of education for the Foundational, Preparatory, Middle and Secondary Stages.

2.1.3.3. Other Suggestions

In this subsection, please provide other suggestions about the philosophy and aims of education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.1.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.2. Pre-school Education and FLN

2.2.1. Vision of NEP 2020

1. *“ECCE ideally consists of flexible, multi-faceted, multi-level, play-based, activity-based, and inquiry-based learning, comprising of alphabets, languages, numbers, counting, colours, shapes, indoor and outdoor play, puzzles and logical thinking, problem-solving, drawing, painting and other visual art, craft, drama and puppetry, music and movement. It also includes a focus on developing social capacities, sensitivity, good behaviour, courtesy, ethics, personal and public cleanliness, teamwork, and cooperation. The overall aim of ECCE will be to attain optimal outcomes in the domains of: physical and motor development, cognitive development, socio-emotional-ethical development, cultural/artistic development, and the development of communication and early language, literacy, and numeracy.” [NEP 2020, 1.2]*
2. *“The ability to read and write, and perform basic operations with numbers, is a necessary foundation and an indispensable prerequisite for all future schooling and lifelong learning. However, various governmental as well as non-governmental surveys indicate that we are currently in a learning crisis: a large proportion of students currently in elementary school - estimated to be over 5 crore in number - have not attained foundational literacy and numeracy, i.e., the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction with Indian numerals.” [NEP 2020, 2.1]*
3. *Fundamental principles of the education system include “according the highest priority to achieving Foundational Literacy and Numeracy by all students by Grade 3;” [NEP 2020, Principles of this Policy, p. 5]*
4. *“recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student’s holistic development in both academic and non-academic spheres;” [NEP 2020, Principles of this Policy, p. 5]*
5. *“creativity and critical thinking to encourage logical decision-making and innovation;” [NEP 2020, Principles of this Policy, p. 5]*
6. *“ethics and human & Constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice”. [NEP 2020, Principles of this Policy, p. 5]*

2.2.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Sections 1 and 2 of NEP 2020, and Chapters 1 and 2 of DNEP 2019 in detail. Please also go through Paragraphs 3.3 to 3.7 of the NEP 2020, as well as P3.1 and P3.5 to 3.9 of DNEP 2019.

1. *“The overall aim of ECCE will be to attain optimal outcomes in the domains of physical and motor development, cognitive development, socio-emotional-ethical development, cultural/artistic development, and the development of communication and early language, literacy, and numeracy.” [NEP 2020, 1.2]*

2. *“A National Curricular and Pedagogical Framework for Early Childhood Care and Education (NCPFECCE) for children up to the age of 8 will be developed by NCERT in two parts, namely, a sub-framework for 0–3-year-olds, and a sub-framework for 3-8 year-olds, aligned with the above guidelines.” [NEP 2020, 1.3]*
3. *“The overarching goal will be to ensure universal access to high-quality ECCE across the country in a phased manner. Special attention and priority will be given to districts and locations that are particularly socio-economically disadvantaged.” [NEP 2020, 1.4]*
4. *“For universal access to ECCE, Anganwadi Centres will be strengthened with high-quality infrastructure, play equipment, and well-trained Anganwadi workers/teachers” [NEP 2020, 1.5]*
5. *“It is envisaged that prior to the age of 5 every child will move to a “Preparatory Class” or “Balavatika” (that is, before Class 1), which has an ECCE-qualified teacher.” [NEP 2020, 1.6]*
6. *“ECCE will also be introduced in Ashramshalas in tribal-dominated areas and in all formats of alternative schooling in a phased manner.” [NEP 2020, 1.8]*
7. *“The responsibility for ECCE curriculum and pedagogy will lie with MHRD. The planning and implementation of early childhood care and education curriculum will be carried out jointly by the Ministries of HRD, Women and Child Development (WCD), Health and Family Welfare (HFW), and Tribal Affairs.” [NEP 2020, 1.9]*
8. *“The ability to read and write, and perform basic operations with numbers, is a necessary foundation and an indispensable prerequisite for all future schooling and lifelong learning.” [NEP 2020, 2.1]*
9. *“Attaining foundational literacy and numeracy for all children will thus become an urgent national mission, with immediate measures to be taken on many fronts and with clear goals that will be attained in the short term (including that every student will attain foundational literacy and numeracy by Grade 3).” [NEP 2020, 2.2]*
10. *“On the curricular side, there will be an increased focus on foundational literacy and numeracy - and generally, on reading, writing, speaking, counting, arithmetic, and mathematical thinking - throughout the preparatory and middle school curriculum, with a robust system of continuous formative/adaptive assessment to track and thereby individualize and ensure each student's learning.” [NEP 2020, 2.4]*
11. *“The numerous rich traditions of India over millennia in ECCE, involving art, stories, poetry, songs, gatherings of relatives, and more, that exist throughout India must also be incorporated in the curricular and pedagogical framework of ECCE to impart a sense of local relevance, enjoyment, excitement, culture, and sense of identity and community. The traditional roles of families in raising, nurturing, and educating children also must be strongly supported and integrated.” [DNEP 2019, Chapter 1, p. 48]*
12. *“Due to the scale of the current learning crisis, all viable methods will be explored to support teachers in the mission of attaining universal foundational literacy and numeracy... it will also be made far easier for trained volunteers - from both the local community and beyond - to participate in this large-scale mission.” [NEP 2020, 2.7]*

13. *“Enjoyable and inspirational books for students at all levels will be developed, including through high-quality translation (technology assisted as needed) in all local and Indian languages, and will be made available extensively in both school and local public libraries.” [NEP 2020, 2.8]*
14. *“A national repository of high-quality resources on foundational literacy and numeracy will be made available on the Digital Infrastructure for Knowledge Sharing (DIKSHA). Technological interventions to serve as aids to teachers and to help bridge any language barriers that may exist between teachers and students, will be piloted and implemented” [NEP 2020, 2.6]*
15. *“Currently, with the lack of universal access to ECCE, a large proportion of children already fall behind within the first few weeks of Grade 1.” [NEP 2020, 2.5]*
16. *“The Foundational Stage will consist of five years of flexible, multilevel, play/activity-based learning and the curriculum and pedagogy of ECCE as mentioned in para 1.2. The Preparatory Stage will comprise three years of education building on the play, discovery, and activity-based pedagogical and curricular style of the Foundational Stage, and will also begin to incorporate some light textbooks as well as aspects of more formal but interactive classroom learning, in order to lay a solid groundwork across subjects, including reading, writing, speaking, physical education, art, languages, science, and mathematics.” [NEP 2020, 4.2]*
17. *“As research clearly shows that children pick up languages extremely quickly between the ages of 2 and 8 and that multilingualism has great cognitive benefits to young students, children will be exposed to different languages early on (but with a particular emphasis on the mother tongue), starting from the Foundational Stage onwards.” [NEP 2020, 4.12]*
18. *“It is recognized that mathematics and mathematical thinking will be very important for India’s future and India’s leadership role in the numerous upcoming fields and professions that will involve artificial intelligence, machine learning, and data science, etc. Thus, mathematics and computational thinking will be given increased emphasis throughout the school years, starting with the foundational stage, through a variety of innovative methods, including the regular use of puzzles and games that make mathematical thinking more enjoyable and engaging.” [NEP 2020, 4.25]*
19. *“All curriculum and pedagogy, from the foundational stage onwards, will be redesigned to be strongly rooted in the Indian and local context and ethos in terms of culture, traditions, heritage, customs, language, philosophy, geography, ancient and contemporary knowledge, societal and scientific needs, indigenous and traditional ways of learning etc. – in order to ensure that education is maximally relatable, relevant, interesting, and effective for our students. Stories, arts, games, sports, examples, problems, etc. will be chosen as much as possible to be rooted in the Indian and local geographic context. Ideas, abstractions, and creativity will indeed best flourish when learning is thus rooted.” [NEP 2020, 4.29]*
20. *“The critical problems and recommendations regarding ECCE, foundational literacy and numeracy, access, enrolment and attendance discussed in Chapters 1–3, are particularly relevant and important for underrepresented and disadvantaged groups. Therefore, the measures from Chapters 1–3 will be targeted in a concerted way for SEDGs.” [NEP 2020, 6.3]*
21. *“Schools providing quality ECCE reap the greatest dividends for children who come from families that are economically disadvantaged.” [NEP 2020, 6.5]*

22. *“Ensuring the inclusion and equal participation of children with disabilities in ECCE and the schooling system will also be accorded the highest priority.” [NEP 2020, 6.10]*
23. *“Beyond the teaching of cutting-edge pedagogy, teacher education will include grounding in sociology, history, science, psychology, early childhood care and education, foundational literacy and numeracy, ...” [NEP 2020, 15.5]*

2.2.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.2.3.1. General questions

1. Please respond to the NEP points above on ECCE/FLN education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in the curriculum and pedagogy of ECCE/FLN?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in ECCE/FLN, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. What should be the core principles for developing curriculum and pedagogy for the various domains of ECCE?
6. What should be the approach to universalize ECCE for all children between the ages of 3 and 6? What are the current challenges towards achieving universal FLN? How can these challenges be overcome? Are there any structures/processes that should be strengthened to achieve this aim?
7. What are the mechanisms through which existing Anganwadi Centres should be strengthened?
8. What is the approach to ensure that all Anganwadi workers, and other teachers engaged with ECCE, acquire educational qualifications in ECCE? What should be done in the interim to ensure existing Anganwadi workers/teachers develop the necessary capacities to fulfill the goals of NEP 2020?
9. What should be the curricular changes in the Foundational and Preparatory Stages that would lay emphasis on FLN?
10. What kind of children’s instructional materials and TLM will be needed for development of strong FLN skills?
11. It is important to include children’s familiar/home languages in the teaching and learning of FLN in early grades. How can this be done at scale in the different contexts of the country?

12. How can enjoyable children's literature be developed in regional and local languages? How can it be made available to children? How can technology be utilized to increase access to quality children's literature?
13. How can Indian knowledge systems and the rich ECCE traditions of India, including local and tribal knowledge and traditions, be incorporated into the ECCE/FLN curriculum?
14. What are the possible coordination mechanisms between Ministry of Education (MoE), Ministry of Women and Child Development (MoWCD), Ministry of Health and Family Welfare (MoHFW) and Ministry of Tribal Affairs (MoTA) to ensure quality ECCE and achievement of FLN? How will the ECCE curriculum be uniformly implemented across different institutions coming under these different departments? What would be the role of the Education Department in this coordination?
15. What should be the approach to teacher education, and for developing teachers for, ECCE?
16. What should be the approach to teacher education, including in-service teacher education, to have a special focus on addressing the FLN gap?
17. What are ways in which families and home learning/schooling can be supported to effectively contribute to addressing ECCE and the FLN gap?
18. How should health-related monitoring be integrated in the Early Years? What areas of health and physical well-being should be monitored by teachers for ensuring better cognition? What indicators can be easily monitored by teachers?
19. What aspects of FLN and ECCE should be incorporated in the Adult Education programme to ensure better support to children in learning by parents?
20. What models of peer learning could work best at the Foundational stage?
21. How can the community be engaged in ensuring that every child achieves Grade-appropriate learning proficiency by Grade 3?
22. What tools can be used to identify the diverse gifts/talents of children at this stage?
23. What tools can be used to identify children with learning disabilities at this stage?
24. In pandemic situations, such as the one we are currently facing, what measures can be taken at the National or State levels to reach out to children at the Foundational Stage and minimise the disruption to their care and education?
25. NEP 2020 also talks about learning experiences for 0-3 year-olds. What should be major components of recommendations for 0-3 year-olds and how should they be implemented?

2.2.3.2. Stagewise approach to curriculum and pedagogy for attaining FLN

The four-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14) and Secondary (ages 14-18) Stages is critical for realizing the vision of NEP 2020. While FLN largely needs to be addressed in the Foundational and Preparatory Stages, some consolidation will be required in

the Middle Stage too. In this section, please give specific proposals and illustrations for the first 3 stages for achieving the goals of FLN.

26. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities in pre-school years, including those relating to FLN, that all students must develop? How should these capacities be developed across each stage (Foundational: up to 8yrs; Preparatory: 8-11yrs; Middle: 11-14yrs)?
27. For each of the concepts/capacities and stages described in #17 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
28. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy (with other subjects and with “real life”) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
29. Describe ways in which each of these concepts (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems.
30. Describe ways in which local knowledge and flavor could be included in the curriculum and pedagogy in the teaching and learning of these concepts including those related to FLN.
31. Describe ways in which families and local communities could be involved in the teaching and learning of these concepts.
32. Describe practices by which students may achieve bi- or multi-lingual proficiency in FLN.
33. Approaches to inclusion for children from SEDGs that are necessary for this curricular area need to be elaborated.
34. Describe how assessment in pre-school and assessment for FLN may be transformed from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development, and tests higher-order capacities such as analysis, critical thinking, and conceptual clarity. Different modes of assessment that are age appropriate should be illustrated for each stage.
35. Describe the approach to development of teaching and learning materials, keeping in mind the curricular and pedagogical shifts.
36. Describe ways in which technology could be used to enhance teaching-learning of FLN in an effective and equitable manner.
37. How should teacher capacity, support, and education be reformed to effectively enable all the above transformations?
38. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place to effectively enable all the above transformations?

2.2.3.3. Other Suggestions

In this subsection, please provide other suggestions about pre-school education and foundational literacy and numeracy that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.2.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.3. Curriculum and Pedagogy

2.3.1. Vision of NEP 2020

1. *“The curricular and pedagogical structure of school education will be reconfigured to make it responsive and relevant to the developmental needs and interests of learners at different stages of their development, corresponding to the age ranges of 3-8, 8-11, 11-14, and 14-18 years, respectively. The curricular and pedagogical structure and the curricular framework for school education will therefore be guided by a 5+3+3+4 design, consisting of the Foundational Stage (in two parts, that is, 3 years of Anganwadi/pre-school + 2 years in primary school in Grades 1-2; both together covering ages 3-8), Preparatory Stage (Grades 3-5, covering ages 8-11), Middle Stage (Grades 6-8, covering ages 11-14), and Secondary Stage (Grades 9-12 in two phases, i.e., 9 and 10 in the first and 11 and 12 in the second, covering ages 14-18).” [NEP 2020, 4.1]*
2. *“The key overall thrust of curriculum and pedagogy reform across all stages will be to move the education system towards real understanding and towards learning how to learn - and away from the culture of rote learning as is largely present today. The aim of education will not only be cognitive development, but also building character and creating holistic and well-rounded individuals equipped with the key 21st century skills.” [NEP 2020, 4.4]*
3. Fundamental principles of the education system include *“creativity and critical thinking to encourage logical decision-making and innovation;” [NEP 2020, Principles of this Policy, p. 5]*
4. *“ethics and human & Constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice;” [NEP 2020, Principles of this Policy, p. 5]*
5. *“flexibility, so that learners have the ability to choose their learning trajectories and programmes, and thereby choose their own paths in life according to their talents and interests”. [NEP 2020, Principles of this Policy, p. 5]*

2.3.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Section 4 of NEP 2020 and Chapter 4 of DNEP 2019 in detail.

1. Stages: *“The curricular and pedagogical structure of school education will be reconfigured to make it responsive and relevant to the developmental needs and interests of learners at different stages of their development, corresponding to the age ranges of 3-8, 8-11, 11-14, and 14-18 years, respectively. The curricular and pedagogical structure and the curricular framework for school education will therefore be guided by a 5+3+3+4 design.” [NEP 2020, 4.1]*
2. Holistic Development of Learners: *“... Specific sets of skills and values across domains will be identified for integration and incorporation at each stage of learning, from pre-school to higher education.” [NEP 2020, 4.4]*

3. Reduce curriculum content: *“Curriculum content will be reduced in each subject to its core essentials, to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based, and analysis-based learning. The mandated content will focus on key concepts, ideas, applications, and problem solving.” [NEP 2020, 4.5]*
4. Fundamental principles of the education system include **“recognizing, identifying, and fostering the unique capabilities of each student**, by sensitizing teachers as well as parents to promote each student’s holistic development in both academic and non-academic spheres;” [NEP 2020, Principles of this Policy, p. 5]
5. **“emphasis on conceptual understanding** rather than rote learning and learning-for-exams”. [NEP 2020, Principles of this Policy, p. 5]
6. Pedagogic Reforms: *“Teaching and learning will be conducted in a more interactive manner; questions will be encouraged, and classroom sessions will regularly contain more fun, creative, collaborative, and exploratory activities for students for deeper and more experiential learning.” [NEP 2020, 4.5]*
7. Experiential learning: *“In all stages, experiential learning will be adopted, including hands-on learning, arts-integrated and sports-integrated education, story-telling-based pedagogy, among others, as standard pedagogy within each subject, and with explorations of relations among different subjects.” [NEP 2020, 4.6]*
8. Competency-based learning: *“To close the gap in achievement of learning outcomes, classroom transactions will shift, towards competency-based learning and education.” [NEP 2020, 4.6]*
9. Assessments: *“The assessment tools (including assessment “as”, “of”, and “for” learning) will also be aligned with the learning outcomes, capabilities, and dispositions as specified for each subject of a given class.” [NEP 2020, 4.6]*
10. Flexibility and Choice: *“Students will be given increased flexibility and choice of subjects to study, particularly in secondary school - including subjects in physical education, the arts and crafts, and vocational skills – so that they can design their own paths of study and life plans.” [NEP 2020, 4.9]*
11. Horizontal Integration: *“No hard separations between arts and sciences, between curricular and co-/extra-curricular activities, between vocational and academic streams, etc. in order to eliminate harmful hierarchies among, and silos between, different areas of learning;” “Subjects such as physical education, the arts, and vocational crafts will be seriously incorporated throughout the school curriculum, with a consideration for what is interesting and safe at each age.” [NEP 2020, Principles of this Policy, p. 5] [DNEP 2019, P4.4.2]*
12. *“Incorporation of Indian knowledge systems into the curriculum: Indian contributions to knowledge - and the historical contexts that led to them - will be incorporated in an accurate and engaging manner, wherever relevant, into the existing school curriculum and textbooks.” [DNEP 2019, P4.6.9.1]*
13. Rootedness: *“All curriculum and pedagogy, from the foundational stage onwards, will be redesigned to be strongly rooted in the Indian and local context and ethos in terms of culture, traditions, heritage, customs, language, philosophy, geography, ancient and contemporary knowledge, societal and scientific needs, indigenous and traditional ways of learning etc. – in*

order to ensure that education is maximally relatable, relevant, interesting, and effective for our students. Stories, arts, games, sports, examples, problems, etc. will be chosen as much as possible to be rooted in the Indian and local geographic context. Ideas, abstractions, and creativity will indeed best flourish when learning is thus rooted.” [NEP 2020, 4.29]

2.3.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.3.3.1. General questions

1. Please respond to the NEP points above on curriculum and pedagogy, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in curriculum and pedagogy?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in curriculum and pedagogy, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. The four-stage school curriculum is one of the most significant transitions in NEP 2020. How is each stage distinct in its curricular and pedagogical approach? How is this approach developmentally appropriate? How will continuity be maintained across the stages even as each stage is distinct?
6. Holistic development is emphasised in NEP 2020. What are the specific sets of skills, capacities and values that would be crosscutting across different curricular areas? What is the progression of development of these skills, capacities and values across school stages?
7. What is the approach to reducing the content load in all the school subjects? What are the key principles that would allow such a systematic reduction without compromising on educational vision and goals? What are the main challenges expected in curriculum reduction? How is the greater focus on concepts likely to help in achieving this objective?
8. How would the transition to the pedagogical approach envisioned by NEP 2020 be made? What are the current challenges to adopting such pedagogies? What are the enabling conditions that are necessary for a more experiential approach to learning? What assistance will teachers expect either from their schools or from teacher-training bodies in shifting to the new pedagogies?
9. To move towards a more competency-based approach, core competencies have to be well defined for each stage of the school curriculum. These would be both subject-specific and cross-curricular. What should be the core competencies for each stage?
10. How would assessment change at each stage to reflect the new curricular and pedagogical vision?

11. Flexibility and choice are emphasised by NEP 2020, particularly in the Secondary Stage. How will this flexibility and choice be enabled in the curriculum?
12. How will this flexibility and choice be translated into practice?
13. How would horizontal integration of the different curricular areas be facilitated and achieved? How would arts, sports and vocational education be integrated across the curriculum?
14. What would be the approach to integrating Indian Knowledge Systems, heritage, and traditions within the school curriculum across curricular areas and school stages?
15. Given the emphasis on experiential learning, no hard separation and flexibility in choice of subjects, what changes may be required regarding time-tabling and time management in schools?
16. What kinds of curricular and pedagogical adjustments would be required for children with different disabilities?
17. How can the habit of reading be developed in every child at an early stage?

2.3.3.2. Stagewise approach to curriculum and pedagogy

The 4-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14), and Secondary (ages 14-18) is critical for realizing the vision of NEP 2020. In addition, age (developmental) appropriateness, holistic education, more opportunities for creativity and analytic thinking rather than rote learning, and choice and flexibility are also emphasised in NEP 2020.

Age-appropriateness: This section should elaborate key understandings of the learning capacities of children of specific age groups, and appropriate curricular and pedagogical approaches across the curriculum for each stage.

Holistic education: This section should elaborate the guiding principles and design approaches for each stage of schooling through which the student will receive holistic education. While elaborating on these, it should be kept in mind that all the curricular areas provide holistic coherence and complement each other. This section should specify the mechanisms through which such coherence would be maintained.

More creativity and analytic thinking with less rote learning: This section should describe the guiding principles and design approaches for each stage of schooling that enable greater experiential, play-based, inquiry-based, and discovery-based learning, creativity, enjoyment, interaction, discussion, problem solving and analytic thinking with less rote learning.

Flexibility and choice: This section should have clear proposals and designs, particularly for the Secondary Stage, to realize the vision of flexibility and choice in NEP 2020. How will the curriculum move away from the current “hard separations”, such as between arts and sciences, between academic and vocational subjects, and between curricular and co-/extra-curricular activities?

2.3.3.3. Other Suggestions

In this subsection, please provide other suggestions about curriculum and pedagogy that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.3.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.4. Education in Social Sciences

2.4.1. Vision of NEP 2020

1. *"While students must have a large amount of flexibility in choosing their individual curricula, certain subjects, skills, and capacities should be learned by all students to become good, successful, innovative, adaptable, and productive human beings in today's rapidly changing world. In addition to proficiency in languages, these skills include...ethical and moral reasoning; knowledge and practice of human and Constitutional values; gender sensitivity; Fundamental Duties; citizenship skills and values; knowledge of India; environmental awareness including water and resource conservation, sanitation and hygiene; and current affairs and knowledge of critical issues facing local communities, States, the country, and the world."* [NEP 2020, 4.23]
2. *"The societal challenges that India needs to address today, such as access for all its citizens to clean drinking water and sanitation, quality education and healthcare, improved transportation, air quality, energy, and infrastructure, will require the implementation of approaches and solutions that are informed by top-notch science and technology and are also rooted in a deep understanding of the social sciences and humanities and the various socio-cultural dimensions of the nation."* [NEP 2020, 17.4]
3. Fundamental principles of the education system include *"creativity and critical thinking to encourage logical decision-making and innovation;"* [NEP 2020, Principles of this Policy, p. 5]
4. *"ethics and human & Constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice".* [NEP 2020, Principles of this Policy, p. 5]

2.4.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Section 4 of NEP 2020 and Chapter 4 of DNEP 2019 in detail.

1. No hard separation of arts and sciences: *"All students will have the opportunity to engage deeply in the arts and humanities as well as in the study of the sciences and social sciences."* [DNEP 2019, P4.4.3]
2. *"Curriculum content will be reduced in each subject to its core essentials, to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based, and analysis-based learning. The mandated content will focus on key concepts, ideas, applications, and problem solving."* [NEP 2020, 4.5]
3. Inculcate scientific temper and encourage evidence-based thinking throughout the curriculum: *"Evidence-based reasoning and the scientific method will be incorporated throughout the school curriculum - in science as well as in traditionally "non-science" subjects - in order to encourage rational, analytical, logical, and quantitative thinking in all aspects of the curriculum."* [DNEP 2019, P4.6.1.1]

4. Development of Constitutional values: *"The process and the content of education at all levels will also aim to develop Constitutional values in all students, and the capacities for their practice... Some of these Constitutional values are: democratic outlook and commitment to liberty and freedom; equality, justice, and fairness; embracing diversity, plurality, and inclusion; humaneness and fraternal spirit; social responsibility and the spirit of service; ethics of integrity and honesty; scientific temper and commitment to rational and public dialogue; peace; social action through Constitutional means; unity and integrity of the nation, and a true rootedness and pride in India with a forward-looking spirit to continuously improve as a nation."* [DNEP 2019, P4.6.8.3]
5. *"The contents of languages, literature, history, and the social sciences will incorporate discussions particularly aimed at addressing ethical and moral principles and values such as patriotism, sacrifice, nonviolence, truth, honesty, peace, righteous conduct, forgiveness, tolerance, mercy, sympathy, helpfulness, courtesy, cleanliness, equality, and fraternity."* [DNEP 2019, P4.6.8.1]
6. *"Incorporation of communication in every subject in the Middle and Secondary years"* [DNEP 2019, P4.6.3.2]
7. *"Incorporation of basic ethical and moral reasoning throughout the school curriculum"* [DNEP 2019, P4.6.8.1]
8. *"Course on critical issues facing the community, the country, and the world for all students in Grades 7-8"* [DNEP 2019, P4.6.10.1]
9. *"Course on current affairs for all students in Grades 9-12"* [DNEP 2019, P4.6.10.2]
10. *"Incorporation of Indian knowledge systems into the curriculum"* [DNEP 2019, P4.6.9.1]
11. *"Teachers-in-training would be able to interact with peers from other disciplines and be taught by faculty in allied disciplines of education such as psychology, child development, and social sciences – making them that much stronger as teachers when they graduate."* [DNEP 2019, Introduction to Section 5.5]
12. *"All curriculum and pedagogy, from the foundational stage onwards, will be redesigned to be strongly rooted in the Indian and local context and ethos in terms of culture, traditions, heritage, customs, language, philosophy, geography, ancient and contemporary knowledge, societal and scientific needs, indigenous and traditional ways of learning etc. – in order to ensure that education is maximally relatable, relevant, interesting, and effective for our students. Stories, arts, games, sports, examples, problems, etc. will be chosen as much as possible to be rooted in the Indian and local geographic context. Ideas, abstractions, and creativity will indeed best flourish when learning is thus rooted."* [NEP 2020, 4.29]

2.4.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.4.3.1. General questions

1. Please respond to the NEP points above on social science education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in the curriculum and pedagogy of social science?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in social sciences, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. What would be the approach to moving social science education from emphasising recall and memory to emphasising evidence-based and critical thinking? How will the content load be reduced? What would be the principles for determining core social science content?
6. How will the social science curriculum incorporate the development of Constitutional values and social action through Constitutional means?
7. Communication is given due importance in NEP 2020, from the early stages (“show and tell”) to more sophisticated forms of communication (both oral and written) in higher stages. How will the social science curriculum develop such communication capacities?
8. Ethics and moral sensibilities are deeply rooted within local contexts and social realities. How will the social science curriculum integrate social science understanding with ethical and moral reasoning?
9. What would be the approach to the design and content of courses on “Critical issues facing the community” and “Current Affairs”? How will these courses fit within the social science curriculum? How would the personal biases of the teachers be handled in these situations?
10. How will the social science curriculum incorporate Indian knowledge systems, heritage and culture into its content and pedagogy? How will Indian history and the freedom struggle be incorporated into the various stages of the school curriculum?
11. How will local and relevant tribal knowledge systems, heritage, and culture be incorporated into the social science curriculum?
12. How can the social science curriculum be made more engaging, multidisciplinary, and its learnings relevant to the child and help in developing 21st century skills? What are other subject areas under the Social Sciences that should be introduced at the secondary stage to fulfil present day demands and needs and provide appropriate linkages with higher education? How can this be implemented?

2.4.3.2. Stagewise approach to education in social sciences

The 4-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14), Secondary (ages 14-18) is critical for realizing the vision of NEP 2020. In this section, please give specific proposals and illustrations for the 4 stages of this curricular area.

13. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities, that all students must develop in this subject by Grade 12? How should these capacities be developed across each stage (Foundational, Preparatory, Middle and Secondary)?
14. For each of the concepts/capacities and stages described in #11 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
15. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy of this subject (with other subjects and with “real life”) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
16. Describe ways in which each of these concepts (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems.
17. Describe ways in which local knowledge and flavor could be included in the curriculum and pedagogy of this subject area.
18. Describe ways in which families and local communities could be involved in the teaching and learning of this subject area.
19. Describe practices by which students may achieve bi- or multi-lingual proficiency in the discussion of this subject.
20. Approaches to inclusion for children from SEDGs that are necessary for this curricular area need to be elaborated.
21. Describe how assessment in the subject may be transformed from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development, and tests higher-order capacities such as analysis, critical thinking, and conceptual clarity. Assessments should respond to the need for being formative and competency based and promoting learning. Different modes of assessment that are age appropriate should be illustrated for each stage.
22. Describe the approach to textbook and TLM development keeping in mind the curricular and pedagogical shifts.
23. Describe ways in which technology could be used to enhance teaching-learning in this subject in an effective and equitable manner.
24. How should teacher capacity, support, and education be reformed to effectively enable all the above transformations?
25. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place to effectively enable all the above transformations?

2.4.3.3. Other Suggestions

In this subsection, please provide other suggestions about social science education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.4.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.5. Vocational Education

2.5.1. Vision of NEP 2020

1. *“Vocational education is extremely vital for our country to run efficiently and properly, and thus it is beneficial to increasingly incorporate elements of vocational education into the school curriculum to expose children to its utility and its value as art. Indeed, some exposure to practical vocational-style training is always fun for young students, and for many students it may offer a glimpse of future professions while for others it would at the very least help teach and reinforce the dignity of all labour.” [DNEP 2019, P4.6.6]*
2. Fundamental principles of the education system include *“creativity and critical thinking to encourage logical decision-making and innovation”.* [NEP 2020, Principles of this Policy, p. 5]
3. *“Vocational education is perceived to be inferior to mainstream education and meant largely for students who are unable to cope with the latter. This is a perception that affects the choices students make. It is a serious concern that can only be dealt with by a complete re-imagination of how vocational education is offered to students in the future.” [NEP 2020, 16.3]*
4. *“This policy aims to overcome the social status hierarchy associated with vocational education and requires integration of vocational education programmes into mainstream education in all education institutions in a phased manner. Beginning with vocational exposure at early ages in middle and secondary school, quality vocational education will be integrated smoothly into higher education. It will ensure that every child learns at least one vocation and is exposed to several more. This would lead to emphasizing the dignity of labour and importance of various vocations including those involving Indian arts and artisanship.” [NEP 2020, 16.4]*

2.5.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Sections 4, 5 and 16 of NEP 2020, as well as Chapters 4 and 5 of DNEP 2019. Please also go through P20.3.1 to P20.3.5 of DNEP 2019.

1. *“A concerted national effort will be made to ensure universal access and afford opportunity to all children of the country to obtain quality holistic education - including vocational education - from pre-school to Grade 12.” [NEP 2020, 3.1]*
2. *“Every student will take a fun course, during Grades 6-8, that gives a survey and hands-on experience of a sampling of important vocational crafts, such as carpentry, electric work, metal work, gardening, pottery making, etc., as decided by States and local communities and as mapped by local skilling needs.” [NEP 2020, 4.26]*
3. *“All students will participate in a 10-day bagless period sometime during Grades 6-8 where they intern with local vocational experts such as carpenters, gardeners, potters, artists, etc.” [NEP 2020, 4.26]*

4. Vocational exposure: *“The importance of and a basic knowledge of various livelihoods and life-skills (such as gardening, pottery, wood-work, electric work, and many others) will be taught at the Foundational and Elementary level, ...Some vocational arts, such as gardening or work with clay, will even be introduced in the foundational years (ages 3-8).” [DNEP 2019, P4.6.6.1]*
5. *“Include ample vocational course options for all in secondary school curriculum: Vocational courses in addition to more traditional academic courses will be offered in Grades 9-12 in secondary school and all children will have access to all courses on offer.” [DNEP 2019, P4.6.6.3]*
6. *“There will be no hard separation among ‘curricular’, ‘extracurricular’, or ‘co-curricular’, among ‘arts’, ‘humanities’, and ‘sciences’, or between ‘vocational’ or ‘academic’ streams.” [NEP 2020, 4.9]*
7. *“The principles for university entrance exams will be similar. The National Testing Agency (NTA) will work to offer a high-quality common aptitude test, as well as specialized common subject exams in the sciences, humanities, languages, arts, and vocational subjects, at least twice every year”. [NEP 2020, 4.42]*
8. *“To ensure an adequate number of teachers across subjects - particularly in subjects such as art, physical education, vocational education, and languages - teachers could be recruited to a school or school complex and the sharing of teachers across schools could be considered in accordance with the grouping-of-schools adopted by State/UT governments.” [NEP 2020, 5.5]*
9. *“Schools/school complexes will be encouraged to hire local eminent persons or experts as ‘master instructors’ in various subjects, such as in traditional local arts, vocational crafts, entrepreneurship, agriculture, or any other subject where local expertise exists, to benefit students and help preserve and promote local knowledge and professions.” [NEP 2020, 5.6]*
10. *“The 12th Five-Year Plan (2012–2017) estimated that only a very small percentage of the Indian workforce in the age group of 19–24 (less than 5%) received formal vocational education Whereas in countries such as the USA the number is 52%, in Germany 75%, and South Korea it is as high as 96%. These numbers only underline the urgency of the need to hasten the spread of vocational education in India.” [NEP 2020, 16.1]*
11. *“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. This is in alignment with Sustainable Development Goal 4.4 and will help to realize the full potential of India’s demographic dividend. The number of students in vocational education will be considered while arriving at the GER targets. The development of vocational capacities will go hand-in-hand with the development of ‘academic’ or other capacities. Vocational education will be integrated in the educational offerings of all secondary schools in a phased manner over the next decade. Towards this, secondary schools will also collaborate with ITIs, polytechnics, local industry, etc. Skill labs will also be set up and created in the schools in a hub and spoke model which will allow other schools to use the facility.” [NEP 2020, 16.1]*
12. *“Vocational education will be integrated into all school and higher education institutions in a phased manner over the next decade. Focus areas for vocational education will be chosen based on skills gap analysis and mapping of local opportunities.” [NEP 2020, 16.6]*

2.5.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.5.3.1. General questions

1. Please respond to the NEP points above on vocational education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in vocational education?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in vocational education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. NEP 2020 envisions vocational education as not merely preparation for livelihood but as a form of understanding and engagement that enables experiential learning. What should be the approach to incorporating vocational aspects of education across all the stages of schooling?
6. For vocational “exposure” what are the principles that would determine the choice of vocations available to the students? What would be the considerations for safety and appropriateness? How would the local contexts and economies influence these choices?
7. What would be the curricular approach to ensure that there is no hard separation between vocational and academic streams in the school curriculum? How will vocational aspects be integrated into the academic areas of the curriculum? How would the curriculum ensure that all children have access to all vocational courses on offer?
8. What is the approach for designing appropriate assessments for vocational skills, values and capacities?
9. What should be the approach for hiring local “master instructors” for vocational courses? What would be the criteria and qualifications of these instructors? How would they be prepared to engage with students in schools? What would be their service conditions?
10. How would the curriculum develop respect among the students for local artisans and craftpersons?
11. How will Indian knowledge systems be incorporated into vocational education?
12. How will local and relevant tribal knowledge systems be incorporated into vocational education?
13. How can technology be used to promote accessibility/exposure to vocational education?
14. What kinds of vocational education would be most relevant and appropriate for children with different disabilities?

15. Which aspects of Vocational Education need to be emphasised from Class VI onwards? How can these aspects be integrated into the curriculum to develop vocational skills among children? How can the local context and the mapping of local needs and strengths be integrated?
16. How would the programmes of 10 bagless days and internships help in achieving the goal of enhancing interests and skills of children in the area of Vocational Education?

2.5.3.2. Stagewise approach to vocational education

The 4-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14), Secondary (ages 14-18) is critical for realizing the vision of NEP 2020. In this section, please give specific proposals and illustrations for the 4 stages of this curricular area.

17. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities, that all students must develop in this subject by Grade 12? How should these capacities be developed across each stage (Foundational, Preparatory, Middle, Secondary)?
18. For each of the concepts/capacities and stages described in #12 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
19. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy of this subject (with other subjects and with “real life”) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
20. Describe ways in which each of these concepts (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems.
21. Describe ways in which local knowledge and flavor could be included in the curriculum and pedagogy of this subject area.
22. Describe ways in which families and local communities could be involved in the teaching and learning of this subject area.
23. Describe practices by which students may achieve bi- or multi-lingual proficiency in the discussion of this subject.
24. Approaches to inclusion for children from SEDGs that are necessary for this curricular area need to be elaborated.
25. Describe how assessment in the subject may be transformed from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development, and tests higher-order capacities such as analysis, critical thinking, and conceptual clarity. Assessments should respond to the need for being formative and competency based and promoting learning. Different modes of assessment that are age appropriate should be illustrated for each stage.

26. Describe the approach to textbook and TLM development keeping in mind the curricular and pedagogical shifts.
27. Describe ways in which technology could be used to enhance teaching-learning in this subject in an effective and equitable manner.
28. How should teacher capacity, support, and education be reformed to effectively enable all the above transformations?
29. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place to effectively enable all the above transformations?

2.5.3.3. Other Suggestions

In this subsection, please provide other suggestions about vocational education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.5.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.6. Science Education

2.6.1. Vision of NEP 2020

1. *“The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution.” [NEP 2020, Principles of the Policy]*
2. *“Inculcate scientific temper and encourage evidence-based thinking throughout the curriculum: Evidence-based reasoning and the scientific method will be incorporated throughout the school curriculum - in science as well as in traditionally “non-science” subjects - in order to encourage rational, analytical, logical, and quantitative thinking in all aspects of the curriculum.” [DNEP 2019, P4.6.1.1]*
3. Fundamental principles of the education system include *“multidisciplinary and a holistic education across the sciences, social sciences, arts, humanities, and sports for a multidisciplinary world in order to ensure the unity and integrity of all knowledge;” [NEP 2020, Principles of this Policy, p. 5]*
4. *“emphasis on conceptual understanding rather than rote learning and learning-for-exams;” [NEP 2020, Principles of this Policy, p. 5]*
5. *“creativity and critical thinking to encourage logical decision-making and innovation;” [NEP 2020, Principles of this Policy, p. 5]*
6. *“ethics and human & Constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice”. [NEP 2020, Principles of this Policy, p. 5]*

2.6.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Chapter 4 of DNEP 2019 and Section 4 of NEP 2020 in detail.

1. Reorientation of the content and process of school education: *“The entire school education curriculum will be reoriented to develop **holistic** learners and develop in learners higher order skills of critical thinking, creativity, logical deduction, collaboration/teamwork, social responsibility, multilingualism, quantitative reasoning, and digital literacy.” [DNEP 2019, P4.2.1]*
2. *“Curriculum content will be reduced in each subject to its core essentials, to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based, and analysis-based learning. The mandated content will focus on key concepts, ideas, applications, and problem solving.” [NEP 2020, 4.5]*
3. Inculcate scientific temper and encourage evidence-based thinking throughout the curriculum: *“Evidence-based reasoning and the scientific method will be incorporated throughout the school*

curriculum - in science as well as in traditionally “non-science” subjects - in order to encourage rational, analytical, logical, and quantitative thinking in all aspects of the curriculum.” [DNEP 2019, P4.6.1.1]

4. *“This Policy envisions a comprehensive approach to transforming the quality and quantity of research in India. This includes definitive shifts in school education to a more play- and discovery-based style of learning with emphasis on the scientific method and critical thinking.” [NEP 2020, 17.8]*
5. *“Incorporation of communication in every subject in the Middle and Secondary years” [DNEP 2019, P4.6.3.2]*
6. Learning science bilingually: *“All efforts will be made in preparing high-quality bilingual textbooks and teaching-learning materials for science and mathematics, so that all students are enabled to think and speak about the two subjects both in their home language/mother tongue and in English.” [NEP 2020, 4.14]*
7. *“High-quality textbooks, including in science, will be made available in home languages/mother tongue. All efforts will be made early on to ensure that any gaps that exist between the language spoken by the child and the medium of teaching are bridged.” [NEP 2020, 4.11]*
8. Incorporation of Indian knowledge systems into the curriculum: *“Indian contributions to knowledge - and the historical contexts that led to them - will be incorporated in an accurate and engaging manner, wherever relevant, into the existing school curriculum and textbooks.” [DNEP 2019, P4.6.9.1]*
9. Inclusion of local and tribal knowledge systems in the curriculum and textbooks: *“Local and tribal knowledge systems will also be included in more detail in regions where such knowledge systems may hold a greater relevance with respect to local needs and customs.” [DNEP 2019, P4.6.9.2]*
10. *“All curriculum and pedagogy, from the foundational stage onwards, will be redesigned to be strongly rooted in the Indian and local context and ethos in terms of culture, traditions, heritage, customs, language, philosophy, geography, ancient and contemporary knowledge, societal and scientific needs, indigenous and traditional ways of learning etc. – in order to ensure that education is maximally relatable, relevant, interesting, and effective for our students. Stories, arts, games, sports, examples, problems, etc. will be chosen as much as possible to be rooted in the Indian and local geographic context. Ideas, abstractions, and creativity will indeed best flourish when learning is thus rooted.” [NEP 2020, 4.29]*

2.6.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.6.3.1. General questions

1. Please respond to the NEP points above on science education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in the curriculum and pedagogy of science?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in science education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. How will the new science curriculum be reoriented towards developing holistic learners? What would be the horizontal connections that the science curriculum will have with other curricular areas for such holistic development?
6. What would be the approach to science education that would respond to the requirement for reduction of content in science to its core essentials, in order to make room for deeper learning and greater creativity, problem solving, discussion, and critical/analytical thinking?
7. How would the science curriculum and pedagogy move from an “Impression Model” where the emphasis is on remembering scientific facts, to a “Process Model” where the emphasis is on developing scientific temper and evidence-based thinking?
8. How would the skill of communicating science be incorporated in the curriculum?
9. How will Indian knowledge systems be incorporated in an accurate and engaging manner into the science curriculum?
10. How would the work and contribution of Indian scientists be included in the curriculum?
11. How will local and relevant tribal knowledge systems be incorporated into the science curriculum?
12. How can scientific temper be incorporated in curriculum and pedagogy from the Foundational Stage itself?
13. How can the science curriculum be made more engaging, multidisciplinary, and its learnings relevant to the child and help in developing 21st century skills? What are other subject areas under the Sciences that should be introduced at the secondary stage to fulfil present day demands and needs and provide appropriate linkages with higher education? How can this be implemented?

2.6.3.2. Stagewise approach to science education

The 4-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14), Secondary (ages 14-18) is critical for realizing the vision of NEP 2020. In this section, please give specific proposals and illustrations for the 4 stages of this curricular area.

14. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities, that all students must develop in this subject by Grade 12? How

- should these capacities be developed across each stage (Foundational, Preparatory, Middle, Secondary)?
15. For each of the concepts/capacities and stages described in #13 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
 16. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy of this subject (with other subjects and with “real life”) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
 17. Describe ways in which each of these concepts (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems.
 18. Describe ways in which local knowledge and flavor could be included in the curriculum and pedagogy of this subject area.
 19. Describe ways in which families and local communities could be involved in the teaching and learning of this subject area.
 20. Describe practices by which students may achieve bi- or multi-lingual proficiency in the discussion of this subject.
 21. Approaches to inclusion for children from SEDGs that are necessary for this curricular area need to be elaborated.
 22. Describe how assessment in the subject may be transformed from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development, and tests higher-order capacities such as analysis, critical thinking, and conceptual clarity. Assessments should respond to the need for being formative and competency based and promoting learning. Different modes of assessment that are age appropriate should be illustrated for each stage.
 23. Describe the approach to textbook and TLM development keeping in mind the curricular and pedagogical shifts.
 24. Describe ways in which technology could be used to enhance teaching-learning in this subject in an effective and equitable manner.
 25. How should teacher capacity, support, and education be reformed to effectively enable all the above transformations?
 26. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place to effectively enable all the above transformations?

2.6.3.3. Other Suggestions

In this subsection, please provide other suggestions about science education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.6.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.7. Arts Education

2.7.1. Vision of NEP 2020

1. *“Any education emphasising creativity and innovation must include the arts. It is well established that people (including engineers and scientists) who are well educated in the arts as children tend to be more productive, creative, and innovative in their lives as adults. ... These studies make it clear that including art - particularly music - from an early age and throughout school can be extremely beneficial for children’s education and for their lives. India has extremely rich traditions in the arts, including and especially in music, and every student at every level must have the opportunity to partake in these character-building creative activities.” [DNEP 2019, P4.6.2]*
2. Fundamental principles of the education system include: *“creativity and critical thinking to encourage logical decision-making and innovation;” [NEP 2020, Principles of this Policy, p. 5]*
3. *“a rootedness and pride in India, and its rich, diverse, ancient and modern culture and knowledge systems and traditions;” [NEP 2020, Principles of this Policy, p. 5]*
4. *“no hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams, etc. in order to eliminate harmful hierarchies among, and silos between different areas of learning;” [NEP 2020, Principles of this Policy, p. 5]*
5. *“multidisciplinarity and a holistic education across the sciences, social sciences, arts, humanities, and sports for a multidisciplinary world in order to ensure the unity and integrity of all knowledge.” [NEP 2020, Principles of this Policy, p. 5]*

2.7.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Section 4 of NEP 2020, and Chapter 4 of DNEP 2019 in detail. Please also go through Paragraphs 22.2 and 22.3 of NEP 2020.

1. *“Cultural awareness and expression are among the major competencies considered important to develop in children, in order to provide them with a sense of identity, belonging, as well as an appreciation of other cultures and identities. It is through the development of a strong sense and knowledge of their own cultural history, arts, languages, and traditions that children can build a positive cultural identity and self-esteem. Thus, cultural awareness and expression are important contributors both to individual as well as societal well-being.” [NEP 2020, 22.2]*
2. *“The arts form a major medium for imparting culture. The arts - besides strengthening cultural identity, awareness, and uplifting societies - are well known to enhance cognitive and creative abilities in individuals and increase individual happiness. The happiness/well-being, cognitive development, and cultural identity of individuals are important reasons that Indian arts of all kinds must be offered to students at all levels of education, starting with early childhood care and education.” [NEP 2020, 22.3]*

3. *“Art-integration is a cross-curricular pedagogical approach that utilizes various aspects and forms of art and culture as the basis for learning of concepts across subjects. As a part of the thrust on experiential learning, art-integrated education will be embedded in classroom transactions not only for creating joyful classrooms, but also for imbibing the Indian ethos through integration of Indian art and culture in the teaching and learning process at every level. This art-integrated approach will strengthen the linkages between education and culture.” [NEP 2020, 4.7]*
4. *“While students must have a large amount of flexibility in choosing their individual curricula, certain subjects, skills, and capacities should be learned by all students to become good, successful, innovative, adaptable, and productive human beings in today’s rapidly changing world. In addition to proficiency in languages, these skills include: scientific temper and evidence-based thinking; creativity and innovativeness; sense of aesthetics and art; ...” [NEP 2020, 4.23]*
5. Reorientation of the content and process of school education: *“The entire school education curriculum will be reoriented to develop **holistic** learners and develop in learners higher order skills of critical thinking, creativity, logical deduction, collaboration/teamwork, social responsibility, multilingualism, quantitative reasoning, and digital literacy.” [DNEP 2019, P4.2.1]*
6. *“Every student from the Foundational stage onwards will have basic exposure to the notes, scales, ragas, and rhythms. Arts experiences will also include theatre, poetry, painting, drawing, and sculpture, and vocational arts such as carpentry and embroidery/sewing/clothes-making”. [DNEP 2019, P4.6.2.1]*
7. Taking up at least one art for deeper study: *“... students will be strongly encouraged to take up at least one such art more deeply - even if they plan to specialise in science or engineering in the future.” [DNEP 2019, P4.6.2.2]*
8. Technology use for bringing the arts to more students: *“Technology will be used to bring the arts to more students.” [DNEP 2019, P4.6.2.3]*
9. Interaction with local artists: *“Local artists and crafts-persons will be recruited and utilised in schools - from short demonstrations to full-fledged classes - in order to ensure that local arts are enjoyed, well represented, and nurtured in each community.” [DNEP 2019, P4.6.2.4]*
10. *“A number of initiatives to foster languages, arts, and culture in school children have been discussed in Chapter 4, which include a greater emphasis on music, arts, and crafts throughout all levels of school; ... the hiring of outstanding local artists, writers, craftspersons, and other experts as master instructors in various subjects of local expertise; accurate inclusion of traditional Indian knowledge including tribal and other local knowledge throughout into the curriculum, across humanities, sciences, arts, crafts, and sports, whenever relevant; and a much greater flexibility in the curriculum, especially in secondary schools ... so that students can choose the ideal balance among courses for themselves to develop their own creative, artistic, cultural, and academic paths.” [NEP 2020, 22.8]*
11. *“To enable the key latter initiatives, a number of further actions will be taken... First, to develop and teach many of the courses of the type mentioned above, an excellent team of teachers and faculty will have to be developed. Strong departments and programmes in Indian languages, comparative literature, creative writing, arts, music, philosophy, etc. will be launched and developed across the country, and degrees including 4- year B.Ed. dual degrees will be developed*

in these subjects. These departments and programmes will, in particular help to develop a large cadre of high-quality language teachers - as well as teachers of art, music, philosophy and writing - who will be needed around the country to carry out this Policy... Outstanding local artists and craftsmen will be hired as guest faculty to promote local music, art, languages, and handicraft, and to ensure that students are aware of the culture and local knowledge where they study. Every ... school or school complex will aim to have Artist(s)-in-Residence to expose students to art, creativity, and the rich treasures of the region/country.” [NEP 2020, 22.9]

2.7.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.7.3.1. General questions

1. Please respond to the NEP points above on arts education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in arts education?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in arts education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. How will the new arts curriculum be reoriented towards developing holistic learners? What are the challenges and limitations in the current art curriculum with respect to development of holistic learners?
6. What will be the horizontal connections that the arts curriculum would have with other curricular areas for such holistic development?
7. How would the art-integrated approach be used as a cross-curricular pedagogical approach?
8. How would the art curriculum assist in imbibing Indian ethos and culture?
9. How will the arts curriculum provide a basic exposure (breadth) to different art forms as envisaged in NEP?
10. Arts and music are essential in the early years (DNEP P4.6.2.1). Describe the approach to make arts and music integral in the Foundational Stage.
11. How will the arts curriculum provide opportunities for students to gain deeper knowledge and skills (depth) in at least one art?
12. How will the curriculum use technology effectively for bringing the arts to more students?
13. How will the curriculum ensure that local arts are well represented and nurtured in each community? How will the curriculum and pedagogy facilitate interaction with local artists?

14. How will local and relevant tribal knowledge systems be incorporated into the arts curriculum?
15. How can the arts curriculum be made more engaging, multidisciplinary, and its learnings relevant to the child and help in developing 21st century skills? What are other subject areas under the Arts that should be introduced at the secondary stage to fulfil present day demands and needs and provide appropriate linkages with higher education? How can this be implemented?

2.7.3.2. Stagewise approach to arts education

The 4-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14), Secondary (ages 14-18) is critical for realizing the vision of NEP 2020. In this section, please give specific proposals and illustrations for the 4 stages of this curricular area.

16. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities, that all students must develop in this subject by Grade 12? How should these capacities be developed across each stage (Foundational, Preparatory, Middle, Secondary)?
17. For each of the concepts/capacities and stages described in #14 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
18. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy of this subject (with other subjects and with “real life”) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
19. Describe ways in which each of these concepts (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems.
20. Describe ways in which local knowledge and flavor could be included in the curriculum and pedagogy of this subject area.
21. Describe ways in which families and local communities could be involved in the teaching and learning of this subject area.
22. Approaches to inclusion for children from SEDGs that are necessary for this curricular area need to be elaborated.
23. Describe how assessment in the subject may be transformed from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development, and tests higher-order capacities such as analysis, critical thinking, and conceptual clarity. Assessments should respond to the need for being formative and competency based and promoting learning. Different modes of assessment that are age appropriate should be illustrated for each stage.

24. Describe the approach to textbook and TLM development keeping in mind the curricular and pedagogical shifts.
25. Describe ways in which technology could be used to enhance teaching-learning in this subject in an effective and equitable manner.
26. How should teacher capacity, support, and education be reformed to effectively enable all the above transformations?
27. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place to effectively enable all the above transformations?

2.7.3.3. Other Suggestions

In this subsection, please provide other suggestions about arts education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.7.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.8. Mathematics Education and Computational Thinking

2.8.1. Vision of NEP 2020

1. *"The need for a skilled workforce, particularly involving mathematics, computer science, and data science, in conjunction with multidisciplinary abilities across the sciences, social sciences, and humanities, will be increasingly in greater demand."* [NEP 2020, Introduction]
2. *"It is recognized that mathematics and mathematical thinking will be very important for India's future and India's leadership role in the numerous upcoming fields and professions that will involve artificial intelligence, machine learning, and data science, etc. Thus, mathematics and computational thinking will be given increased emphasis throughout the school years, starting with the foundational stage, through a variety of innovative methods, including the regular use of puzzles and games that make mathematical thinking more enjoyable and engaging. Activities involving coding will be introduced in Middle Stage."* [NEP 2020, 4.25]
3. Fundamental principles of the education system include *"creativity and critical thinking to encourage logical decision-making and innovation;"* [NEP 2020, Principles of this Policy, p. 5]
4. *"ethics and human & Constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice".* [NEP 2020, Principles of this Policy, p. 5]

2.8.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Chapter 4 of DNEP 2019 and Section 4 of NEP 2020 in detail.

1. *"While students must have a large amount of flexibility in choosing their individual curricula, certain subjects, skills, and capacities should be learned by all students to become good, successful, innovative, adaptable, and productive human beings in today's rapidly changing world. In addition to proficiency in languages, these skills include: scientific temper and evidence-based thinking; ...problem solving and logical reasoning; ...digital literacy, coding, and computational thinking; ..."* [NEP 2020, 4.23]
2. *"...there will be an increased focus on foundational literacy and numeracy - and generally, on reading, writing, speaking, counting, arithmetic, and mathematical thinking - throughout the preparatory and middle school curriculum, with a robust system of continuous formative/adaptive assessment to track and thereby individualize and ensure each student's learning."* [NEP 2020, 2.4]
3. *"Curriculum content will be reduced in each subject to its core essentials, to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based, and analysis based learning. The mandated content will focus on key concepts, ideas, applications, and problem solving."* [NEP 2020, 4.5]

4. *“Seriously incorporating games, puzzles, and problem-solving activities into the curriculum”.* [DNEP 2019, P4.6.5.1]
5. *“From age 6 onwards, computational thinking (the thought processes involved in formulating problems and solutions in ways that computers can effectively execute) will be integrated into the school curriculum. This is a fundamental skill in the digital age, and it can be effectively taught with well-designed paper worksheets... The school curriculum will offer optional subjects focused on programming and other advanced computer-based activities at the late upper primary and secondary stages.”* [DNEP 2019, P23.4.1]
6. Integration of digital literacy: *“The new curriculum will also integrate digital literacy for all learners at the basic level, with hands-on assessments and worksheets keeping in mind the available digital infrastructure on the ground. At a more advanced level, curricula will be developed for: (i) Computational thinking; (ii) programming and other computer-based activities. Appropriate learning outcomes will be formulated as part of the National Curricular Framework in these subjects, and they will be extensively offered as courses in middle and secondary schools with adequate computing and teacher resources.”* [DNEP 2019, P4.6.7.1]
7. Learning mathematics bilingually: *“All efforts will be made in preparing high-quality bilingual textbooks and teaching-learning materials for science and mathematics, so that students are enabled to think and speak about the two subjects both in their home language/mother tongue and in English.”* [NEP 2020, 4.14]
8. Incorporation of Indian knowledge systems into the curriculum: *“Indian contributions to knowledge - and the historical contexts that led to them - will be incorporated in an accurate and engaging manner, wherever relevant, into the existing school curriculum and textbooks.”* [DNEP 2019, P4.6.9.1]
9. Inclusion of local and tribal knowledge systems in the curriculum and textbooks: *“Local and tribal knowledge systems will also be included in more detail in regions where such knowledge systems may hold a greater relevance with respect to local needs and customs.”* [DNEP 2019, P4.6.9.2]
10. *“All curriculum and pedagogy, from the foundational stage onwards, will be redesigned to be strongly rooted in the Indian and local context and ethos in terms of culture, traditions, heritage, customs, language, philosophy, geography, ancient and contemporary knowledge, societal and scientific needs, indigenous and traditional ways of learning etc. – in order to ensure that education is maximally relatable, relevant, interesting, and effective for our students. Stories, arts, games, sports, examples, problems, etc. will be chosen as much as possible to be rooted in the Indian and local geographic context. Ideas, abstractions, and creativity will indeed best flourish when learning is thus rooted.”* [NEP 2020, 4.29]
11. *“All textbooks shall aim to contain the essential core material (together with discussion, analysis, examples, and applications) deemed important on a national level, but at the same time contain any desired nuances and supplementary material as per local contexts and needs”.* [NEP 2020, 4.31]
12. *“All subjects and corresponding assessments, beginning with mathematics, could be offered at two levels, with students doing some of their subjects at the standard level and some at a higher level”.* [NEP 2020, 4.38]

2.8.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.8.3.1. General questions

1. Please respond to the NEP points above on mathematics education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in the curriculum and pedagogy of mathematics?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in mathematics education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. What are current challenges in the mathematics curriculum, and how will those challenges be addressed in the new curriculum towards making it flexible and horizontally cross cutting across different curricular areas?
6. What is the approach to reducing the curricular load in mathematics to focus on the core areas?
7. What would be the role of games, puzzles and problem-solving activities in the curriculum, pedagogy and assessment in mathematics?
8. What would be the approach to integrating digital literacy in the early years of mathematics education?
9. How would computational thinking and computer programming be introduced in the Middle and Secondary school stages?
10. What would be the approach to make students bilingually capable in mathematics?
11. How would the content of mathematics – e.g. games, puzzles, problems to be solved – be rooted in the Indian context?
12. How would the Board Examinations for mathematics be reformed to include two levels?
13. How will Indian knowledge systems be incorporated into the mathematics curriculum? How would the contribution of India to the world of mathematics be addressed in the curriculum?
14. How will the work and contributions of leading Indian mathematicians be represented in the curriculum?
15. How will local and relevant tribal knowledge systems be incorporated into the mathematics curriculum?
16. How can the mathematics curriculum be made more engaging, multidisciplinary, and its learnings relevant to the child and help in developing 21st century skills? What are other subject areas under Mathematics Education and Computational Thinking that should be introduced at

the secondary stage to fulfil present day demands and needs and provide appropriate linkages with higher education? How can this be implemented?

2.8.3.2. Stagewise approach to mathematics education

The 4-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14), Secondary (ages 14-18) is critical for realizing the vision of NEP 2020. In this section, please give specific proposals and illustrations for the 4 stages of this curricular area.

17. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities, that all students must develop in this subject by Grade 12? How should these capacities be developed across each stage (Foundational, Preparatory, Middle, Secondary)?
18. For each of the concepts/capacities and stages described in #15 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
19. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy of this subject (with other subjects and with “real life”) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
20. Describe ways in which each of these concepts (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems.
21. Describe ways in which local knowledge and flavor could be included in the curriculum and pedagogy of this subject area.
22. Describe ways in which families and local communities could be involved in the teaching and learning of this subject area.
23. Describe practices by which students may achieve bi- or multi-lingual proficiency in the discussion of this subject.
24. Approaches to inclusion for children from SEDGs that are necessary for this curricular area need to be elaborated.
25. Describe how assessment in the subject may be transformed from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development, and tests higher-order capacities such as analysis, critical thinking, and conceptual clarity. Assessments should respond to the need for being formative and competency based and promoting learning. Different modes of assessment that are age appropriate should be illustrated for each stage.
26. Describe the approach to textbook and TLM development keeping in mind the curricular and pedagogical shifts.

27. Describe ways in which technology could be used to enhance teaching-learning in this subject in an effective and equitable manner.
28. How should teacher capacity, support, and education be reformed to effectively enable all the above transformations?
29. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place to effectively enable all the above transformations?

2.8.3.3. Other Suggestions

In this subsection, please provide other suggestions about mathematics education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.8.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

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2.9. Language Education

2.9.1. Vision of NEP 2020

1. *“The issues regarding language are most fundamental to education. Language is a medium of expression of the individual, society and its collective continuity in culture, in addition to being a tool for communication. Language has a direct bearing as the mediator in all cognitive and social capacities, including in knowledge acquisition and production.” [DNEP 2019, Introduction to Section 4.5].*
2. *“It is well understood that young children learn and grasp nontrivial concepts more quickly in their home language/mother tongue.” [NEP 2020, 4.11]*
3. *“Multilingualism has great cognitive benefits to young students.” [NEP 2020, 4.12]*
4. *“All languages will be taught with high quality to all students; a language does not need to be the medium of instruction for it to be taught and learned well.” [NEP 2020, 4.11]*
5. Fundamental principles of the education system include *“promoting multilingualism and the power of language in teaching and learning;” [NEP 2020, Principles of this Policy, p. 5]*
6. *“extensive use of technology in teaching and learning, removing language barriers, increasing access for Divyang students, and educational planning and management”. [NEP 2020, Principles of this Policy, p. 5]*

2.9.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Section 4 of NEP 2020 and Chapter 4 of DNEP 2019 in detail. Please also go through Paragraphs 22.4 to 22.9 and 22.15 of NEP 2020, as well as P22.2 and P22.5 of DNEP 2019.

1. *“Wherever possible, the medium of instruction until at least Grade 5, but preferably till Grade 8 and beyond, will be the home language/mother tongue/local language language/regional language. Thereafter, the home/local language shall continue to be taught as a language wherever possible. This will be followed by both public and private schools.” [NEP 2020, 4.11]*
2. *“All efforts will be made early on to ensure that any gaps that exist between the language spoken by the child and the medium of teaching are bridged. In cases where home language/mother tongue textbook material is not available, the language of transaction between teachers and students will still remain the home language/mother tongue wherever possible. Teachers will be encouraged to use a bilingual approach, including bilingual teaching-learning materials, with those students whose home language may be different from the medium of instruction” [NEP 2020, 4.11].*
3. *“...a language does not need to be the medium of instruction for it to be taught and learned well”. [NEP 2020, 4.11]*
4. *“As ... multilingualism has great cognitive benefits to young students, children will be exposed to different languages early on (but with a particular emphasis on the mother tongue), starting from the Foundational Stage onwards..” [NEP 2020, 4.12]*

5. *“All languages will be taught in an enjoyable and interactive style, with plenty of interactive conversation, and with early reading and subsequently writing in the mother tongue in the early years, and with skills developed for reading and writing in other languages in Grade 3 and beyond.” [NEP 2020, 4.12]*
6. *“The three-language formula will continue to be implemented while keeping in mind the Constitutional provisions, aspirations of the people, regions, and the Union, and the need to promote multilingualism as well as promote national unity. However, there will be a greater flexibility in the three-language formula, and no language will be imposed on any State. The three languages learned by children will be the choices of States, regions, and of course the students themselves, so long as at least two of the three languages are native to India.” [NEP 2020, 4.13]*
7. *“All efforts will be made in preparing high-quality bilingual textbooks and teaching-learning materials for science and mathematics, so that students are enabled to think and speak about the two subjects both in their home language/mother tongue and in English.” [NEP 2020, 4.14]*
8. *“Every student in the country will participate in a fun project/activity on ‘The Languages of India’, sometime in Grades 6-8... Such an activity would give ... both a sense of the unity and the beautiful cultural heritage and diversity of India and would be a wonderful icebreaker their whole lives as they meet people from other parts of India.” [NEP 2020, 4.16]*
9. *“Sanskrit will ... be offered at all levels of school and higher education as an important, enriching option for students, including as an option in the three-language formula. It will be taught in ways that are interesting and experiential as well as contemporarily relevant, including through the use of Sanskrit Knowledge Systems, and in particular through phonetics and pronunciation.” [NEP 2020, 4.17]*
10. *“In addition to Sanskrit, other classical languages and literatures of India, including Tamil, Telugu, Kannada, Malayalam, Odia, Pali, Persian, and Prakrit, will also be widely available in schools as options for students, possibly as online modules, through experiential and innovative approaches, to ensure that these languages and literature stay alive and vibrant. Similar efforts will be made for all Indian languages having rich oral and written literatures, cultural traditions, and knowledge.” [NEP 2020, 4.18]*
11. *“In addition to high quality offerings in Indian languages and English, foreign languages, such as Korean, Japanese, Thai, French, German, Spanish, Portuguese, and Russian, will also be offered at the secondary level”. [NEP 2020, 4.20]*
12. *“The teaching of all languages will be enhanced through innovative and experiential methods, including through gamification and apps, by weaving in the cultural aspects of the languages - such as films, theatre, storytelling, poetry, and music - and by drawing connections with various relevant subjects and with real-life experiences.” [NEP 2020, 4.21]*
13. *“A national repository of high-quality resources on foundational literacy and numeracy will be made available on the Digital Infrastructure for Knowledge Sharing (DIKSHA). Technological interventions to serve as aids to teachers and to help bridge any language barriers that may exist between teachers and students, will be piloted and implemented.” [NEP 2020, 2.6]*
14. *“The overall aim of ECCE will be to attain optimal outcomes in the domains of: physical and*

motor development, cognitive development, socio-emotional-ethical development, cultural/artistic development, and the development of communication and early language, literacy, and numeracy.” [NEP 2020, 1.2]

15. *“There has been a severe scarcity of skilled language teachers in India, despite various measures being taken. Language-teaching too must be improved to be more experiential and to focus on the ability to converse and interact in each language and not just on the literature, vocabulary, and grammar of the language. Languages must be used more extensively for conversation and for teaching-learning.” [NEP 2020, 22.7]*
16. *“Scholarships for people of all ages to study Indian Languages, Arts, and Culture with local masters and/or within the higher education system will be established. The promotion of Indian languages is possible only if they are used regularly and if they are used for teaching and learning. Incentives, such as prizes for outstanding poetry and prose in Indian languages across categories, will be established to ensure vibrant poetry, novels, nonfiction books, textbooks, journalism, and other works in all Indian languages.” [NEP 2020, 22.20]*

2.9.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.9.3.1. General questions

1. Please respond to the NEP points above on language education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in the curriculum and pedagogy of languages?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in language education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. How would it be ensured that the medium of instruction through (at least) Grade 5 is the home language/mother tongue/local language language/regional language in both public and private schools?
6. What should be the approach to multilingualism, especially in the Foundational and Preparatory Stages? Why is multilingualism relevant to our classrooms? How can a teacher handle multiple languages in the classroom? Does the teacher need to be familiar with the home languages of all the learners present in the classroom? How can children’s languages be included in teaching and learning at scale?
7. How does the multilingual nature of learners equip them to learn other languages (transfer of skills)? In other words, how do children’s multilingual abilities facilitate the learning of more languages? How can the school and classroom facilitate bi/multilingual competence?

8. How can language learning be made more interactive, enjoyable, useful, and effective?
9. What are the most effective approaches for the teaching and learning of languages that are children's first (familiar) languages and those that are unfamiliar/second languages?
10. How would languages used as mediums of instruction / as additional subjects be selected and sequenced? How can bi/multilingual competence be developed?
11. What is the best time/grade to introduce English as a subject to (a) ensure good comprehension and learning of all subjects and (b) to learn English well? How can it be ensured that students learn languages native to India and also English well (as is analogously carried out very successfully in other countries)? What corresponding changes are required in teacher education?
12. How should the three language formula be implemented? When should the second and third languages be introduced? How can students be given flexibility in choosing their second and third languages?
13. How would the fun project/activity "Languages of India" be developed and structured, and what should be its aim, content, and pedagogy?
14. How would the curriculum develop the understanding of language systems and the fundamental commonalities and differences between language systems, particularly with respect to the languages of India (including tribal languages)?
15. What should be the approach for making Sanskrit language, its vast literature, and Sanskrit Knowledge Systems available, enjoyable, and engaging to school students?
16. What should be the approach to make other important classical languages of India, and their vast literatures, available, enjoyable, and engaging to school students for study?
17. How should students be provided meaningful opportunities to learn foreign languages?
18. What should be the approach to ensure that students are familiar with inspiring Indian literature (including from local and tribal traditions, some of which are oral) and also world literature?
19. How would the teaching of languages be enhanced through use of contemporary and relevant content, and through the use of technological aids?
20. How can the language curriculum be made more engaging, multidisciplinary, and its learnings relevant to the child and help in developing 21st century skills? What are other subject areas under Language education, including Literature, Translation, Interpretation, etc. that should be introduced at the secondary stage to fulfil present day demands and needs and provide appropriate linkages with higher education? How can this be implemented?

2.9.3.2. Stagewise curricular approach to language education

The 4-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14), Secondary (ages 14-18) is critical for realizing the vision of NEP 2020. In this section, please give specific proposals and illustrations for the 4 stages of this curricular area.

1. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities, that all students must develop in this subject by Grade 12? How

- should these capacities be developed across each stage (Foundational, Preparatory, Middle, Secondary)?
2. For each of the concepts/capacities and stages described in #17 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
 3. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy of this subject (with other subjects and with real life) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
 4. Describe ways in which each of these concepts (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems.
 5. Describe ways in which local knowledge and flavor could be included in the curriculum and pedagogy of this subject area.
 6. Describe ways in which families and local communities could be involved in the teaching and learning of this subject area.
 7. Approaches to inclusion for children from SEDGs that are necessary for this curricular area need to be elaborated.
 8. Describe how assessment in the subject may be transformed from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development, and tests higher-order capacities such as analysis, critical thinking, and conceptual clarity. Assessments should respond to the need for being formative and competency based and promoting learning. Different modes of assessment that are age appropriate should be illustrated for each stage.
 9. Describe the approach to textbook and TLM development keeping in mind the curricular and pedagogical shifts.
 10. Describe ways in which technology could be used to enhance teaching-learning in this subject in an effective and equitable manner.
 11. How should teacher capacity, support, and education be reformed to effectively enable all the above transformations?
 12. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place to effectively enable all the above transformations?

2.9.3.3. Other Suggestions

In this subsection, please provide other suggestions about language education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.9.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.10. Environmental Education

2.10.1. Vision of NEP 2020

1. *“Certain subjects, skills, and capacities should be learned by all students to become good, successful, innovative, adaptable, and productive human beings in today’s rapidly changing world...these skills include: ... environmental awareness including water and resource conservation, sanitation and hygiene; ...” [NEP 2020, 4.23]*
2. *“The vision of the Policy is to instill among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen.” [NEP 2020, The Vision of this Policy]*
3. *“The societal challenges that India needs to address today, such as access for all its citizens to clean drinking water and sanitation, quality education and healthcare, improved transportation, air quality, energy, and infrastructure, will require the implementation of approaches and solutions that are not only informed by top-notch science and technology but are also rooted in a deep understanding of the social sciences and humanities and the various socio-cultural and environmental dimensions of the nation.” [NEP 2020, 17.4]*

2.10.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Chapter 4 of DNEP 2019 and Section 4 of NEP 2020 in detail.

1. *“Concerted curricular and pedagogical initiatives, including the introduction of contemporary subjects such as Artificial Intelligence, Design Thinking, Holistic Health, Organic Living, **Environmental Education**, Global Citizenship Education (GCED), etc. at relevant stages will be undertaken to develop these various important skills in students at all levels.” [NEP 2020, 4.24]*
2. *““Knowledge of India” will include knowledge from ancient India and its contributions to modern India and its successes and challenges, and a clear sense of India’s future aspirations with regard to education, health, **environment**, etc.” [NEP 2020, 4.27]*
3. *“Students will be taught at a young age the importance of “doing what’s right”, and will be given a logical framework for making ethical decisions....As consequences of such basic ethical reasoning, traditional Indian values and all basic human and Constitutional values (such as ...respect for environment...) will be developed in all students.” [NEP 2020, 4.28]*
4. *“Other disruptive technologies that are expected to change the way we live, and, therefore, change the way we educate students, include those relating to clean and renewable energy, water conservation, sustainable farming, environmental preservation, and other green initiatives; these will also receive prioritized attention in education.” [NEP 2020, 23.13]*
5. *“With climate change, increasing pollution, and depleting natural resources, there will be a sizeable shift in how we meet the world’s energy, water, food, and sanitation needs, ... resulting*

in the need for new skilled labour, particularly in biology, chemistry, physics, agriculture, climate science, and social science.” [NEP 2020, Introduction]

6. *“All B.Ed. programmes will also appropriately integrate environmental awareness and sensitivity towards its conservation and sustainable development, so that environment education becomes an integral part of school curricula.” [NEP 2020, 5.24]*

2.10.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.10.3.1. General questions

1. Please respond to the NEP points above on environmental education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in the curriculum and pedagogy of environmental education?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in environmental education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. What would be the approach to developing environmental awareness across the four stages of schooling? What would be the emphasis of the environmental education curriculum in each of these stages?
6. Environmental education is seen as one of the “essential” and “contemporary subjects” in NEP 2020. How will the environmental education curriculum include contemporary concerns and current affairs?
7. How would ideas such as “respect for environment” be integrated within the development of overall ethical reasoning, and the development of humanistic and Constitutional values?
8. How would environmental education be integrated within the science and social science education curricula? Should it be offered as a separate subject at any stage?
9. How would local knowledge and knowledge of Indian contexts be explored and embedded within the environmental education curriculum?
10. How could India’s traditional perceptions of and connectedness with the natural world help promote environmental awareness and sensitivity?
11. How can the curriculum of Environmental education be made more engaging, multidisciplinary, and its learnings relevant to the child and help in developing 21st century skills? What are other subject areas under Environmental education that should be introduced at the secondary stage

to fulfil present day demands and needs and provide appropriate linkages with higher education? How can this be implemented?

2.10.3.2. Stagewise curricular approach to environmental education

The 4-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14), Secondary (ages 14-18) is critical for realizing the vision of NEP 2020. In this section, please give specific proposals and illustrations for the 4 stages of this curricular area.

12. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities, that all students must develop in this subject by Grade 12? How should these capacities be developed across each stage (Foundational, Preparatory, Middle, Secondary)?
13. For each of the concepts/capacities and stages described in #10 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
14. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy of this subject (with other subjects and with “real life”) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
15. Describe ways in which each of these concepts (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems.
16. Describe ways in which local knowledge and flavor could be included in the curriculum and pedagogy of this subject area.
17. Describe ways in which families and local communities could be involved in the teaching and learning of this subject area.
18. Describe practices by which students may achieve bi- or multi-lingual proficiency in the discussion of this subject.
19. Approaches to inclusion for children from SEDGs that are necessary for this curricular area need to be elaborated.
20. Describe how assessment in the subject may be transformed from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development, and tests higher-order capacities such as analysis, critical thinking, and conceptual clarity. Assessments should respond to the need for being formative and competency based and promoting learning. Different modes of assessment that are age appropriate should be illustrated for each stage.
21. Describe the approach to textbook and TLM development keeping in mind the curricular and pedagogical shifts.

22. Describe ways in which technology could be used to enhance teaching-learning in this subject in an effective and equitable manner.
23. How should teacher capacity, support, and education be reformed to effectively enable all the above transformations?
24. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place to effectively enable all the above transformations?

2.10.3.3. Other Suggestions

In this subsection, please provide other suggestions about environmental education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.10.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.11. Health and Well-being, Yoga, Sports and Fitness

2.11.1. Vision of NEP 2020

1. *“All fields of human endeavour, including arts, crafts, and sports, are valuable to both human and societal advancement, and so should be actively pursued by students in their curricula to achieve holistic development”. [DNEP 2019, Introduction to Section 4.4].*
2. *“Children are unable to learn optimally when they are undernourished or unwell. Hence, the nutrition and health (including mental health) of children will be addressed, through healthy meals and the introduction of well-trained social workers, counsellors, and community involvement into the schooling system.” [NEP 2020, 2.9].*
3. *“While students must have a large amount of flexibility in choosing their individual curricula, certain subjects, skills, and capacities should be learned by all students to become good, successful, innovative, adaptable, and productive human beings in today’s rapidly changing world. In addition to proficiency in languages, these skills include: ... health and nutrition; physical education, fitness, wellness, and sports...” [NEP 2020, 4.23].*
4. Fundamental principles of the education system include *“no hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams, etc. in order to eliminate harmful hierarchies among, and silos between different areas of learning;” [NEP 2020, Principles of this Policy, p. 5]*
5. *“multidisciplinarity and a holistic education across the sciences, social sciences, arts, humanities, and sports for a multidisciplinary world in order to ensure the unity and integrity of all knowledge;” [NEP 2020, Principles of this Policy, p. 5]*
6. *the learning of “life skills such as communication, cooperation, teamwork, and resilience”. [NEP 2020, Principles of this Policy, p. 5]*

2.11.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Sections 2, 4, 5 and 7 of NEP 2020, and Chapters 2, 4, 5 and 7 of DNEP 2019 in detail.

1. *“The curriculum will aim at enabling learners to attain learning outcomes relating to all curricular areas, including sports, science, art, language, literature, and ethics education, thereby ensuring that all children and youth receive an education that helps realise their potential, in all realms, to the fullest.” [DNEP 2019, P4.2.1]*
2. *“Physical education is important for both physical and mental health and development. It helps improve a child’s muscular and cardiovascular strength, flexibility, endurance, motor skills, and mind-body connection and wellness. It gives children the opportunity to set and strive for personal and achievable goals. Moreover, playing sports also helps students develop the qualities of teamwork, cooperation, problem-solving, discipline, perseverance, and responsibility. In general, physical activity is well established to be among the best releases for tension and*

anxiety, and facilitates emotional stability and resilience. All of these qualities and benefits are also relevant to success in the classroom; studies show that students who stay physically active are more successful with other school work as well. Finally, people who are physically active as young people tend to stay more fit as adults as well, leading them to lead longer, healthier, and more productive lives” [DNEP 2019, Introduction to Section 4.6.4]

3. *“While students must have a large amount of flexibility in choosing their individual curricula, certain subjects, skills, and capacities should be learned by all students to become good, successful, innovative, adaptable, and productive human beings in today’s rapidly changing world. In addition to proficiency in languages, these skills include: health and nutrition; physical education, fitness, wellness, and sports; collaboration and teamwork; problem solving and logical reasoning; ...” [NEP 2020, 4.23]*
4. *No hard separation of content in terms of curricular, extra-curricular, or co-curricular areas: “All school subjects will be considered curricular rather than extra-curricular or co-curricular, including sports, yoga, dance, music, drawing, painting, sculpting, pottery making, woodworking, gardening, and electric work.” [DNEP 2019, P4.4.2]*
5. *Incorporating physical education, mind-and-body wellness, and sports into the curriculum starting at the Foundational stage: “All students at all levels of school will have regular periods and opportunities to participate in physical activity and exercise, including sports, games, yoga, martial arts, dance, gardening, and more, in accordance with local availability of teachers and facilities. Playgrounds and sports fields will be available - if not on the school grounds, then within the school complex region, with suitable transport provided if needed - so that all students have the opportunity to participate and excel in sports. Joint sports activities and competitions between schools within the school complex and across school complexes will be fostered and encouraged.” [DNEP 2019, P4.6.4.1]*
6. *“Concerted curricular and pedagogical initiatives, including the introduction of contemporary subjects such as Holistic Health, Organic Living, at relevant stages will be undertaken to develop these various important skills in students at all levels.” [NEP 2020, 4.24]*
7. *“Basic training in health, including preventive health, mental health, good nutrition, personal and public hygiene, disaster response and first-aid will also be included in the curriculum, as well as scientific explanations of the detrimental and damaging effects of alcohol, tobacco, and other drugs” [NEP 2020, 4.28]*
8. *Establish topic-centered and project-based clubs at the school, school complex, block, and district levels: “A system of Topic-centered and Project-based Clubs and Circles in Mathematics, Science, Music, Chess, Poetry, Language, Literature, Debate, Sports, etc. will be set up and funded in accordance with student needs in various localities, in order to foster singular interests and talents of students across the country. Teachers along with students would be encouraged to apply for such clubs where sufficient interest is present; further funding would be based on attendance levels achieved and the transportation and educational material needs of the circle or club.” [DNEP 2019, P4.10.2]*
9. *Basic health and safety training, as a service to oneself and to those around us: “Basic training in health, including preventative health, mental health, nutrition, personal and public hygiene, and first-aid will also be included in the curriculum, as will be scientific explanations of the*

- detrimental and damaging effects of alcohol, tobacco, and other drugs. Sex education will also be included in secondary school for future judgment surrounding consent, harassment, respect for women, safety, family planning, and STD prevention.” [DNEP 2019, P4.6.8.5]*
10. *“Special shorter local teacher education programmes will also be available at BITEs, DIETs, or at school complexes themselves for eminent local persons who can be hired to teach at schools or school complexes as ‘master instructors’, for the purpose of promoting local professions, knowledge, and skills, e.g., local art, music, agriculture, business, sports, carpentry, and other vocational crafts.” [NEP 2020, 5.25]*
 11. *Role of social workers and counsellors: “Social workers and counsellors will be hired to school complexes to work with students - and their parents, teachers, tutors, IAs, and community members - to help ensure the retention in school and the mental health of all children.” [DNEP 2019, P2.16]*
 12. *Counsellors: “While the teachers will have the central role in student care and well-being, each school complex will have one or more capable counsellors available. The counselling available will range from career guidance to mental health. While there may be other areas of counselling that can be identified and mechanisms established to offer them, the following will be provided: ... b. Support and counselling on age related growth and development issues, especially during the adolescent years c. Support and counselling on mental health issues, including stress and mood disorders. The mechanisms to make such counselling available will have to be responsive to the practical reality of the school complex, including training some of the teachers or social workers to be able to play the role of counsellors, appointing full time counsellors for one or more school complexes, and arranging for counsellors to visit the schools frequently. This counselling support should also be able to identify cases requiring clinical mental health support - and the school complex must have the tie-ups necessary to provide this. The State departments of education and health will have to coordinate closely for enabling this.” [DNEP 2019, P7.2.4]*
 13. *“In all stages, experiential learning will be adopted, including hands-on learning, arts-integrated and sports-integrated education, story-telling-based pedagogy, among others, as standard pedagogy within each subject, and with explorations of relations among different subjects. To close the gap in achievement of learning outcomes, classroom transactions will shift, towards competency-based learning and education. The assessment tools (including assessment “as”, “of”, and “for” learning) will also be aligned with the learning outcomes, capabilities, and dispositions as specified for each subject of a given class.” [NEP 2020, 4.6]*
 14. *“Sports-integration is another cross-curricular pedagogical approach that utilizes physical activities including indigenous sports, in pedagogical practices to help in developing skills such as collaboration, self-initiative, self-direction, self-discipline, teamwork, responsibility, citizenship, etc. Sports-integrated learning will be undertaken in classroom transactions to help students adopt fitness as a lifelong attitude and to achieve the related life skills along with the levels of fitness as envisaged in the Fit India Movement. The need to integrate sports in education is well recognized as it serves to foster holistic development by promoting physical and psychological well-being while also enhancing cognitive abilities” [NEP 2020, 4.8]*
 15. *“‘Knowledge of India’ will include knowledge from ancient India and its contributions to modern India and its successes and challenges, and a clear sense of India’s future aspirations with regard*

to education, health, environment, etc These elements will be incorporated in an accurate and scientific manner throughout the school curriculum wherever relevant; in particular, Indian Knowledge Systems, including tribal knowledge and indigenous and traditional ways of learning, will be covered and included in yoga,, medicine,, sports, games, Competitions may be held in schools for learning various topics and subjects through fun and indigenous games..." [NEP 2020, 4.27]

16. *"Stories, arts, games, sports, examples, problems, etc. will be chosen as much as possible to be rooted in the Indian and local geographic context. Ideas, abstractions, and creativity will indeed best flourish when learning is thus rooted." [NEP 2020, 4.29]*

2.11.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.11.3.1. General questions

1. Please respond to the NEP points above on health and well-being education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in education regarding health and well-being? Please note that health includes all dimensions of health, including mental health.
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in the education for health and well-being, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. What principles should guide the selection of content and the approach to health and well-being across school stages? How would curricular integration be enabled? How would the curriculum for health and well-being be made relevant and meaningful for school education?
6. What should be the priorities and approach related to health and well-being at different school stages? What should be the pedagogical approach?
7. What is the relevance of sports-related and other clubs and circles for different school stages (DNEP P4.10.2)? What should be the objectives of setting them up? How should they be organised? How can other stakeholders be involved? Please illustrate with examples where possible.
8. How can aspects related to health and safety be integrated into the curriculum at different school stages?
9. What preparation would teachers need? What should the content of the teacher education programmes related to physical education, health and safety?

10. What will be the expectations from master instructors? What will be the criteria for identifying master instructors? How should they be prepared? How can their preparation be aligned to the local context?
11. What should be the criteria for selection of social workers and counsellors? What will be expected of them in terms of ensuring retention and learning? How will they be prepared? What processes will be in place for their professional development? What kind of tie ups are needed to ensure children in need of professional help are able to receive it with due care and sensitivity?
12. What would be the horizontal connections health and well-being would have with other parts of the school curriculum? Please illustrate with specific examples across the different stages.
13. What aspects of Indian knowledge systems would be incorporated into health and well-being education? How will these aspects be included across subjects?

2.11.3.2. Stagewise curricular approach to health and well-being

The 4-stage design of Foundational (ages 3-8), Preparatory (ages 8-11), Middle (ages 11-14), Secondary (ages 14-18) is critical for realizing the vision of NEP 2020. In this section, please give specific proposals and illustrations for the 4 stages of this curricular area.

14. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities, that all students must develop in this subject by Grade 12? How should these capacities be developed across each stage (Foundational, Preparatory, Middle, Secondary)?
15. For each of the concepts/capacities and stages described in #13 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
16. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy of this subject (with other subjects and with “real life”) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
17. Describe ways in which each of these concepts (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems.
18. Describe ways in which local knowledge and flavor could be included in the curriculum and pedagogy of this subject area.
19. Describe ways in which families and local communities could be involved in the teaching and learning of this subject area.
20. Approaches to inclusion for children from SEDGs that are necessary for this curricular area need to be elaborated.

21. Describe how assessment in the subject may be transformed from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development, and tests higher-order capacities such as analysis, critical thinking, and conceptual clarity. Assessments should respond to the need for being formative and competency based and promoting learning. Different modes of assessment that are age appropriate should be illustrated for each stage.
22. Describe the approach to textbook and TLM development keeping in mind the curricular and pedagogical shifts.
23. Describe ways in which technology could be used to enhance teaching-learning in this subject in an effective and equitable manner.
24. How should teacher capacity, support, and education be reformed to effectively enable all the above transformations?
25. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place to effectively enable all the above transformations?

2.11.3.3. Other Suggestions

In this subsection, please provide other suggestions about education for health and well-being that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.11.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

2.12. Reform in Examinations and Holistic Progress Card

2.12.1. Vision of NEP 2020

1. *“The changes in curriculum must be accompanied by parallel changes in assessment procedures and mechanisms. The very aim of assessment in the culture of our schooling system must shift from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development for our students, and tests higher-order skills such as analysis, critical thinking, and conceptual clarity. The primary purpose of assessment should indeed be for learning - it should help the teacher and student - and the entire schooling system - continuously revise teaching-learning processes in order to optimise learning and development for all students”. [DNEP 2019, Introduction to Section 4.9].*
2. *“This approach must be used throughout the educational system and throughout all subjects, including on school examinations, Board Examinations, entrance examinations for universities, university examinations, and examinations for employment”. [DNEP 2019, Introduction to Section 4.9]*
3. *“Emphasis on conceptual understanding rather than rote learning and learning-for-exams” [NEP 2020, Principles of this Policy, p. 5]*
4. *“Focus on regular formative assessment for learning rather than the summative assessment that encourages today’s ‘coaching culture’”. [NEP 2020, Principles of this Policy, p. 5]*
5. *“The current nature of secondary school exams, including Board exams and entrance exams - and the resulting coaching culture of today - are doing much harm, especially at the secondary school level, replacing valuable time for true learning with excessive exam coaching and preparation. These exams also force students to learn a very narrow band of material in a single stream, rather than allowing the flexibility and choice that will be so important in the education system of the future”. [NEP 2020, 4.36]*
6. *“The progress card of all students for school-based assessment, which is communicated by schools to parents will be a holistic, 360-degree, multidimensional report that reflects in great detail the progress as well as the uniqueness of each learner in the cognitive, affective, and psychomotor domains.” [NEP 2020, 4.35]*

2.12.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read “Principles of this Policy”, Section 4 and Chapter 4 of DNEP 2019 in detail. Please also go through Paragraph 8.10 of NEP 2020.

1. *“A new paradigm of assessment for learning and development: The focus will be on formative assessment, i.e., assessment for learning. In this transformation, assessment will be redesigned to primarily test core concepts and skills along with higher order capacities such as critical thinking, analysis, and conceptual clarity rather than rote memorisation. This approach will be used across all examinations - from schools to “entrance examinations” to National or State-level achievement surveys to university examinations and examinations for employment.*

Examinations will not be as “high-stakes” - the psychological burden on students will be significantly reduced through mechanisms such as best of multiple attempts.” [DNEP 2019, P4.9.1]

2. *“The aim of assessment in the culture of our schooling system will shift from one that is summative and primarily tests rote memorization skills to one that is more regular and formative, is more competency-based, promotes learning and development for our students, and tests higher-order skills, such as analysis, critical thinking, and conceptual clarity. The primary purpose of assessment will indeed be for learning; it will help the teacher and student, and the entire schooling system, continuously revise teaching-learning processes to optimize learning and development for all students. This will be the underlying principle for assessment at all levels of education.” [NEP 2020, 4.34]*
3. *Setting standards: “It is proposed to set up a National Assessment Centre, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), as a standard-setting body under MHRD that fulfils the basic objectives of setting norms, standards, and guidelines for student assessment and evaluation for all recognized school boards of India, guiding the State Achievement Survey (SAS) and undertaking the National Achievement Survey (NAS), monitoring achievement of learning outcomes in the country, and encouraging and helping school boards to shift their assessment patterns towards meeting the skill requirements of the 21st century in consonance with the stated objectives of this Policy. This Centre will also advise school boards regarding new assessment patterns and latest researches, promote collaborations between school boards. It will also become an instrument for the sharing of best practices among school boards, and for ensuring equivalence of academic standards among learners across all school boards” [NEP 2020, 4.41]*
4. *“Formative assessment to continually improve teaching-learning processes: At the school level, such developmental assessment of learning will be carried out periodically, and at least once a month, in all domains, to help both teachers and students continuously reassess and optimise learning plans. Over time, online question banks of higher order questions will be made available to teachers and students for this purpose. Since assessment will be formative and will test primarily higher order skills and applications of essential concepts, open book examinations may be used as well, and portfolios may be used in the Secondary Stage. Teachers will prepare their own quizzes, examinations, and portfolio assessments in this spirit to track students’ progress and revise personalised.” [DNEP 2020, P4.9.2] “The assessment tools (including assessment “as”, “of”, and “for” learning) will also be aligned with the learning outcomes, capabilities, and dispositions as specified for each subject of a given class.” [NEP 2020, 4.6]*
5. *Restructuring of Board Examinations: “Board Examinations will be significantly restructured to test only core concepts, skills, and higher order capacities in a range of required subjects and a range of elective subjects of the student’s choice. The goal will be to be flexible, like the curriculum, and to design the Board Examinations so that any student attending classes in their chosen subjects and making basic efforts in these classes will be able to comfortably pass their Board Examinations - without any necessity for coaching, cramming, or other major outside-of-usual-schoolwork efforts. Board Examinations will thus be used as a check for basic learning, skills, and analysis. To eliminate the “high stakes” aspect of Board Examinations, all students will be allowed to take Board Examinations on up to two occasions during any given school year.*

Eventually, when computerised adaptive testing becomes widely available, multiple attempts for Board Examinations could be allowed. To achieve such flexibility, reduce stress, lessen the examination burden on students by replacing in-class final examinations with Board Examinations, and allowing students to take the Board Examination in each subject at the end of the semester in which they take that subject, the Policy envisions shifting, as soon as is possible, to a “modular Board Examinations” approach, where Board examinations are offered each semester in a range of subjects.” [DNEP 2019, P4.9.5]

6. *“All subjects and corresponding assessments, beginning with mathematics, could be offered at two levels, with students doing some of their subjects at the standard level and some at a higher level; and Board exams in certain subjects could be redesigned to have two parts – one part of an objective type with multiple-choice questions and the other of a descriptive type”. [NEP 2020, 4.38]*
7. *Census examinations in Grades 3, 5, and 8: “To track students’ progress throughout their school experience, and not just at the end in Grade 10 and 12 - for the benefit of students, parents, teachers, principals, and school management committees in planning improvements to schools and teaching-learning processes - all students will take State census examinations in Grades 3, 5, and 8 in addition to the Board Examinations in Grades 10 and 12. Again, these examinations would test core concepts and knowledge from the national and local curricula, along with relevant higher order skills gained during the respective levels of education, rather than rote memorisation. The Grade 3 census examination, in particular, would test basic literacy, numeracy, and other foundational skills.” [DNEP 2019, P4.9.4][NEP 2020, 4.40] Further, “a sample-based National Achievement Survey (NAS) of student learning levels will be carried out ... States will also be encouraged to conduct their own census-based State Assessment Survey (SAS)” [NEP 2020, 8.10] “The results of school examinations will be used only for developmental purposes of the school education system, including for public disclosure by schools of their overall (anonymized) student outcomes, and for continuous monitoring and improvement of the schooling system.” [NEP 2020, 4.40]*
8. *Use of technology for assessment: “Once internet and computers are standard in schools, assessment at all levels - especially during the Middle and Secondary stages - may also be conducted in an adaptive computer assisted manner, so that students could regularly monitor their own progress and formulate, with the help of their teachers, revised personalised learning plans and goals. Formal official assessments, such as Board and entrance examinations, could eventually be conducted in this manner also, with students thereby being easily able to take such tests on more than one or two occasions to improve.” [DNEP 2020, P4.9.3]*
9. *Holistic progress card: “The progress card will be a holistic, 360-degree, multidimensional report that reflects in great detail the progress as well as the uniqueness of each learner in the cognitive, affective, and psychomotor domains. It will include self-assessment and peer assessment, and progress of the child in project-based and inquiry-based learning, quizzes, role plays, group work, portfolios, etc., along with teacher assessment. The holistic progress card will form an important link between home and school and will be accompanied by parent-teacher meetings in order to actively involve parents in their children’s holistic education and development. The progress card would also provide teachers and parents with valuable information on how to support each student in and out of the classroom. AI-based software could*

be developed and used by students to help track their growth through their school years based on learning data and interactive questionnaires for parents, students, and teachers, in order to provide students with valuable information on their strengths, areas of interest, and needed areas of focus, and to thereby help them make optimal career choices.” [NEP 2020, 4.35]

10. “National Testing Agency strengthened to conduct college and university entrance examinations: *The NTA will ... administer aptitude tests and tests in specific subjects that can be taken on multiple occasions during the year in order to reduce the intense and unnecessary pressures of the university entrance examinations system. The NTA tests will aim to assess essential concepts, knowledge, and higher order skills from the national common curriculum as per the NCF in each subject, for the purpose of aiding colleges and universities in their admissions decisions”* across the country. These tests will also be used by employers. [DNEP 2019, P4.9.6][NEP 2020, 4.42]

2.12.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

2.12.3.1. General questions

1. Please respond to the NEP points above on reforms in assessment and holistic progress cards, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in assessment / examinations, including Board Examinations?
3. How can we ensure that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in assessments and examinations, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. How can the shift to “assessment for learning” be made? How can core concepts and skills be identified? What will be the approach to assessment of these core capacities and skills? How will higher order capacities be assessed? Please illustrate how assessment will be used for learning.
6. What is the relevance of standards in school education, what should these standards be, and how should they be set? What is the relationship between standards and competence? What is the relationship between standards and learning outcomes? How can standards help in ensuring equivalence across school boards? Why is this important for meeting the goals of NEP 2020?
7. How could States make use of National standards to the best effect in their States?
8. What is meant by competency-based learning? How can standards support competency-based learning?
9. How can the transition to the reformed Board examinations be made? How can the high stakes nature of examinations be changed? How can Board examinations be offered in a flexible manner, and what are the implications for content, frequency and reporting of examinations?

What changes will be required in the school curriculum and processes to make this possible? What is meant by modular Board examinations, what are the advantages of such modular Board exams, and how could they be carried out in practice in India? How can subjects be offered at two levels without compromising on the essential subjects, concepts and skills mentioned in the NEP 2020?

10. How can schools and teachers be supported to implement formative assessments? What kind of resources can be provided to them, who will develop them, and how can orientation and feedback be facilitated? How can teachers have autonomy to take decisions related to assessment? Please illustrate how assessment tools can be developed and used.
11. How can assessment be made rigorous, valid, ethical and fair?
12. What is the need for systemic assessments in classes 3, 5 and 8? How are these different from regular school examinations? How can the results of large-scale assessments be used to improve educational processes and outcomes? How can they be used for developmental purposes? At what frequency should they be held? What should be the approach, and how can the process be made manageable without compromising on rigor and results? How can confidentiality be maintained? How should results be reported? How can these assessments be used for systemic improvement?
13. What are the advantages and challenges of using technology in assessment? What is meant by adaptive assessments? How can they be used to support student learning? Please outline a roadmap with relevant transitions for using technology for assessment.
14. What will be the contours of a holistic progress card? What is meant by a 360-degree, multidimensional report – what will it contain and who will be involved in reporting progress? What is its relevance? How will records be maintained and reporting done?
15. How will the NTA enable reduction of stress and burden on students? How can universities and employers use results of NTA tests? What should be the nature of NTA tests? How can they ensure equivalence across Boards?
16. What is the approach to assessment in each of the four stages? How is this approach appropriate for each relevant stage?
17. How would the assessment/examination have fidelity to the learning objectives set in the curriculum?
18. What should be the expectations from PARAKH?

2.12.3.2. Other Suggestions

In this subsection, please provide other suggestions about reforms in examinations that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

2.12.3.3. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.



Position Papers – Cross-Cutting Themes

3. Position Paper Guidelines - Cross-cutting themes

3.1. Knowledge of India

3.1.1. Vision of NEP 2020

1. *“While students must have a large amount of flexibility in choosing their individual curricula, certain subjects, skills, and capacities should be learned by all students to become good, successful, innovative, adaptable, and productive human beings in today’s rapidly changing world. In addition to proficiency in languages, these skills include: knowledge of India; and knowledge of critical issues facing local communities, States, the country, and the world.” [NEP 2020, 4.23].*
2. *“Instilling knowledge of India and its varied social, cultural, and technological needs, its inimitable artistic, language, and knowledge traditions, and its strong ethics in India’s young people is considered critical for purposes of national pride, self-confidence, self-knowledge, cooperation, and integration” [NEP 2020, Introduction, p. 4].*
3. *“Indian literature and traditions contain deep knowledge in a variety of disciplines, including mathematics, philosophy, art, logic, grammar, law, poetry, drama, astronomy, chemistry, metallurgy, botany, zoology, ecology, environmental conservation, medicine, architecture, water management, agriculture, music, dance, yoga, psychology, politics, fables, and education. These knowledge systems, which occur in ancient as well as more recent Indian literature, folk arts, and local oral and tribal traditions, serve to impart culture as well as valuable knowledge - yet much of this knowledge remains better known outside India than in India”. [DNEP 2019, Introduction to Section 4.6.9]*
4. Fundamental principles of the education system include *“a rootedness and pride in India, and its rich, diverse, ancient and modern culture and knowledge systems and traditions” [NEP 2020, Principles of this Policy, p. 5]*

3.1.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read the “Introduction”, Section 4 and Paragraph 22.12 of NEP 2020, and Chapter 4 of DNEP 2019 in detail.

1. *“Indian contributions to knowledge and the contexts in which they were discovered must be incorporated into the school curriculum not just for reasons of historical accuracy (which is sufficient reason on its own), but also for the often more holistic nature of the traditional Indian approach which leads to a deeper understanding, as well as for reasons of increased relatability due to geographic location, national pride, inspiration, and self-esteem” [DNEP 2019, Introduction to Section 4.6.9]*
2. *““Knowledge of India” will include knowledge from ancient India and its contributions to modern India and its successes and challenges, and a clear sense of India’s future aspirations with regard*

to education, health, environment, etc. These elements will be incorporated in an accurate and scientific manner throughout the school curriculum wherever relevant". [NEP 2020, 4.27]

3. Incorporation of Indian knowledge systems into the curriculum: *"Indian contributions to knowledge - and the historical contexts that led to them - will be incorporated in an accurate and engaging manner, wherever relevant, into the existing school curriculum and textbooks. Topics will include Indian contributions to mathematics, astronomy, philosophy, psychology, yoga, architecture, medicine, as well as governance, polity, society, and conservation". [DNEP 2019, P4.6.9.1]*
4. Inclusion of local and tribal knowledge systems in the curriculum and textbooks: *"Local and tribal knowledge systems will also be included in more detail in regions where such knowledge systems may hold a greater relevance with respect to local needs and customs". [DNEP 2019, P4.6.9.2]*
5. *"There are a number of excellent, truly scientific, and learned scholars in India who are experts in traditional knowledge systems of India in various subjects, including in tribal knowledge. We must get their help to accurately and scientifically bring the most enlightening and relevant aspects of Indian knowledge systems to the appropriate grade levels in the school curriculum". [DNEP 2019, Section 4.6.9]*
6. *"Indian Knowledge Systems, including tribal knowledge and indigenous and traditional ways of learning, will be covered and included in mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as in governance, polity, conservation. Specific courses in tribal ethno-medicinal practices, forest management, traditional (organic) crop cultivation, natural farming, etc. will also be made available. Competitions may be held in schools for learning various topics and subjects through fun and indigenous games. Video documentaries on inspirational luminaries of India, ancient and modern, in science and beyond, will be shown at appropriate points throughout the school curriculum. Students will be encouraged to visit different States as part of cultural exchange programmes". [NEP 2020, 4.7]*
7. *"All curriculum and pedagogy, from the foundational stage onwards, will be redesigned to be strongly rooted in the Indian and local context and ethos in terms of culture, traditions, heritage, customs, language, philosophy, geography, ancient and contemporary knowledge, societal and scientific needs, indigenous and traditional ways of learning etc. – in order to ensure that education is maximally relatable, relevant, interesting, and effective for our students. Stories, arts, games, sports, examples, problems, etc. will be chosen as much as possible to be rooted in the Indian and local geographic context. Ideas, abstractions, and creativity will indeed best flourish when learning is thus rooted." [NEP 2020, 4.29]*
8. *"A number of initiatives to foster languages, arts, and culture in school children have been discussed [in Chapter 4], which include a greater emphasis on music, arts, and crafts throughout all levels of school; early implementation of the three-language formula to promote multilingualism; teaching in the home/local language wherever possible; conducting more experiential language learning; the hiring of outstanding local artists, writers, craftspersons, and other experts as master instructors in various subjects of local expertise; accurate inclusion of traditional Indian knowledge including tribal and other local knowledge throughout into the*

curriculum, across humanities, sciences, arts, crafts, and sports, whenever relevant; and a much greater flexibility in the curriculum, especially in secondary schools and in higher education, so that students can choose the ideal balance among courses for themselves to develop their own creative, artistic, cultural, and academic paths." [NEP 2020, 22.8]

9. "An engaging course on Indian Knowledge Systems will also be available to students in secondary school as an elective." [NEP 2020, 4.27]

3.1.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

3.1.3.1. General questions

1. Please respond to the NEP points above on knowledge of India, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in the incorporation of knowledge of India in curriculum and pedagogy that must be addressed by the new NCF?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in the curriculum and pedagogy for knowledge of India, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. How can knowledge of India develop national pride?
6. What would be the best pedagogy to draw the child's interest in Indian knowledge systems? How to design hands-on, experiential learning in this area?
7. What principles will be used to determine how elements from knowledge of India can be incorporated at each of the stages and in each subject (e.g., Section 4.6.9 of the Draft NEP 2019 illustrates how this can be done in the context of mathematics)?
8. Describe ways in which Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.) and Knowledge Systems can be incorporated through horizontal connections across subjects and with real life, thereby promoting a more holistic and multidisciplinary experience for students.
9. How can a deep understanding of the local context be leveraged for learning and holistic development?
10. How will material related to knowledge of India and the local context (including tribal knowledge) be sourced and developed?

3.1.3.2. Stagewise approach

11. What are the core learning objectives and outcomes, i.e., key concepts, skills, values, dispositions, and capacities, related to knowledge of India that all students must develop by Grade 12? How should these capacities be developed across each stage (Foundational: up to 8yrs; Preparatory: 8-11yrs; Middle: 11-14yrs; High: 14-18yrs)? Please give a few specific examples of concepts from each of the school stages; please try to illustrate linkages across stages.
12. For each of the concepts/capacities and stages described in #13 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
13. Describe how to develop useful/interesting/illuminating horizontal connections in the curriculum and pedagogy of this subject (with other subjects and with “real life”) for each of these concepts (or for as many of these concepts as possible) that would promote a more holistic and multidisciplinary experience for students.
14. Describe ways in which families and local communities could be involved in the teaching and learning of this area.
15. How can scholars be involved, and the community’s resources leveraged, to enable children’s engagement with this area?
16. Describe ways in which technology could be used to enhance teaching-learning in this area in an effective and equitable manner?
17. What should be the design for the elective course in the Secondary Stage on Indian Knowledge Systems?
18. How should teacher capacity, support, and education be reformed in order to effectively enable all the above transformations?
19. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?

3.1.3.3. Other Suggestions

In this subsection, please provide other suggestions about knowledge of India that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

3.1.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

3.2. Value education

3.2.1. Vision of NEP 2020

1. *"The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution." [NEP 2020, Principles of this Policy]*
2. *"Students will be taught at a young age the importance of "doing what's right", and will be given a logical framework for making ethical decisions. In later years, this would then be expanded along themes of cheating, violence, plagiarism, littering, tolerance, equality, empathy, etc., with a view to enabling children to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. As consequences of such basic ethical reasoning, traditional Indian values and all basic human and Constitutional values (such as seva, ahimsa, swachchhata, satya, nishkam karma, shanti, sacrifice, tolerance, diversity, pluralism, righteous conduct, gender sensitivity, respect for elders, respect for all people and their inherent capabilities regardless of background, respect for environment, helpfulness, courtesy, patience, forgiveness, empathy, compassion, patriotism, democratic outlook, integrity, responsibility, justice, liberty, equality, and fraternity) will be developed in all students." [NEP 2020, 4.28]*
3. *Fundamental principles of the education system include "a rootedness and pride in India, and its rich, diverse, ancient and modern culture and knowledge systems and traditions" [NEP 2020, Principles of this Policy, p. 5]*

3.2.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Chapter 4 of DNEP 2019 and Section 4 of NEP 2020 in detail.

1. *"ethics and human and Constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice". [NEP 2020, Principles of this Policy]*
2. *"Incorporation of basic ethical and moral reasoning throughout the school curriculum: ... Incorporation of ethical and moral awareness and reasoning in the curriculum will be promoted through direct as well as indirect methods. In the direct method there will be classroom activities, discussions and readings specifically designed to address ethical and moral awareness and reasoning. In the indirect method, the contents of languages, literature, history, and the social sciences will incorporate discussions particularly aimed at addressing ethical and moral principles..." [DNEP 2019, P4.6.8.1]*
3. *"Incorporation of ethical and moral principles and values: As consequences of basic ethical reasoning as in P4.6.8.1, traditional Indian values of seva, ahimsa, swachchata, satya, nishkam karma, tolerance, honest hard work, respect for women, respect for elders, respect for all people*

and their inherent capabilities regardless of background, respect for environment, etc. will be inculcated in students.” [DNEP 2019, P4.6.8.2]

4. *“Development of Constitutional values: The process and the content of education at all levels will also aim to develop Constitutional values in all students, and the capacities for their practice.” [DNEP 2019, P4.6.8.3]*
5. *“Development of ideas of personal freedom and responsibility among students: At the same time, ideas of personal freedom and responsibility will be important to develop as well: the idea that India is a free society, but that freedom comes with responsibility for all citizens, in order for society to truly function and prosper.” [DNEP 2019, P4.6.8.4]*
6. *“Basic health and safety training, as a service to oneself and to those around us: Basic training in health, including preventative health, mental health, nutrition, personal and public hygiene, and first-aid will also be included in the curriculum ... Sex education will also be included in secondary school for future judgment surrounding consent, harassment, respect for women, safety, family planning, and STD prevention.” [DNEP 2019, P4.6.8.5]*
7. *“Explicit training in socio-emotional skills ensures higher levels of attention and emotional and cognitive regulation that are necessary not only for well-being, empathy towards others, and lower stress, but also leads to increased academic success.” [DNEP 2019, P4.6.8.6]*
8. *“Inspiring lessons from the literature and people of India: ... Children will have the opportunity to read and learn from the original stories of the Panchatantra, Jataka, Hitopadesh, and other fun fables and inspiring tales from the Indian tradition. Excerpts from the Indian Constitution will also be considered essential reading for students, for the values of Equality, Liberty, and Fraternity that it espouses. Highlights from the lives of great Indians of history will also be an excellent way to inspire and introduce core values in India’s young people...” [DNEP 2019, P4.6.8.7]*
9. *“Courses on ethical and moral reasoning: In addition to incorporating P4.6.8.1-P4.6.8.7 throughout the school curriculum, a one-year course on ethical and moral reasoning will be required for all students sometime in Grades 6-8, where the subject of ethics as already described above will be discussed in a more sophisticated and deeper manner ... More advanced semester courses on philosophy, ethics, and moral reasoning will be available in high school as well.” [DNEP 2019, P4.6.8.8]*

3.2.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

3.2.3.1. General questions

1. Please respond to the NEP points above on value education, including any suggestions you may have regarding additions or modifications.

2. What are the problems currently faced in the incorporation of value education in curriculum and pedagogy that must be addressed by the new NCF?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in value education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. How would concerns about basic health and safety be addressed in the curriculum? What is the role of these concerns in other curricular areas such as physical education and science education?
6. What should be the approach to sex education? How would sex education incorporate the values of consent, respect, safety and prevention of diseases?
7. What should be the approach in curriculum and pedagogy to develop the values of: compassion and empathy; patience and kindness; honesty and integrity; private and public hygiene; personal responsibility?
8. In what ways can India's literature, traditional values, culture, and ancient systems of ethics and philosophy be used to impart values in the modern world?
9. Can case studies based on ethical dilemmas, and other such approaches, be integrated into the curriculum at various stages? How?

3.2.3.2. Stagewise approach

10. What are the core learning objectives and outcomes, i.e., key values, dispositions and capacities, that all students must develop related to value education by Grade 12? How should these capacities be developed across each stage (Foundational: up to 8yrs; Preparatory: 8-11yrs; Middle: 11-14yrs; High: 14-18yrs)?
11. What is the stagewise progression of development of moral reasoning and ethical values? What would be developmentally appropriate for each stage? What would be the approach for "direct" and "indirect methods", along with the transformation of school culture, in developing ethical values?
12. How would a compulsory one-year course on ethical and moral reasoning be included in the curriculum sometime in Grades 6-8? What would be the guiding principles for the design of this course? What would be the approach and design for an advanced philosophy, ethics and moral reasoning elective course in the Secondary Stage? How would different aspects of Socio-Emotional Learning be incorporated at different stages?
13. For each of the capacities and stages described in #8 and #9 (or for as many as possible), describe stagewise, experiential/play-based/toy-based/discovery-based/experiment-based/art-based/sports-based/storytelling-based/interactive/less-textbook-centric/creative/enjoyable activities and pedagogy that will enable students to develop these capacities through less rote and greater creativity and analytical/critical thinking.
14. Describe how to develop useful/interesting/illuminating horizontal connections with value education in the curriculum and pedagogy of other subjects and with real life that would

promote a more holistic and multidisciplinary experience for students. How would aspects of value education be integrated in other curricular areas?

15. Describe ways in which each of these capacities (or as many as possible) can be rooted in India, such as through Indian and local traditions (including stories, poems, music, dance, drama, games, toys, etc.), culture, heritage, and Knowledge Systems. What would be the approach for incorporating literature from India and also biographies of Indian heroes for development of ethics and values?
16. Describe ways in which local knowledge and flavor could be included across subjects for the development of these capacities.
17. Describe ways in which families and local communities could be involved in the development of these capacities.
18. How should teacher capacity, support, and education be reformed in order to effectively enable all the above transformations?
19. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations? Beyond the taught curriculum, how would the school culture, ethos and relationships reflect and model ethical and Constitutional values? What are the opportunities available for students to exercise both their freedoms and responsibilities within school contexts?

3.2.3.3. Other Suggestions

In this subsection, please provide other suggestions about value education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

3.2.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

3.3. Inclusive Education

3.3.1. Vision of NEP 2020

1. *“Education is the single greatest tool for achieving social justice and equality. Inclusive and equitable education - while indeed an essential goal in its own right - is also critical to achieving an inclusive and equitable society in which every citizen has the opportunity to dream, thrive, and contribute to the nation. The education system must aim to benefit India’s children so that no child loses any opportunity to learn and excel because of circumstances of birth or background. This Policy reaffirms that bridging the social category gaps in access, participation, and learning outcomes in school education” [NEP 2020, 6.1]*
2. *“Socio-Economically Disadvantaged Groups (SEDGs) can be broadly categorized based on gender identities (particularly female and transgender individuals), socio-cultural identities (such as Scheduled Castes, Scheduled Tribes, OBCs, and minorities), geographical identities (such as students from villages, small towns, and aspirational districts), disabilities (including learning disabilities), and socio-economic conditions (such as migrant communities, low income households, children in vulnerable situations, victims of or children of victims of trafficking, orphans including child beggars in urban areas, and the urban poor).” [NEP 2020, 6.2]*
3. *“recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student’s holistic development in both academic and non-academic spheres” [NEP 2020, Principles of this Policy, p.5]*
4. *“respect for diversity and respect for the local context in all curriculum, pedagogy, and policy, always keeping in mind that education is a concurrent subject” [NEP 2020, Principles of this Policy, p.5]*
5. *“full equity and inclusion as the cornerstone of all educational decisions to ensure that all students are able to thrive in the education system” [NEP 2020, Principles of this Policy, p.5]*

3.3.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Section 6 of NEP 2020 and Chapter 6 of DNEP 2019 in detail.

1. *“Actions must be taken urgently to understand the barriers students face and to implement proactive measures ensuring inclusive and equitable participation of children from URGs (SEDGs) across all levels of school education” [DNEP 2019, Introduction to Chapter 6]*
2. Establishment of Special Education Zones (SEZ): *“States will be encouraged to declare any clearly definable area as an SEZ on the basis of clear social development and socio-economic indicators (e.g. tribal districts of Madhya Pradesh)” [DNEP 2019, P6.1.2].*
3. Availability and capacity development of teachers: *“Inclusive education will be an integral part of both pre-service teacher education as well as in-service professional development, including for Anganwadi workers, pre-school and school teachers, school leaders, and other education functionaries” [DNEP 2019, P6.1.3].*

4. Creation of inclusive school environments: *“Admissions processes that go against the spirit of inclusivity will be abolished, and institutional processes (including time-tables and academic calendars) will reflect the diverse needs of learners and their communities. Schools will define and enforce rules and regulations to ensure privacy, dignity, safety, and access to all school resources, activities, and events (including sports and self-defense classes) for learners from URG” [DNEP 2019, P6.1.4] “All the above policies and measures are absolutely critical to attaining full inclusion and equity for all SEDGs - but they are not sufficient. What is also required is a change in school culture. The culture of the system and the school must also reflect inclusion, equity and sensitivity.” [NEP 2020, 6.19].*
5. *“What is also required is a change in school culture. All participants in the school education system, including teachers, principals, administrators, counsellors, and students, will be sensitized to the requirements of all students, the notions of inclusion and equity, and the respect, dignity, and privacy of all persons. Such an educational culture will provide the best pathway to help students become empowered individuals who, in turn, will enable society to transform into one that is responsible towards its most vulnerable citizens. Inclusion and equity will become a key aspect of teacher education (and training for all leadership, administrative, and other positions in schools); efforts will be made to recruit more high-quality teachers and leaders from SEDGs in order to bring in excellent role models for all students.” [NEP 2020, 6.19]*
6. *“Students will be sensitized through this new school culture, brought in by teachers, trained social workers and counsellors as well as through corresponding changes to bring in an inclusive school curriculum. The school curriculum will include, early on, material on human values such as respect for all persons, empathy, tolerance, human rights, gender equality, non-violence, global citizenship, inclusion, and equity. It would also include more detailed knowledge of various cultures, religions, languages, gender identities, etc. to sensitize and develop respect for diversity. Any biases and stereotypes in school curriculum will be removed, and more material will be included that is relevant and relatable to all communities.” [NEP 2020, 6.20]*
7. Maintenance of data related to students of SEDGs: *“Up to date information for each student will be maintained in the National Repository of Educational Data (NRED).” [DNEP 2019, P6.1.5]*
8. *“All scholarships and other opportunities and schemes available to students from SEDGs will be coordinated and announced by a single agency and website to ensure that all students are aware of, and may apply in a simplified manner on such a ‘single window system’, as per eligibility”. [NEP 2020, 6.18][DNEP 2019, P6.1.6].*
9. Education of girls as a cross-cutting theme: *“a key strategy in uplifting Indian society is to give concerted attention to uplifting women and girls; and a key strategy in uplifting URGs (SEDGs) is to give due attention to uplifting the women in these groups”. [DNEP 2019, Introduction to Section 6.2] (This area this should be dealt with in detail in the Position Paper on Gender Education).*
10. Education of children belonging to Scheduled Caste Communities and Other Backward Classes: *“Bridging the social category gaps in access, participation, and learning outcomes in school education will continue to be one of the major goals of all education sector development programmes”. [DNEP 2019, Introduction to Section 6.3].*

11. Education of children from tribal communities: *“Children from tribal communities often report finding their school education irrelevant and foreign to their lives, both culturally and academically” [DNEP 2019, Introduction to Section 6.4]. “special mechanisms need to be made to ensure that children belonging to tribal communities receive the benefits of these interventions”. [NEP 2020, 6.2.3].*
12. Education of children from educationally underrepresented groups within minority communities: *“Existing traditional or religious schools may be encouraged to preserve their traditions and pedagogical styles, but at the same time must be supported to also integrate the subject and learning areas prescribed by the National Curricular Framework into their curricula in order to reduce and eventually eliminate the underrepresentation of children from these schools in higher education”. [DNEP 2019, Introduction to Section 6.5].*
13. Education of children from urban poor families: *“lack of literacy and proper schooling and playing opportunities, often leads children and adolescents into unfortunate and harmful activities, including petty crime and drugs; an estimated one third of street children are dealing with substance abuse”. [DNEP 2019, Introduction to Section 6.6]*
14. Education of transgender children: *“The Policy recognises the urgent need to address matters related to education of transgender children and initiating appropriate measure to remove the stigma and discrimination they face in their life, including with respect to education.” [DNEP 2019, Introduction to Section 6.7] (This area must be dealt with in detail in the Position Paper on Gender Education).*
15. Education of children with disabilities (CwD): *“The Rights of Persons with Disabilities (RPWD) Act 2016 defines inclusive education as a ‘system of education wherein students with and without disabilities learn together and the system of teaching and learning is suitably adapted to meet the learning needs of different types of students with disabilities’. This Policy is in complete consonance with the provisions of the RPWD Act 2016 and endorses all its recommendations with regard to school education.” [NEP 2020, 6.10].*
16. *“The awareness and knowledge of how to teach children with specific disabilities (including learning disabilities) will be an integral part of all teacher education programmes, along with gender sensitization and sensitization towards all underrepresented groups (SEDGs) in order to reverse their underrepresentation.” [NEP 2020, 6.14]*

3.3.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

3.3.3.1. General questions

1. Please respond to the NEP points above on inclusive education, including any suggestions you may have regarding additions or modifications.

2. What are the problems currently faced with respect to inclusion and providing equitable educational opportunities, particularly with respect to children from SEDGs, that must be addressed?
3. How can we ensure that the problems listed in #2 are addressed/overcome? What are the implications of inclusive and equitable participation for curriculum, pedagogy, school and classroom processes, and learning materials? How can these aspects contribute to retention in school and attainment of learning outcomes?
4. What is currently being done well in inclusive education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. Describe ways in which families and local communities could be involved in addressing the problems listed in #2.
6. What should be done at the systemic level, and at the level of schools and classrooms to ensure that the Policy goals with respect to school education are met for children from SEDGs? Please illustrate how specific barriers to inclusion and equitable educational opportunities can be overcome.
7. Describe ways in which technology could be used to facilitate understanding of issues and data collection as well as in dissemination of information related to scholarships, financial support, residences, etc.
8. What kind of data related to children from SEDG needs to be collected? What kind of data is relevant and useful? How should it be maintained and analysed? How can confidentiality be maintained?
9. How should teacher capacity, support, and education be reformed in order to effectively enable all the above transformations?
10. What kind of preparation would teachers of different school stages as well as different individuals who make up the education system (school leaders, BRC, CRC, BEO, DEO, etc) need with respect to practising inclusion?
11. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?
12. What kind of culture do we want to see in our schools and classrooms? Who will be responsible for this culture and how can this be developed?
13. What kind of support is required for students from SEDGs to attain learning goals? Which programmes, schemes have had success and should be continued? Besides targeted scholarships, how will measures like meals, internships, opportunities for work, etc. help? How can financial support be streamlined further? How can specific groups access funds and scholarships meant for them?
14. What kinds of steps should be taken to make it easier for SEDGs to participate in later stages of education and higher education to complete their education?
15. How can the curriculum of existing religious or alternative educational institutions be made equivalent to that of mainstream schools? How can the quality of education in these schools be strengthened?

16. How can access be increased to reach vulnerable groups? How can social workers and counsellors work with these groups to increase enrolment, retention and the attainment of learning outcomes?
17. What specific measures need to be taken to integrate children with disabilities (CwD) into regular schools in terms of infrastructure, assistive devices, technology, and learning resources? If children are not able to attend school, what provisions should be made so that they are still able to access educational opportunities? What kind of preparation should be provided to teachers and special educators? What kind of assistive tools/technology could be used at each stage for Divyang children for better quality education?
18. What will be the criteria to set up SEZs? How will these Zones cater to specific needs of children from SEDGs? What will be the processes related to planning and decentralization, review and monitoring, and ensuring quality teaching-learning?

3.3.3.2. *Stagewise approach*

19. What are the stage-specific implications for inclusive education at each stage related to curriculum and pedagogy (i.e. Foundational, Preparatory, Middle and Secondary Stages)?

3.3.3.3. *Other Suggestions*

In this subsection, please provide other suggestions about inclusive education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

3.3.3.4. *Bibliography and References*

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

3.4. Gender Education

3.4.1. Vision of NEP 2020

1. *“Education is the single greatest tool for achieving social justice and equality. Inclusive and equitable education - while indeed an essential goal in its own right - is also critical to achieving an inclusive and equitable society in which every citizen has the opportunity to dream, thrive, and contribute to the nation” [NEP 2020, 6.1]. “Girls’ access to education is the clearest path to disrupt poverty and violence, promote community health and well-being, and foster development dividends that carry on into the next generation”. [DNEP 2019, Introduction to Section 6.2]. “The Policy recognises the urgent need to address matters related to the education of transgender children and initiating appropriate measures to remove the stigma and discrimination they face in their life, including with respect to education”. [DNEP 2019, P.6.7.1]*
2. *“recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student’s holistic development in both academic and non-academic spheres” [NEP 2020, Principles of this Policy, p.5]*
3. *“full equity and inclusion as the cornerstone of all educational decisions to ensure that all students are able to thrive in the education system” [NEP 2020, Principles of this Policy, p.5]*

3.4.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Section 6 of NEP 2020 and Chapter 6 of DNEP 2019 in detail.

1. Education of girls as a cross-cutting theme: *“It must be noted that women cut across all underrepresented groups, making up about half of all SEDGs. Unfortunately, the exclusion and inequity that SEDGs face is only amplified for the women in these SEDGs. The policy additionally recognizes the special and critical role that women play in society and in shaping social mores; therefore, providing a quality education to girls is the best way to increase the education levels for these SEDGs, not just in the present but also in future generations. The policy thus recommends that the policies and schemes designed to include students from SEDGs should be especially targeted towards girls in these SEDGs.” [NEP 2020, 6.7]*
2. Focus on girls within measures for children from SEDGs: *“All schools will develop credible mechanisms to ensure schools remain discrimination-, harassment-, intimidation-free, especially for women and girls. Guidelines for ensuring school safety and security of girls will be developed and made a part of the eligibility conditions for institutional accreditation Girls’ safety outside of school is also recognised as critical to their attendance and overall educational attainment”. [DNEP 2019, P6.2.3]*
3. Ensuring participation of transgender children in school education: *“The creation of safe and supportive school environments which do not violate their Constitutional rights will be accorded priority... curriculum and textbooks will be reoriented to address issues related to transgender*

- children and their concernsTeachers will be sensitized about the issues related to transgender children...” [DNEP 2019, P6.7.1]*
4. Gender inclusion fund: *“The Government of India will develop a ‘Gender-Inclusion Fund’ to build the nation’s capacity to provide quality and equitable education for all girls, focusing on five pillars” [DNEP 2019, P6.2.1]*
 5. *“Fostering women’s participation and leadership in education: Resources will be made available to increase the number of women in positions of leadership in schools”. [DNEP 2019, P6.2.2]*
 6. School safety and security: *“Guidelines for ensuring school safety and security of girls will be developed and made a part of the eligibility conditions for institutional accreditation.” [DNEP 2019, 6.2.3] “The creation of safe and supportive school environments which do not violate their Constitutional rights will be accorded priority. Schools, school complexes, and social workers will be encouraged to develop a plan in consultation with transgender students and their parents regarding the use of their names and access to rest rooms and other spaces corresponding to their gender identity.” [DNEP 2019, P6.7.2]*
 7. Sensitising parents and the community: *“As part of an ongoing effort to identify and eliminate gender stereotypes in society, especially those that encourage withdrawal from schools, schools and social workers will hold regular discussions with parents In addition, the presence of strong role models, e.g. female teachers, will help change societal perceptions about women’s abilities and ambitions.” [DNEP 2019, P6.2.4]*
 8. Involvement of civil society groups in enabling transgender children to access quality education: *“Active involvement of civil society groups in conjunction with social workers will be sought to facilitate and ensure participation of transgender children in all levels of school education”. [DNEP 2019, P6.7.2]*
 9. Improving educational opportunities for girls: *“Free boarding facilities will be built - matching the standard of Jawahar Navodaya Vidyalayas - in school locations where students may have to come from far, and particularly for students who from socio-economically disadvantaged backgrounds, with suitable arrangements for the safety of all children, especially girls. Kasturba Gandhi Balika Vidyalayas will be strengthened and expanded to increase the participation in quality schools (up to Grade 12) of girls from socio-economically disadvantaged backgrounds. Additional Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas will be built around the country, especially in aspirational districts, Special Education Zones, and other disadvantaged areas, to increase high-quality educational opportunities. Pre-school sections covering at least one year of early childhood care and education will be added to Kendriya Vidyalayas and other primary schools around the nation, particularly in disadvantaged areas.” [NEP 2020, 6.9]*
 10. *“The awareness and knowledge of how to teach children with specific disabilities (including learning disabilities) will be an integral part of all teacher education programmes, along with gender sensitization and sensitization towards all underrepresented groups in order to reverse their underrepresentation.” [NEP 2020, 6.14]*

3.4.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

3.4.3.1. General questions

1. Please respond to the NEP points above on gender education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced with respect to inclusion of girls and transgender children that must be addressed?
3. How can we ensure that the problems listed in #2 are addressed/overcome? What are the implications of inclusive and equitable participation of girls and transgender children for curriculum, pedagogy, school and classroom processes, and learning materials? How can these aspects contribute to retention in school and attainment of learning outcomes?
4. What is currently being done well in gender education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. Describe ways in which families and local communities could be involved in addressing problems listed in #2. How can schools partner with the community and parents to ensure access and equitable participation of girls and transgender children to educational opportunities?
6. What kind of measures would need to be taken to ensure safety of girls and transgender children? How will relevant stakeholders be sensitised and empowered to take decisions?
7. How will a reliable national database be developed keeping in mind all aspects related to ethics, sensitivity and confidentiality?
8. How should teacher capacity, support, and education be reformed in order to effectively enable all the above transformations?
9. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?
10. What are the specific learning needs of transgender children? How can teachers be sensitised to these? What rights does the Constitution and the Transgender Persons (Protection of Rights) Act, 2019 grant to transgender children?
11. How can the gender inclusion fund be used to meet Policy goals related to education of girls and transgender children? How should it be managed optimally?
12. What can be done to increase the participation of women in leadership positions? How can a positive impact on the inclusion and educational attainment of girls be ensured?
13. What are some of the cultural and/or attitudinal changes (changing mindsets, halting harmful practices, removing stigmas and discrimination, etc.) required for valuing, accepting and including all children, by the:
 - Parents and community at large?
 - School leaders and teachers?

- Learners themselves, belonging to different gender identities?
14. What kind of linkages need to be established between the Directorate of Education, the NCPCR and SCPCR to support the education of transgender children? What role can civil society groups play? How can they support social workers? Are there specific needs for specific school stages?
 15. What criteria will be used for determining places where boarding schools (specifically KGBV, JNVs) or co-educational schools need to be set up or their numbers increased? How can KGBVs be improved to enhance access, retention and educational facilities?

3.4.3.2. Stagewise approach

16. Are there any stage-specific implications for gender education related to curriculum and pedagogy (i.e. Foundational, Preparatory, Middle and Secondary Stages)?

3.4.3.3. Other Suggestions

In this subsection, please provide other suggestions about gender education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

3.1.1.1. *Bibliography and References*

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

3.5. Technology in Education

3.5.1. Vision of NEP 2020

1. *"India is a global leader in information and communication technology and in other cutting-edge domains, such as space. The Digital India Campaign is helping to transform the entire nation into a digitally empowered society and knowledge economy. While education will play a critical role in this transformation, technology itself will play an important role in the improvement of educational processes and outcomes; thus, the relationship between technology and education at all levels is bidirectional." [NEP 2020, 23.1]*
2. *"The global education development agenda reflected in the Goal 4 (SDG4) of the 2030 Agenda for Sustainable Development, adopted by India in 2015 - seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030." [NEP 2020, Introduction, p. 1]*
3. *"Appropriate integration of technology into all levels of education - to support teacher preparation and development; improve teaching, learning and evaluation processes; enhance educational access to disadvantaged groups; and streamline educational planning, administration and management." [DNEP 2019, Chapter 19, Objective]*
4. *"extensive use of technology in teaching and learning, removing language barriers, increasing access for Divyang students, and educational planning and management" [NEP 2020, Principles of this Policy, p.5]*

3.5.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Sections 23 and 24 of NEP 2020, and Chapter 19 of DNEP 2019 in detail.

1. *"Use and integration of technology to improve multiple aspects of education will be supported and adopted, provided these interventions are rigorously and transparently evaluated in relevant contexts before they are scaled up. An autonomous body, the National Educational Technology Forum (NETF), will be created to provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration, and so on, both for school and higher education. The aim of the NETF will be to facilitate decision making on the induction, deployment, and use of technology, by providing to the leadership of education institutions, State and Central governments, and other stakeholders, the latest knowledge and research as well as the opportunity to consult and share best practices." [NEP 2020, 23.3]*
2. *"Given the explosive pace of technological development allied with the sheer creativity of tech-savvy teachers and entrepreneurs including student entrepreneurs, it is certain that technology will impact education in multiple ways, only some of which can be foreseen at the present time." [NEP 2020, 23.2]*
3. *"The thrust of technological interventions will be for the purposes of improving teaching-learning and evaluation processes, supporting teacher preparation and professional development, enhancing educational access, and streamlining educational planning, management, and*

- administration including processes related to admissions, attendance, assessments, etc.” [NEP 2020, 23.5]*
4. *“A rich variety of educational software, for all the above purposes, will be developed and made available for students and teachers at all levels. All such software will be available in all major Indian languages and will be accessible to a wide range of users including students in remote areas and Divyang students.” [NEP 2020, 23.6]*
 5. *“Enjoyable and inspirational books for students at all levels will be developed, including through high-quality translation (technology assisted as needed) in all local and Indian languages” [NEP 2020, 2.8]*
 6. *“.....Extensive use of technology will be made for teaching and learning of different languages and to popularize language learning.” [NEP 2020, 4.12]*
 7. *“For the enrichment of the children, and for the preservation of these rich languages and their artistic treasures, all students in all schools, public or private, will have the option of learning at least two years of a classical language of India and its associated literature, through experiential and innovative approaches, including the integration of technology, in Grades 6-12, with the option to continue from the middle stage through the secondary stage and beyond.” [NEP 2020, 4.19]*
 8. *“Qualified support for educational technology with teachers playing a central role: All use and integration of technology to improve multiple aspects of education will be supported and adopted, provided these interventions have been rigorously and transparently evaluated in relevant contexts before they are scaled up.” [DNEP 2019, P19.2.1]*
 9. *“Particular attention will need to be paid to emerging disruptive technologies that will necessarily transform the education system...This policy has been formulated at a time when an unquestionably disruptive technology - Artificial Intelligence (AI) 3D/7D Virtual Reality - has emerged.” [NEP 2020, 23.7 and 23.8]*
 10. *“Data is a key fuel for AI-based technologies, and it is critical to raise awareness on issues of privacy, laws, and standards associated with data handling and data protection, etc. ... Education will play a key role in these awareness raising efforts.” [NEP 2020, 23.13]*
 11. *“New circumstances and realities require new initiatives. The recent rise in epidemics and pandemics necessitates that we are ready with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible...the National Education Policy 2020 recognizes the importance of leveraging the advantages of technology while acknowledging its potential risks and dangers. It calls for carefully designed and appropriately scaled pilot studies to determine how the benefits of online/digital education can be reaped while addressing or mitigating the downsides.” [NEP 2020, 24.1]*
 12. *“However, the benefits of online/digital education cannot be leveraged unless the digital divide is eliminated through concerted efforts, such as the Digital India campaign and the availability of affordable computing devices. It is important that the use of technology for online and digital education adequately addresses concerns of equity.” [NEP 2020, 24.2]*
 13. *“Teachers require suitable training and development to be effective online educators. It cannot be assumed that a good teacher in a traditional classroom will automatically be a good teacher*

in an online classroom. Aside from changes required in pedagogy, online assessments also require a different approach.” NEP 2020, 24.3]

14. General guidelines for technology-based interventions: *“Three main components will form an integral part of most technology-based interventions: hardware, software and data.” [DNEP 2019, P19.2.4]*
15. Use of educational technology for continuous teacher professional development: *“An online training platform - linked to appropriate mechanisms to certify trainees in specific areas - will be developed to empower in-service teachers at all levels of education to stay at the cutting edge of pedagogical techniques.” [DNEP 2019, P19.3.2]*
16. A technology-based comprehensive teacher-requirement planning forecasting exercise will be conducted by each State to assess expected subject-wise teacher vacancies over the next two decades [NEP 2020, 5.7]
17. All B.Ed. programmes will include training in time-tested as well as the most recent techniques in pedagogy, including pedagogy with respect to foundational literacy and numeracy, multi-level teaching and evaluation, teaching children with disabilities, teaching children with special interests or talents, use of educational technology, and learner-centered and collaborative learning. All B.Ed. programmes will include strong practicum training in the form of in-classroom teaching at local schools” [NEP 2020, 5.24]
18. “This Policy recommends the following key initiatives: (a) Pilot studies for online education ... (b) [Investment in] digital infrastructure ... (c) Online teaching platform and tools ... (d) Content creation, digital repository, and dissemination ... (e) Addressing the digital divide ... (f) Virtual Labs ... (g) Training and incentives for teachers ... [in online content creation and] using online teaching platforms and tools ... (h) Online assessment and examinations ... (i) Blended models of learning ... (j) Laying down standards ... for online/digital learning ...” [NEP 2020, 24.4]
19. “Assistive devices and appropriate technology-based tools, as well as adequate and language-appropriate teaching-learning materials (e.g., textbooks in accessible formats such as large print and Braille) will be made available to help children with disabilities integrate more easily into classrooms and engage with teachers and their peers.” [NEP 2020, 6.11]
20. “While it is clear that the education of all children with disabilities is the responsibility of the State, technology-based solutions will be used for the orientation of parents/caregivers along with wide-scale dissemination of learning materials to enable parents/caregivers to actively support their children’s learning needs will be accorded priority.” [NEP 2020, 6.12]
21. “Teachers must be helped to identify such learning disabilities early and plan specifically for their mitigation. Specific actions will include the use of appropriate technology allowing and enabling children to work at their own pace, with flexible curricula to leverage each child’s strengths, and creating an ecosystem for appropriate assessment and certification.” [NEP 2020, 6.13]
22. “The use of technology platforms such as SWAYAM/DIKSHA for online training of teachers will be encouraged, so that standardized training programmes can be administered to large numbers of teachers within a short span of time.” [NEP 2020, 15.10]

23. “..... Quality technology-based options for adult learning such as apps, online courses/modules, satellite- based TV channels, online books, and ICT-equipped libraries and Adult Education Centres, etc. . . .” [NEP 2020, 21.10]
24. “Efforts to preserve and promote all Indian languages including classical, tribal and endangered languages will be taken on with new vigour. Technology and crowdsourcing, with extensive participation of the people, will play a crucial role in these efforts.” [NEP 2020, 22.17]

3.5.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

3.5.3.1. General questions

1. Please respond to the NEP points above on educational technology for school education, including any suggestions you may have regarding additions or modifications.
2. What should be the role of technology to support learners, teachers, parents and administrators? What is the nature of the “bi-directional” relationship and influence between education and technology? What is its impact across the four areas of NCF - Early Childhood education, school education, teacher education, and adult education?
3. How can technology be integrated into the areas mentioned in the Anchor points above? Specifically:
 - a. **Education processes:** Teaching, learning and evaluation processes,
 - b. **Administrative processes:** Streamlining educational planning, processes related to admissions, attendance, assessments, teacher requirement planning forecasting
 - c. **Teacher education:** Supporting teacher preparation and professional development, including standardised training at large scale in a short period of time and in B.Ed. programs
 - d. **Access:** Enhancing educational access to those from remote areas and disadvantaged backgrounds
 - e. **Support to Divyang students:** Assistance and appropriate support to Divyang students, support to teachers to detect and plan mitigations for specific disabilities, solutions for their parents and care-givers along with wide scale dissemination of learning materials
 - f. **Adult learning:** Quality technology based options for adult learning
 - g. **Language learning and removing language barriers:** Removing language barriers to learning, language translations, popularising learning of languages, multilingual education, language preservation and promotion, extensive participation of people through crowdsourcing,
 - h. **Textbook development and textbook review processes**
 - i. **Examination process**
 - j. **Other:** Are there any other areas where technology could be used?
4. The aim of “appropriate use” and “integration of technology at all levels” in education is to achieve the policy objectives of quality, inclusive, equitable and lifelong learning. How can the

advantages and opportunities of technology be reaped to make India a “knowledge superpower” while minimizing the downsides and associated risks, including issues related to the digital divide and data-related issues of misuse, privacy and security?

5. “New circumstances and realities require new initiatives.” What are some notable examples and experiences, including benefits and downsides, from recent years, such as the current pandemic period responses, of how technology was used? From these examples, can guidelines or frameworks be created for appropriate use and integration of technology at all levels, including mitigating the downsides and risks? How would these guidelines differ across early childhood, school, teacher and adult education, and across various areas listed above (see Question 6 below also)?
6. Given the rapidly evolving nature of technology, and the emergence of disruptive technologies such as AI, how should we prepare for “the multiple ways in which technology will impact education, “only some of which can be foreseen at the present time”?
7. What are principles and mechanisms for evaluating the effectiveness of technology use in education?
8. Any technology is a tool whose effectiveness also depends on the capabilities of the people who use it. What should be the approach towards building the capabilities of teachers, administrators etc. for using technology effectively?
9. Can technology related to gamification be used effectively for curriculum transaction? How?
10. What are the possible approaches for “bridging the digital divide”, so as to fully leverage the digital dividend?
11. NEP calls for “reconfiguring” pedagogical structures to make it “responsive and relevant” - what should be the considerations for reconfiguring digital-enabled pedagogies, while keeping in mind the potential benefits and risks?
12. What other enabling conditions (e.g. content, rewards and recognitions, school culture, practices, infrastructure, equipment, governance, community, etc.) should be in place in order to effectively enable all the above transformations?
13. How should competencies and skills related to technology in education be developed in children, teachers and adult learners across the stages? What changes in the curriculum would be required to achieve this?

3.5.3.2. Other Suggestions

In this subsection, please provide other suggestions that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020..

3.5.3.3. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.



Position Papers – Other Important Areas

4. Position Paper Guidelines - Other Important Areas

4.1. Teacher Education

4.1.1. Vision of NEP 2020

1. *“Teacher education is vital in creating a pool of schoolteachers that will shape the next generation. Teacher preparation is an activity that requires multidisciplinary perspectives and knowledge, formation of dispositions and values, and development of practice under the best mentors. Teachers must be grounded in Indian values, languages, knowledge, ethos, and traditions including tribal traditions, while also being well-versed in the latest advances in education and pedagogy.” [NEP 2020, 15.1]*
2. *“Recognizing that the teachers will require training in high-quality content as well as pedagogy, teacher education will gradually be moved by 2030 into multidisciplinary colleges and universities. As colleges and universities all move towards becoming multidisciplinary, they will also aim to house outstanding education departments that offer B.Ed., M.Ed., and Ph.D. degrees in education.” [NEP 2020, 5.22]*
3. Fundamental principles of the education system include *“teachers and faculty as the heart of the learning process – their recruitment, continuous professional development, positive working environments and service conditions” [NEP 2020, Principles of this Policy, p.5]*

4.1.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Paragraphs 5.22-5.29 and the entire Section 15 of NEP 2020, and Section 5.5 and whole of Chapter 15 of DNEP 2019 in detail.

Pre-Service Teacher Education

1. *“As teacher education requires multidisciplinary inputs, and education in high-quality content as well as pedagogy, all teacher education programmes must be conducted within composite multidisciplinary institutions. To this end, all multidisciplinary universities and colleges - will aim to establish, education departments which, besides carrying out cutting-edge research in various aspects of education, will also run B.Ed. programmes, in collaboration with other departments such as psychology, philosophy, sociology, neuroscience, Indian languages, arts, music, history, literature, physical education, science and mathematics. Moreover, all stand-alone TEIs will be required to convert to multidisciplinary institutions by 2030, since they will have to offer the 4-year integrated teacher preparation programme.” [NEP 2020, 15.4]*
2. Dual-major holistic 4-year integrated teacher education programme: *“The 4-year integrated B.Ed. offered by such multidisciplinary HEIs will, by 2030, become the minimal degree qualification for school teachers. The 4-year integrated B.Ed. will be a dual-major holistic Bachelor’s degree, in Education as well as a specialized subject such as a language, history, music, mathematics, computer science, chemistry, economics, art, physical education, etc. Beyond the teaching of cutting-edge pedagogy, the teacher education will include grounding in*

sociology, history, science, psychology, early childhood care and education, foundational literacy and numeracy, knowledge of India and its values/ethos/art/traditions, and more....” [NEP 2020, 15.5]

3. *“Teacher preparation is an activity that requires multidisciplinary perspectives and knowledge, formation of dispositions and values, and development of practice under the best mentors. Teachers must be grounded in Indian values, languages, knowledge, ethos, and traditions including tribal traditions, while also being well-versed in the latest advances in education and pedagogy.” [NEP 2020, 15.1] “All B.Ed. programmes will include training in time-tested as well as the most recent techniques in pedagogy, including pedagogy with respect to foundational literacy and numeracy, multi-level teaching and evaluation, teaching children with disabilities, teaching children with special interests or talents, use of educational technology, and learner-centred and collaborative learning. All B.Ed. programmes will include strong practicum training in the form of in-classroom teaching at local schools. All B.Ed. programmes will also emphasize the practice of the Fundamental Duties (Article 51A) of the Indian Constitution along with other Constitutional provisions while teaching any subject or performing any activity. It will also appropriately integrate environmental awareness and sensitivity towards its conservation and sustainable development, so that environment education becomes an integral part of school curricula.” [NEP 2020, 5.24]*
4. *“Each higher education institution will have a network of government and private schools to work closely with, where potential teachers will student-teach along with participating in other activities such as community service, adult and vocational education, etc.” [NEP 2020, 15.6]*
5. *Stage-specific teacher education programme: “Teacher education for all levels - Foundational, Preparatory, Middle, and Secondary - will take place within the university/higher education system as a stage-specific, four-year integrated B.Ed. programme, combining content, pedagogy, and practical training. The four-year integrated B.Ed. programme of pre-service teacher preparation for different tracks will be offered at the university level as a dual-degree (in education together with any desired specialised subject) undergraduate programme of study and will thus include both disciplinary as well as teacher preparation courses.” “The different tracks that teachers will be prepared for in a B.Ed. programme will include:*
 - a. *Foundational and Preparatory school generalist teachers*
 - b. *Subject teachers for Middle and Secondary school*
 - c. *Special education teachers*
 - d. *Art teachers (including visual and performing arts)*
 - e. *Teachers for vocational education and*
 - f. *Physical education teachers*

The four-year degree will be on par with other undergraduate degrees and students with a four-year integrated B.Ed. will be eligible to move on to a Master’s degree programme in either the disciplinary stream or the pedagogic stream.” [DNEP 2019, P5.5.1]

6. *“Higher education institutions (HEIs) offering teacher education programmes will ensure the availability of a range of experts in education and related disciplines as well as specialized subjects.” [NEP 2020, 15.6] “The faculty profile in Departments of Education will necessarily aim*

to be diverse and but teaching/field/research experience will be highly valued. Faculty with training in areas of social sciences that are directly relevant to school education e.g., psychology, child development, linguistics, sociology, philosophy, economics, and political science as well as from science education, mathematics education, social science education, and language education programmes will be attracted and retained in teacher education institutions, to strengthen multidisciplinary education of teachers and provide rigour in conceptual development". [NEP 2020, 15.8]

7. Types of teacher education programmes:

- a. 4-year integrated teacher education programme: *"By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree that teaches a range of knowledge content and pedagogy and includes strong practicum training in the form of student-teaching at local schools."* [NEP 2020, 5.23]
- b. 2-year B.Ed programme: *"The 2-year B.Ed. programmes will also be offered, by the same multidisciplinary institutions offering the 4-year integrated B.Ed., and will be intended only for those who have already obtained Bachelor's Degrees in other specialized subjects."* [NEP 2020, 5.23]
- c. 1-year B.Ed programme: *"These B.Ed. programmes may also be suitably adapted as 1-year B.Ed. programmes, and will be offered only to those who have completed the equivalent of 4-year multidisciplinary Bachelor's Degrees or who have obtained a Master's degree in a specialty and wish to become a subject teacher in that specialty."* [NEP 2020, 5.23]

"All such B.Ed. degrees would be offered only by accredited multidisciplinary higher education institutions offering 4-year integrated B.Ed. programmes". [NEP 2020, 5.23]

8. *"In order to improve and reach the levels of integrity and credibility required to restore the prestige of the teaching profession, the Regulatory System shall be empowered to take stringent action against substandard and dysfunctional teacher education institutions (TEIs) that do not meet basic educational criteria, after giving one year for remedy of the breaches. By 2030, only educationally sound, multidisciplinary, and integrated teacher education programmes shall be in force."* [NEP 2020, 15.3]

In-service Teacher Education

9. *"Teachers will be given continuous opportunities for self-improvement and to learn the latest innovations and advances in their professions. These will be offered in multiple modes, including in the form of local, regional, state, national, and international workshops as well as online teacher development modules. Platforms (especially online platforms) will be developed so that teachers may share ideas and best practices. Each teacher will be expected to participate in at least 50 hours of CPD opportunities every year for their own professional development, driven by their own interests. CPD opportunities will, in particular, systematically cover the latest pedagogies regarding foundational literacy and numeracy, formative and adaptive assessment of learning outcomes, competency-based learning, and related pedagogies, such as experiential learning, arts-integrated, sports-integrated, and storytelling-based approaches, etc."* [NEP 2020, 5.15]

10. *“School Principals and school complex leaders will have similar modular leadership/management workshops and online development opportunities and platforms to continuously improve their own leadership and management skills, and so that they too may share best practices with each other. Such leaders will also be expected to participate in 50 hours or more of CPD modules per year, covering leadership and management, as well as content and pedagogy with a focus on preparing and implementing pedagogical plans based on competency-based education.” [NEP 2020, 5.16]*
11. *“Special shorter local teacher education programmes will also be available at BITEs, DIETs, or at school complexes themselves for eminent local persons who can be hired to teach at schools or school complexes as ‘master instructors’, for the purpose of promoting local professions, knowledge, and skills, e.g., local art, music, agriculture, business, sports, carpentry, and other vocational crafts.” [NEP 2020, 5.25]*
12. *“Shorter post-B.Ed. certification courses will also be made widely available, at multidisciplinary colleges and universities, to teachers who may wish to move into more specialized areas of teaching, such as the teaching of students with disabilities, or into leadership and management positions in the schooling system, or to move from one stage to another between foundational, preparatory, middle, and secondary stages.” [NEP 2020, 5.26]*
13. *“Flexible and modular approach to continuous professional development for teachers: Teachers must have access to more short courses that are certified, for modular approaches that allow them to accumulate credits and earn certificates and diplomas, even leading to professional degrees (including an M.A. in Education or M.Ed. degrees). Such courses must be offered in a range of formats including part time, evening, blended, and online in addition to full time programmes either by Departments of Education at Universities or at Centres of Professional Development that are accredited. Teachers must also have opportunities for research, access to professional communities through which they develop and share their professional knowledge. Teachers who are in service need to be seen as an important student clientele by Departments of Education at universities, so that programmes that meet their requirements for research and further study are developed and offered. These requirements and avenues of professional development are over and above other avenues that are already well established presently, including workshops, seminars, short courses, teacher meets, and also certificate and diploma courses for various areas of pedagogy and related skills, understanding of education, school social work, administration and leadership.” [DNEP P5.3.1]*
14. *“Revamping continuous professional development: All CPD will be redesigned, keeping in mind the following considerations:*
 - a. *A well-integrated CPD curriculum will be developed for all stages and subjects including subject content, pedagogical content knowledge, development of school culture, classroom practice, and - in cases of principals/headmasters/school complex leaders - also management, administration, resource sharing, effective handling of finances, and leadership.*
 - b. *Teachers must be able to choose what they want to learn, the content as well as the delivery methods. Teachers will have the opportunity to choose from multiple modes of learning - namely, expert-driven, peer-supported, or self-directed; in-person workshops, blended, or*

online; etc. - which would be all informed by the CPD curriculum and will include short and long-duration workshops, short discussions, exposure visits, in-class demonstrations, online apps and content, and other creative methods. Teachers will complete, at minimum, 50 hours of CPD training per year, across all platforms, as per their choosing.” [DNEP 2019, P5.3.2]

15. *“Self-directed personal development of teachers: All States should adopt a technology-based system for enabling choice-based CPD and to track the professional trajectory of each teacher. This system must be used for developmental purposes by the teacher as well as head teachers and principals and be based on a personal development plan and goals. Professional learning communities and centres must be created, developed and sustained. While such efforts do require great academic and social expertise, they must be carried out so that a culture of self/peer learning is developed rather than a “command and control”-type directed learning. CPD must be delivered within school complexes by making use of the nearest CRCs, which can be upgraded into well-resourced and pleasant environments, offering platforms for peer learning. Mechanisms for regular interactions, such as school complex meetings, may also be utilised for peer-supported CPD.” [DNEP 2019, P5.3.3]*
16. *“Online resources for continuous professional development: ICT will also be utilised extensively for CPD. Teachers will be given access to the internet and to technology platforms both at school and from their homes. There will be no centralised determination of the curriculum, no cascade-model training and no rigid norms. The resource people for delivering these CPD programmes will be carefully selected, effectively trained, and will have tenure in the role. The capacity of these resource persons / teacher educators will have considerable impact on the quality of the CPDs so they will be suitably invested in. Such resource persons will most often be selected from amongst the best teachers and they must be given every opportunity to develop their knowledge continually. Collaboration with civil society organisations will be encouraged for the development and execution of effective CPD. The programmes will be based on a coherent curriculum framework that addresses issues relevant to the practice of teaching, including perspectives in education, content, pedagogy, interrelated nature of subjects, school culture, governance, management, resource sharing, and leadership.” [DNEP 2019, P5.3.4]*
17. *“In-school teacher development processes: Every head teacher and/or school principal will be responsible for building strong in-school teacher development processes and a supportive school culture that enhances the capabilities of all the teachers in the school. This task will be integrated into their role definition and evaluation. In this effort, the teachers and the head teacher/principal can receive support from the larger community available to them within the school complex.” [DNEP 2019, P5.3.5]*

Implications of transitioning to a new curricular/pedagogical structure of school education

18. *Curricular and pedagogical structure of school education: “The curricular and pedagogical structure of school education will be reconfigured to make it responsive and relevant to the developmental needs and interests of learners at different stages of their development, corresponding to the age ranges of 3-8, 8-11, 11-14, and 14-18 years, respectively. The curricular and pedagogical structure and the curricular framework for school education will therefore be guided by a 5+3+3+4 design, consisting of the Foundational Stage (in two parts, that is, 3 years of Anganwadi/pre-school + 2 years in primary school in Grades 1-2; both together covering ages 3-*

- 8), Preparatory Stage (Grades 3-5, covering ages 8-11), Middle Stage (Grades 6-8, covering ages 11-14), and Secondary Stage (Grades 9-12 in two phases, i.e., 9 and 10 in the first and 11 and 12 in the second, covering ages 14-18)". [NEP 2020, 4.1]
19. 5+3+3+4 curricular and pedagogical structure of school education: *"The Foundational Stage will consist of five years of flexible, multilevel, play/activity-based learning and the curriculum and pedagogy of ECCE as mentioned in para 1.2. The Preparatory Stage will comprise three years of education building on the play, discovery, and activity-based pedagogical and curricular style of the Foundational Stage and will also begin to incorporate some light textbooks as well as aspects of more formal but interactive classroom learning, in order to lay a solid groundwork across subjects, including reading, writing, speaking, physical education, art, languages, science, and mathematics. The Middle Stage will comprise three years of education, building on the pedagogical and curricular style of the Preparatory Stage, but with the introduction of subject teachers for learning and discussion of the more abstract concepts in each subject that students will be ready for at this stage across the sciences, mathematics, arts, social sciences, and humanities. Experiential learning within each subject, and explorations of relations among different subjects, will be encouraged and emphasized despite the introduction of more specialized subjects and subject teachers. The Secondary Stage will comprise of four years of multidisciplinary study, building on the subject-oriented pedagogical and curricular style of the Middle Stage, but with greater depth, greater critical thinking, greater attention to life aspirations, and greater flexibility and student choice of subjects. In particular students would continue to have the option of exiting after Grade 10 and re-entering in the next phase to pursue vocational or any other courses available in Grades 11- 12, including at a more specialized school, if so desired". [NEP 2020, 4.2]*
20. Experiential learning as a pedagogical approach: *"In all stages, experiential learning will be adopted, including hands-on learning, arts-integrated and sports-integrated education, story-telling-based pedagogy, among others, as standard pedagogy within each subject, and with explorations of relations among different subjects." [NEP 2020, 4.6]*
21. Art-integration as a cross-curricular pedagogical approach: *"Art-integration is a cross-curricular pedagogical approach that utilizes various aspects and forms of art and culture as the basis for learning of concepts across subjects. As a part of the thrust on experiential learning, art-integrated education will be embedded in classroom transactions not only for creating joyful classrooms, but also for imbibing the Indian ethos through integration of Indian art and culture in the teaching and learning process at every level. This art-integrated approach will strengthen the linkages between education and culture." [NEP 2020, 4.7]*
22. Sports-integration as a cross-curricular pedagogical approach: *"Sports-integration is another cross-curricular pedagogical approach that utilizes physical activities including indigenous sports, in pedagogical practices to help in developing skills such as collaboration, self-initiative, self-direction, self-discipline, teamwork, responsibility, citizenship, etc. Sports-integrated learning will be undertaken in classroom transactions to help students adopt fitness as a lifelong attitude and to achieve the related life skills along with the levels of fitness as envisaged in the Fit India Movement. The need to integrate sports in education is well recognized as it serves to foster holistic development by promoting physical and psychological well-being while also enhancing cognitive abilities." [NEP 2020, 4.8]*

23. Support for students with special talents: *“There are innate talents in every student, which must be discovered, nurtured, fostered, and developed. These talents may express themselves in the form of varying interests, dispositions, and capacities. Those students that show particularly strong interests and capacities in a given realm must be encouraged to pursue that realm beyond the general school curriculum. Teacher education will include methods for the recognition and fostering of such student talents and interests. ... B.Ed. programmes may also allow a specialization in the education of gifted children.” [NEP 2020, 4.43]. “Teachers will aim to encourage students with singular interests and/or talents in the classroom by giving them supplementary enrichment material and guidance and encouragement.” [NEP 2020, 4.44]*
24. Autonomy to teachers in choosing aspects of pedagogy and focus on socio-emotional learning: *“Teachers will be given more autonomy in choosing aspects of pedagogy, so that they may teach in the manner they find most effective for the students in their classrooms. Teachers will also focus on socio-emotional learning – a critical aspect of any student’s holistic development.” [NEP 2020, 5.14]*

4.1.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

4.1.3.1. General questions

1. Please respond to the NEP points above on teacher education, including any suggestions you may have regarding additions or modifications.
2. What are the current challenges in teacher education, both pre-service and in-service?
3. How can we ensure the challenges outlined in #2 are addressed/overcome in the next five years? What are the existing mechanisms that would need to be strengthened to make this a reality? What new mechanisms would need to be put in place?
4. NEP 2020 envisages a complete transformation of pre-service teacher education with the four-year programme in multidisciplinary institutions. What would be the approach to establishing and running the four-year programme over the next five years so that it becomes the primary qualification to become a teacher?
5. Which set of multidisciplinary institutions could offer this programme within the next three years? What kind of support would these institutions need for this to happen?
6. What are the coordination mechanisms envisaged between higher education and school education to ensure that there is a continuous link between teacher education programs and the school system?
7. NEP 2020 envisages several key transformations - focus on and integration of early childhood education, achieving foundational literacy and numeracy, restructuring of School Stages, and commensurate changes in the curriculum, pedagogy, assessment and materials across Stages through the new NCF and SCF. These transitions require careful and detailed planning for

implementation, close review of impact on the ground as well as mid-course corrections. They also demand significant and continuous academic and administrative support for teachers. What would be the role of all stakeholders, including SCERT, DIETs, BRCs and CRCs to support these transformations as envisaged in NEP 2020?

8. What would be the approach to planning rejuvenation of the SCERT, DIETs, BRCs and CRCs towards this transformation?
9. What would be the approach to and design of in-service teacher education that will address these requirements?
10. How would it be ensured that continuous professional development programmes designed as envisaged in NEP 2020 are available to all teachers?
11. What other enabling conditions (e.g., culture of teacher education institutes, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?

4.1.3.2. Stagewise approach

12. What are the core principles and broad design of the four-year dual-degree teacher education programme? What would be the linkages and the distinctions between programmes preparing teachers for each of the stages – Foundational, Preparatory, Middle and Secondary.
13. What would be the broad curriculum, pedagogy and school experience required to develop teachers specialized in each of the school stages along with a school subject?

4.1.3.3. Other Suggestions

In this subsection, please provide other suggestions about teacher education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

4.1.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

4.2. Guidance and Counselling for Schools

4.2.1. Vision of NEP 2020

1. *“Children are unable to learn optimally when they are undernourished or unwell. Hence, the nutrition and health (including mental health) of children will be addressed, through healthy meals and the introduction of well-trained social workers, counsellors, and community involvement into the schooling system”. [NEP 2020, 2.9]*
2. *“All participants in the school education system, including teachers, principals, administrators, social workers, counsellors, and students, will need to be sensitised to the requirements of all students, the notions of inclusion and equity, and the respect and dignity of all persons”. [DNEP 2019, Introduction to Chapter 6]*
3. *“... counselors and/or well-trained social workers that work with and connect with students, parents, schools, and teachers in order to improve attendance and learning outcomes have been found to be especially effective for children in urban poor areas.” [NEP 2020, 6.5]*
4. *“recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student’s holistic development in both academic and non-academic spheres” [NEP 2020, Principles of this Policy, p.5]*

4.2.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Sections 2, 3, 6 and 7 of NEP 2020, and Chapters 2, 3, 6 and 7 of DNEP 2019 in detail.

1. *“While the teachers will have the central role in student care and well-being, each school complex will have one or more capable counsellors available. The counselling available will range from career guidance to mental health. While there may be other areas of counselling that can be identified and mechanisms established to offer them, the following will be provided: a. Counselling on choice of subjects in secondary grades, including vocational subjects, and on choices in higher education, leading to potential career choices b. Support and counselling on age related growth and development issues, especially during the adolescent years c. Support and counselling on mental health issues, including stress and mood disorders This counselling support should also be able to identify cases requiring clinical mental health support”. [DNEP 2019, P.7.2.4]*
2. *“Social workers and counsellors will be hired to school complexes ... to work with students - and their parents, teachers, ... and community members - to help ensure the retention in school and the mental health of all children”. [DNEP 2019, P2.16]*
3. *“...ensure that every school has: (a) adequate number of counsellors/trained social workers and teachers (shared or otherwise)”. [NEP 2020, 7.5] “Adequate numbers of social workers will be appointed to the school complexes depending on the student population and the population of adult learners in that geography.” [DNEP 2019, P7.2.3]*

4. *"Explicit training in socio-emotional skills ensures higher levels of attention and emotional and cognitive regulation that are necessary not only for well-being, empathy towards others, and lower stress, but also leads to increased academic success". [DNEP 2019, P.4.6.8.6]*
5. *"Counselors or well-trained social workers connected to schools/school complexes and teachers will continuously work with students and their parents and will travel through and engage with communities to ensure that all school-age children are attending and learning in school." [NEP 2020, 3.3]*
6. *"...schools, social workers, counsellors, and/or health workers will help instruct parents, students, and the community-at-large on good health, hygiene, cleanliness, and timely vaccination practices, and will connect them to the appropriate health services so that children may return to school as soon as possible". [DNEP 2019, P3.9]*
7. *"The new and existing schools that will enhance access for children in urban poor areas, as per P6.6.1, will also invest in hiring excellent social workers and counsellors". [DNEP 2019, P6.6.2]*
8. *"Social workers and counsellors will be hired to school complexes (see P3.8 Draft NEP 2019) to work with students - and their parents, teachers, tutors, ..., and community members - to help ensure the retention in school and the mental health of all children". [DNEP 2019, P2.16] "School complexes could also share counsellors, trained social workers, technical and maintenance staff, etc. to further support teachers and help create an effective learning environment." [NEP 2020, 5.10]*
9. *"The mechanisms to make such counselling available will have to be responsive to the practical reality of the school complex, including training some of the teachers or social workers to be able to play the role of counsellors, appointing full time counsellors for one or more school complexes, and arranging for counsellors to visit the schools frequently". [DNEP 2019, P.7.2.4]*
10. *"Efforts will be made to involve community and alumni in volunteer efforts for enhancing learning by providing at schools: one-on-one tutoring; the teaching of literacy and holding of extrahelp sessions; teaching support and guidance for educators; career guidance and mentoring to students; etc. In this regard, the support of active and healthy senior citizens, school alumni and local community members will be suitably garnered. Databases of literate volunteers, retired scientists/government/semi government employees, alumni, and educators will be created for this purpose." [NEP 2020, 3.7]*

4.2.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

4.2.3.1. General questions

1. Please respond to the NEP points above on guidance and counselling, including any suggestions you may have regarding additions or modifications.

2. What are the problems currently faced in guidance and counselling that must be addressed?
3. How can we ensure that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in guidance and counselling, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. What should be the outcomes of guidance and counselling in schools among the following focus areas:
 - i. Student well-being (academic, physical, social, emotional)
 - ii. Ensuring enrolment and retention along with academic progress
 - iii. Transitions from one school stage to another, and from school to higher education
 - iv. Helping students identify areas for further study based on their interests and aptitude
 - v. Prevention of damage to health and well-being due to any cause (e.g. stress, injury, harassment, bullying, or addiction of any kind, whether to drugs, tobacco, gaming, etc.)
 - vi. Expanding services to parents (providing necessary information, advocating importance of education, etc.)
6. Who should provide guidance and counselling? What kind of guidelines are required to ensure that the goals of guidance and counselling are met? How can a connection between home and school be established so that students have access to guidance and counselling services in case of natural disasters, pandemics, etc.?
7. How do counsellors contribute to the overall school culture? How can counsellors ensure that schools are inclusive and safe environments for all students?
8. Can teachers and school heads play a role in guidance and counselling? What kind of preparation and support would they need? When would a professional be required? What should be the minimal qualifications of a guidance counsellor, a counsellor and a social worker? What kind of professional preparation is required? Do they need any certification? What kind of continuous professional development is required for these professionals?
9. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?

4.2.3.2. Stagewise approach

10. What are the requirements at each stage for guidance and counselling, in terms of specific developmental characteristics and requirements of students?

4.2.3.3. Other Suggestions

In this subsection, please provide other suggestions about guidance and counselling that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

4.2.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

4.3. School Governance and Leadership

4.3.1. Vision of NEP 2020

1. *“The objective ... would be to ensure that every school has: (a) adequate number of counsellors/trained social workers and teachers (shared or otherwise) for teaching all subjects including art, music science, sports, languages, vocational subjects, etc (b) adequate resources (shared or otherwise), such as a library, science labs, computer labs, skill labs, playgrounds, sports equipment and facilities, etc.; (c) a sense of community is built to overcome the isolation of teachers, students, and schools, through joint professional development programmes, sharing of teaching-learning content, joint content development, holding joint activities such as art and science exhibitions, sports meets, quizzes and debates, and fairs; (d) cooperation and support across schools for the education of children with disabilities; and (e) improved governance of the schooling system by devolving all finer decisions, to Principals, teachers, and other stakeholders within each group of schools and treating such a group of schools, which range from the foundational stage through the secondary stage, as an integrated semi-autonomous unit.” [NEP 2020, 7.5]*
2. *“a ‘light but tight’ regulatory framework to ensure integrity, transparency, and resource efficiency of the educational system through audit and public disclosure while encouraging innovation and out-of-the-box ideas through autonomy, good governance, and empowerment” [NEP 2020, Principles of this Policy, p.5]*

4.3.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Section 7 of NEP 2020 and Chapter 7 of DNEP 2019 in detail.

1. *“One possible mechanism for accomplishing the above would be the establishment of a grouping structure called the school complex, consisting of one secondary school together with all other schools offering lower grades in its neighbourhood including Anganwadis, in a radius of five to ten kilometres ... This Policy strongly endorses the idea of the school complex/cluster, wherever possible. The aim of the school complex/cluster will be greater resource efficiency and more effective functioning, coordination, leadership, governance, and management of schools in the cluster.” [NEP 2020, 7.6]*
2. *“The establishment of school complexes/clusters and the sharing of resources across complexes will have a number of other benefits as a consequence, such as improved support for children with disabilities, more topic-centred clubs and academic/sports/arts/crafts events across school complexes, better incorporation of art, music, language, vocational subjects, physical education, and other subjects in the classroom through the sharing of teachers in these subjects including use of ICT tools to conduct virtual classes, better student support, enrolment, attendance, and performance through the sharing of social workers and counsellors, and School Complex Management Committees (rather than simply School Management Committees) for more robust*

and improved governance, monitoring, oversight, innovations, and initiatives by local stakeholders. Building such larger communities of schools, school leaders, teachers, students, supporting staff, parents, and local citizens would energize and empower the schooling system, and in a resource-efficient manner.” [NEP 2020, 7.7]

3. *“The governance of schools will also improve and become far more efficient with school complexes/clusters. First, the Department of School Education (DSE) will devolve authority to the school complex/cluster, which will act as a semi-autonomous unit. The District Education Officer (DEO) and the Block Education Officers (BEO) will interact primarily with each school complex/cluster as a single unit and facilitate its work. The complex itself will perform certain tasks delegated by the DSE and will deal with the individual schools within it. The school complex/cluster will be given significant autonomy by the DSE to innovate towards providing integrated education and to experiment with pedagogies, curriculum, etc., while adhering to the National Curricular Framework (NCF) and State Curricular Framework (SCF). Under this organization, schools will gain in strength, will be able to exercise greater freedom, and will contribute towards making the complex more innovative and responsive. Meanwhile, the DSE will be able to focus on the aggregate level goals that need to be achieved, improving overall system effectiveness.” [NEP 2020, 7.8]*
4. *“The culture of working to a plan, both short-term and long-term ones, will be developed through such complexes/clusters. Schools will develop their plans (SDPs) with the involvement of their SMCs. These plans will then become the basis for the creation of School Complex/Cluster Development Plans (SCDPs). The SCDP will also involve the plans of all other institutions. associated with the school complex, such as vocational education institutions, and will be created by the principals and teachers of the school complex with the involvement of the SCMC and will be made available publicly. The plans will include human resources, learning resources, physical resources and infrastructure, improvement initiatives, financial resources, school culture initiatives, teacher development plans, and educational outcomes. It will detail the efforts to leverage the teachers and students across the school complex to develop vibrant learning communities. The SDP and SCDP will be the primary mechanism to align all stakeholders of the school, including the DSE. The SMC and SCMC will use the SDP and SCDP for oversight of the functioning and direction of the school and will assist in the execution of these plans. The DSE, through its relevant official, e.g., the BEO, will endorse and confirm the SCDP of each school complex. It will then provide the resources (financial, human, physical, etc.) necessary to achieve the SCDPs, both short-term (1-year) and long-term (3-5 years). It will also provide all other relevant support to the school complexes to achieve the educational outcomes. The DSE and the SCERT may share specific norms (e.g., financial, staffing, process) and frameworks for development of the SDP and SCDP with all schools, which may be revised periodically.” [NEP 2020, 7.9]*
5. *“It will be up to the individual State governments to group schools into school complexes according to the population distribution, road connectivity, and other local considerations. Therefore, the size and composition of the school complexes can vary....” [DNEP 2019, P7.1.2]*
6. *“Each school complex will be a semiautonomous unit that will offer education from the Foundational stage (ages 3-8 years) till Grade 12 (age 18). The complex will consist of one secondary school (covering Grades 9-12) and all the public schools in its neighbourhood that offer*

education from pre-primary till Grade 8. All the schools that are part of a complex will be chosen due to their proximity to each other, forming a logical geographical group. If for any reason a school complex does not have a secondary school where Grades 9-12 are being taught, then these grades must be introduced in one of the schools. The school complexes will also have pre-school centres/Anganwadis, vocational education facilities, an Adult Education Centre (AEC) etc., associated with them.” [DNEP 2019, P7.1.2]

7. “The school complex will be used to break the severe isolation in which teachers at small schools function today. It will create a community of teachers and principals who can meet face-to-face and work together to support each other - academically and administratively.” [DNEP 2019, P 7.1.1a].
8. “While each individual school will be adequately resourced, the introduction of complexes will enable substantially better resourcing across all schools in the complex due to the ability to share resources e.g. teachers for all subjects and grades, more books for libraries, better equipped laboratories and sports facilities. Students will be able to get all the facilities they need until Grade 12, within their own school complex.” [DNEP 2019, P7.1.1.c].
9. “Teachers can also be shared among the schools in the complex. Areas/subjects, which by the nature of the curriculum, do not require a teacher for every school (accounting for the number of students), may have teachers appointed to the overall school complex thus making it possible for resourcing to happen optimally. For instance, language teachers, sports teachers, art and music teachers, yoga teachers, school nurses, and counsellors can all be appointed to the staff of the secondary school and be shared across the schools in the complex.” [DNEP 2019, P7.2.2]
10. “The School Complex Management Committee (SCMC) and the School Management Committees (SMC) of individual schools within the complex will be involved in school governance.” [DNEP 2019, P7.5.3 and P7.7.1]
11. “In collaboration with parents and other key local stakeholders, teachers will also be more involved in the governance of schools/school complexes, including as members of the School Management Committees/School Complex Management Committees.” [NEP 2020, 5.11]
12. “The principal of the secondary school will be the head of the school complex. S/he will be endowed with administrative, financial and academic powers to oversee the coordinated development of all the schools within the complex....The principal of the secondary school will be given adequate administrative support by the functionaries of the DSE, the DEO and the BEO, and be assigned an adequate number of staff members for general administration, finance and accounting, and so on. The principals/head teachers of the other schools within the school complex will report to the head of the school complex. They will form a team that will be charged with the responsibility of improving the quality of each individual school in the complex, increase enrolment, reduce dropout rates sharply, and encourage all children to stay in school until Grade 12.” [DNEP 2019, P7.1.3]
13. “Adequate numbers of social workers will be appointed to the school complexes depending on the student population and the population of adult learners in that geography.” [DNEP 2019, P7.2.3]

14. *“In addition to having social workers, school complexes will have counselors who will counsel secondary students on subject choices, support age related growth and development issues and provide support on mental health concerns.” [DNEP 2019, P7.2.4]*

4.3.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

4.3.3.1. General questions

1. Please respond to the NEP points above on school governance and leadership, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in governance and leadership in schools that must be addressed?
3. How can we ensure that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in school governance and leadership, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. What should be the criteria for grouping schools into a complex? What considerations will inform the geographic area a school complex should cover? How can schools within a complex be accessible for all students (especially girls, young children and other vulnerable groups)?
6. What kind of infrastructure and learning resources should be available in each school within a school complex? How will schools in the complex work out a method for sharing resources? How will teachers and students be given access to use these resources? What kinds of systems will be required to facilitate the movement of equipment and students within the school complex?
7. What kind of leadership is desirable for schools to run efficiently and smoothly? What kind of capacities and support systems would the head of the school complex require? How can the leader involve the entire set of teachers and staff to function as a team?
8. How will the school complex build a vibrant teacher community? How will teachers work together to achieve the purpose of the school complex?
9. How will the recruitment and sharing of social workers and counsellors be implemented on ground? What are potential bottlenecks that the school complex may encounter and measures that would need to be taken to be able to adequately support all students that the school complex serves?
10. Who should be eligible to become a member of the School Complex Management Committee? What kind of support/training would SCMCs require to be fully functional? What would the relationship be between a SCMC and a school leader? What should the SCMC be responsible for in terms of school and classroom processes?

11. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?
12. How do Centrally Sponsored Schemes such as Samagra Shiksha play a role in bringing quality improvement in schools, and how could they be further strengthened?
13. How strong are the linkages among schools, BRCs, CRCs, DIETs, BITEs, and SCERT? What steps can be taken to further strengthen these linkages for implementing the NEP 2020 and the new NCF/SCFs?

4.3.3.2. Stagewise approach

14. What are the requirements at each stage for governance and leadership, in terms of specific developmental characteristics and requirements of students, their parents, teachers, staff and stakeholders at each stage?

4.3.3.3. Other Suggestions

In this subsection, please provide other suggestions about school governance and leadership that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

4.3.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

4.4. Publication of Quality Textual and Non-textual Materials: Issues, Challenge and Way Forward

4.4.1. Vision of NEP 2020

1. *“Education ... must move towards less content, and more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields.” [NEP 2020, Introduction, p. 3]*
2. *“Learning materials will be safe, stimulating, developmentally appropriate, low cost, and preferably created using environmentally-friendly and locally-sourced materials... While the teacher/educator will be involved in the selection and development of learning materials, children could also participate. Some examples of learning materials are picture cards, puzzles, dominoes, picture story books, blocks, simple musical instruments, number towers and rods, puppets, materials for arts and crafts, and colouring books. Posters, graphics, and art containing alphabets, words, numbers, shapes, colours, etc. will be placed on walls at the eye levels of children for high quality stimulation and engagement.” [DNEP 2019, P1.4]*
3. *“The reduction in content and increased flexibility of school curriculum - and the renewed emphasis on constructive rather than rote learning - must be accompanied by parallel changes in school textbooks. All textbooks shall aim to contain the essential core material (together with discussion, analysis, examples, and applications) deemed important on a national level, but at the same time contain any desired nuances and supplementary material as per local contexts and needs. Where possible, schools and teachers will also have choices in the textbooks they employ - from among a set of textbooks that contain the requisite national and local material - so that they may teach in a manner that is best suited to their own pedagogical styles as well as to their students and communities’ needs.” [NEP 2020, 4.31]*
4. *“An Indian Institute of Translation and Interpretation (IITI) will be established as a constituent unit of one of the existing national level institutions or in a Central University, in collaboration with States, to carry out high quality translations of materials of importance between various Indian languages as well between foreign languages and Indian languages. ... In particular, through the IITI, all NCERT-developed textbooks and nationally recommended teaching-learning materials (with collaboration from SCERTs) will be made available in all major Indian languages.” [DNEP 2019, P4.8.4]*

4.4.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Section 4 of NEP 2020, and Chapter 4 and P1.1 of DNEP 2019 in detail.

1. *“The second part will be an educational framework for 3-8 year olds (Foundational Stage) - The framework would also include suggestions regarding exercises, puzzles, colouring books, connect-the-dots drawings, stories, rhymes, songs, games, etc. that would help in developing children in the Foundational Stage in a holistic way.” [DNEP 2019, P1.1b]*

2. *“Workbooks on language and mathematics: Every child in Grades 1-5 will have a workbook for languages and mathematics in addition to the school textbook. This will ensure that grade-appropriate, creative, and engaging practice opportunities are available for each child to work at his/her own pace.” [DNEP 2019, P2.3]*
3. *“The National Teacher’s Portal (DIKSHA) will have a special section of high quality resources on foundational literacy and numeracy”. [DNEP 2019, P2.3]*
4. *“Incorporation of relevant excerpts from great works of Indian literature throughout the curriculum” [P4.5.13 of Draft NEP 2019]. “samplings of diverse ancient and medieval writings in Sanskrit from a diverse set of authors (e.g. the plays of Kalidasa and Bhasa), will be made widely available in schools and higher educational institutions. Where relevant, history-changing Sanskrit writings will be integrated suitably in various school subjects as well as in literature and writing classes”. [DNEP 2019, P4.5.13]*
5. *“Inspiring lessons from the literature and people of India: ...original stories of the Panchatantra, Jataka, Hitopadesh, and other fun fables and inspiring tales from the Indian tradition. Excerpts from the Indian Constitution Highlights from the lives of great Indians of history”. [DNEP 2019, P4.6.8.7]*
6. *“Music and art experiences in the early years: ...classical Indian music (Carnatic and/or Hindustani) through vocal exercises, singing, and clapping, as well as in local folk music, art, and craft in a hands-on way; they will have exposure to both vocal and instrumental music. Simple, inexpensive hand instruments such as shakers and xylophones would be available.... Arts experiences will also include theatre, poetry, painting, drawing, and sculpture, and vocational arts such as carpentry and embroidery/sewing/ clothes-making”. [DNEP 2019, P4.6.2.1]*
7. *“Jigsaw puzzles, playing with blocks, and solving mazes help to develop a child’s spatial reasoning; games of strategy (such as tic-tac-toe, and leading up to deeper games like chess) develop strategic thinking and problem-solving skills. Word and logic puzzles (including grid-process-of-elimination puzzles) are a fun way to teach deductive reasoning. Simple puzzles can help develop in students’ skills of logical and creative thinking in an enjoyable manner”. [DNEP 2019, Introduction to Section 4.6]*
8. *“Seriously incorporating games, puzzles, and problem-solving activities into the curriculum...in order to develop a love for thinking, logical deduction, quantitative reasoning, and creativity”. [DNEP 2019, P4.6.5.1]*
9. *“Once internet-connected smart phones or tablets are available in all homes and/or schools, online apps with quizzes, competitions, assessments, enrichment materials, and online communities for shared interests will be developed, and will work to enhance all the aforementioned initiatives, as group activities for students with appropriate supervision of parents and teachers. Schools will develop smart classrooms, in a phased manner, for using digital pedagogy and thereby enriching the teaching-learning process with online resources and collaborations.” [DNEP 2019, P4.46]*
10. *“Incorporation of ethical and moral awareness and reasoning in the curriculum will be promoted through direct as well as indirect methods... In the direct method there will be classroom activities, discussions and readings specifically designed to address ethical and moral awareness and reasoning. In the indirect method, the contents of languages, literature, history, and the*

social sciences will incorporate discussions particularly aimed at addressing ethical and moral principles and values such as patriotism, sacrifice, nonviolence, truth, honesty, peace, forgiveness, tolerance, mercy, sympathy, equality and fraternity”. [DNEP 2019, P4.6.8.1]

11. *“Course on current affairs for all students in Grades 9-12: Having become aware of some of the key issues, in Grades 9-12 the course ... would be continued in a more advanced manner, to be held during one period each week, and be sourced from current newspapers, journals/magazines, books, and even films. This will encourage reading and awareness about current affairs and foster critical thinking. ...The article will be assigned or read by the teacher in class, and the students will be asked to discuss and debate it, as individuals or in groups. the content to remain current and well-sourced, and also include a healthy amount of regional literature to encourage discussions over articles by regional authors as well....It will be necessary to include a wide variety of material in this class ranging from science, technology and medicine to art, literature, and music. Articles addressing social issues such as patriarchy and racism will be included as well.” [DNEP 2019, P4.6.10.2]*
12. *“Teachers will be encouraged to use a bilingual approach, including bilingual teaching-learning materials, with those students whose home language may be different from the medium of instruction.” (P4.11 of NEP 2020) 4.14. “All efforts will be made in preparing high-quality bilingual textbooks and teaching-learning materials for science and mathematics, so that students are enabled to think and speak about the two subjects both in their home language/mother tongue and in English.” [NEP 2020, 4.14]*
13. *“Indian Sign Language (ISL) will be standardized across the country, and National and State curriculum materials developed, for use by students with hearing impairment. Local sign languages will be respected and taught as well, where possible and relevant.” [NEP 2020, 4.22]*
14. *“Schools and school complexes will work and be supported for providing all children with disabilities accommodations and support mechanisms tailored to suit their needs and to ensure their full participation and inclusion in the classroom. In particular, assistive devices and appropriate technology-based tools, as well as adequate and language-appropriate teaching-learning materials (e.g. textbooks in accessible formats such as large print and Braille) will be made available to help children with disabilities integrate more easily into classrooms and engage with teachers and their peers. This will apply to all school activities including arts, sports, and vocational education. NIOS will develop high-quality modules to teach Indian Sign Language, and to teach other basic subjects using Indian Sign Language.” [NEP 2020, 6.11]*
15. *“Teachers will aim to encourage students with singular interests and/or talents in the classroom by giving them supplementary enrichment material and guidance and encouragement.” [NEP 2020, 4.44]*
16. *“The school curriculum will include, early on, material on human values such as respect for all persons, empathy, tolerance, human rights, gender equality, non-violence, global citizenship, inclusion, and equity. It would also include more detailed knowledge of various cultures, religions, languages, gender identities, etc. to sensitize and develop respect for diversity. Any biases and stereotypes in school curriculum will be removed, and more material will be included that is relevant and relatable to all communities.” [NEP 2020, 6.20]*
17. National textbooks with local content and flavor:

- a. *“The reduction in, and increased flexibility of, school curriculum content – and the renewed emphasis on constructivist rather than rote learning – must be accompanied by parallel changes in school textbooks. All textbooks shall aim to contain the essential core material (together with discussion, analysis, examples, and applications) deemed important on a national level, but at the same time contain any desired nuances and supplementary material in accordance with local contexts and needs.” [DNEP 2019, Introduction to Section 4.8][NEP 2020, 4.31]*
- b. *“Concerted efforts, through suitable changes in curriculum and pedagogy, will be made by NCERT, SCERTs, schools, and educators to significantly reduce the weight of school bags and textbooks.” [NEP 2020, 4.33]*
- c. *“NCERT textbooks will be revised to first contain only the essential core material in each subject, keeping in mind a constructivist, discovery-based, analysis-based, engaging, and enjoyable style of learning in accordance with the revised NCF.....In certain subjects, in addition to this core material, NCERT may also prepare a few supplementary units that may be used to enhance the core material in various States.” [DNEP 2019, P4.8.1]*
- d. *“Where possible, teachers will also have choices in the textbooks they employ - from among a set of textbooks that contain the requisite national and local material - so that they may teach in a manner that is best suited to their own desired teaching styles and to the needs of the students and communities.” [DNEP 2019, Introduction to Section 4.8][NEP 2020, 4.31]*
- e. *“The aim will be to provide such quality textbooks at the lowest possible cost - namely, the cost of production/printing - in order to remove the burdens of textbook prices on the students and on the education system. This may be accomplished by using high quality textbook materials developed by NCERT in conjunction with the SCERTs; additional textbook materials would be funded by public private partnerships and crowdsourcing that incentivise experts to write such at-cost-priced high quality textbooks.” [DNEP 2019, Introduction to Section 4.8] [NEP 2020, 4.32]*
- f. *“To encourage innovative new school textbooks in all States and in all regional languages, and to give teachers choice in the textbooks and pedagogical styles that they use, both public and private schemes will be developed”. [DNEP 2019, P4.8.5]*
- g. *“States will prepare their own curricula (which may be based on the NCFSE prepared by NCERT to the extent possible) and prepare textbooks (which may be based on the NCERT textbook materials) incorporating State flavour and material as needed. While doing so, it must be borne in mind that NCERT curriculum would be taken as the nationally acceptable criterion. The availability of such textbooks in all regional languages will be a top priority, so that all students have access to high quality learning.” [NEP 2020, 4.32]*
- h. *“With the new flexibility in the school curriculum, NCERT/SCERT textbooks and teaching-learning materials will be developed for additional subjects as well, e.g. computer science, music, and literature. All textbooks will aim to have a national and Indian flavor, as well as a local flavor where possible/desirable.” [DNEP 2019, P4.8.3]*
- i. *“Textbooks will be approved on the basis of containing: a. The national core curricular material and, where relevant, any local material deemed necessary by States; b. Innovative, creative, and engaging presentation; and c. Correctness and accuracy.” (P4.8.5 of Draft NEP*

2019) “Textbooks will aim to contain only correct, relevant material; when unproven hypotheses or guesses are included, this will be explicitly stated.” [DNEP 2019, P4.8.2]

- j. “Inclusion of local and tribal knowledge systems in the curriculum and textbooks”. [DNEP 2019, P4.6.9.2]

4.4.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

4.4.3.1. General questions

1. Please respond to the NEP points above on publication of quality textual and non-textual materials for school education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced related to textual and non-textual materials that must be addressed?
3. How can we ensure that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in publication of quality textual and non-textual materials, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. How will materials be sourced? Which criteria will inform selection of materials? How will the authenticity and validity of materials be ascertained?
6. What will be the process of developing materials? What kinds of challenges will arise while developing materials? What quality parameters need to be kept in mind while developing materials?
7. Why is it important to develop materials that are connected to the local culture and context?
8. How can equity and inclusion be incorporated in materials, particularly with respect to children from socio-economically disadvantaged groups (SEDGs)? What considerations will inform materials that inculcate sensitivity and respect for diversity? How can aspects of different cultures be included in the materials? How can materials be free of bias and stereotypes – what are expectations from material developers in this aspect? What criteria will be used to evaluate materials?
9. How can workbooks be used – for learning, for assessment, or for both? What would need to be kept in mind when designing workbooks?
10. What role should DIKSHA play? What can be done to improve DIKSHA further?
11. With the aim of reorienting learning, how should textbooks and other learning materials be redesigned? What parameters will be used to define quality?

12. What considerations will inform the development of bilingual materials? How will they be used by students and teachers? What criteria will be used for ensuring equivalence of materials?
13. How will materials be developed in various languages? Will translation be required? What kind of mechanisms would be required to enable this?
14. What kinds of materials will be required for music and art education? Can local artists and craftspeople be involved in developing these materials? Will students be able to participate in developing materials during the duration of these courses?
15. What kind of materials will be required to develop digital literacy at different school stages? What considerations for safety and security will need to be kept in mind?
16. What infrastructure, devices, connectivity and support will enable the use of technology? What kind of learner and teacher preparedness are required? How will technology-based materials be developed? What will be the criteria to determine the quality of technology-based materials?
17. How can sign language be included among the other languages in school? What considerations will inform this inclusion?
18. What considerations will inform the development of materials for children with disabilities? How will they be used by students and teachers? What criteria will be used for ensuring equivalence of materials?
19. What criteria will be used to define supplementary enrichment materials? Who will these materials be meant for? Who will develop them? How will they be used?
20. What should be the approach to textbooks (e.g. interactive, cross-disciplinary references, contextual, etc)? What would be the criteria for selecting essential core content and supplementary content? What can be done to reduce the content of textbooks and thereby the weight of the school bag?
21. How will a set of textbooks (i.e. more than one textbook) be made available to teachers? How can they be supported to choose which they prefer to use? What material other than textbooks can teachers choose to use?
22. How can textbooks be prepared at low costs while retaining quality? What criteria should be used to assess textbooks for quality? Please illustrate with examples, where possible.
23. How can textbooks be given a 'State flavor'? How can such textbooks be used to ensure quality learning? What should be the process of textbook development (principles to inform choosing teams, selecting content, layout and design, printing, etc)?
24. Which subjects will need a new set of textbooks? What kind of contextualisation will be required?
25. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?
26. What kinds of technology can be used to enhance textbook development?

4.4.3.2. Stagewise approach

27. What kind of materials would need to be developed for different stages to achieve the goals of the Policy? What kinds of games, puzzles, activities, etc can be used at different school stages to develop relevant capacities? Please illustrate with suitable examples.
28. What kind of materials will be required to develop digital literacy at different school stages? What considerations for safety and security will need to be kept in mind?

4.4.3.3. Other Suggestions

In this subsection, please provide other suggestions about textual and non-textual materials that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

4.4.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

4.5. Linkage between School Education and Higher Education

4.5.1. Vision of NEP 2020

1. *“For the purpose of developing holistic individuals, it is essential that an identified set of skills and values will be incorporated at each stage of learning, from pre-school to higher education.” [NEP 2020, 9.1.2]*
2. *“... synergy in curriculum across all levels of education from early childhood care and education to school education to higher education” [NEP 2020, Principles of this Policy, p. 5]*

4.5.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Sections 4, 6, 9, 11, 14 and 15 of NEP 2020, and Chapters 4, 6, 9, 11, 15 and 21 of DNEP 2019 in detail.

1. *“The Secondary Stage will comprise of four years of multidisciplinary study, building on the subject-oriented pedagogical and curricular style of the Middle Stage, but with greater depth, greater critical thinking, greater attention to life aspirations, and greater flexibility and student choice of subjects. In particular students would continue to have the option of exiting after Grade 10 and re-entering in the next phase to pursue vocational or any other courses available in Grades 11-12, including at a more specialized school, if so desired.” [NEP 2020, 4.2]*
2. *“A holistic and multidisciplinary education, as described so beautifully in India’s past, is indeed what is needed for the education of India to lead the country into the 21st century and the fourth industrial revolution. Even engineering institutions, such as IITs, will move towards more holistic and multidisciplinary education with more arts and humanities. Students of arts and humanities will aim to learn more science and all will make an effort to incorporate more vocational subjects and soft skills.” [NEP 2020, 11.4]*
3. *“Undergraduate programmes shall be interdisciplinary with curricula designed to develop broadly useful capacities and important dispositions, while offering rigorous education in specialisations, as chosen by students, from across all disciplines and fields: arts, physical and life sciences, mathematics, social sciences and humanities, vocational and professional fields.” [DNEP 2019, P11.1.1]*
4. *“Each higher educational institution will have a network of government and private schools and school complexes to work with in close proximity, where potential teachers will student-teach (among other synergistic activities between HEIs and school complexes, such as community service, adult and vocational education, etc.).” [DNEP 2019, P15.2.1]*
5. *“Special Education Zones will be set up in disadvantaged regions across the country. It is known that there is inequitable development across regions - even within States that are otherwise performing better than the national average on human development indicators. The key idea will be to have these Zones act upon all the Policy actions for the upliftment of Under-represented*

groups in a concerted manner, with close joint monitoring by the Centre and the State, in order to quickly enable substantial positive differences in the areas of the country that truly need it most.” [DNEP 2019, P6.1.2]

6. *“.....Enhance access by establishing more high-quality HEIs in aspirational districts and Special Education Zones containing larger numbers of SEDGsDevelop and support high-quality HEIs that teach in local/Indian languages or bilingually”. [NEP 2020, 14.4.1]*

4.5.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

4.5.3.1. General questions

1. Please respond to the NEP points above on linkages between school education and higher education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in this area that must be addressed?
3. How can we ensure that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in linking school education and higher education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. Do any kind of linkages already exist between school education and higher education? If yes, how can they be strengthened?
6. How can continuity be maintained between the curriculum and learning experiences of school and higher education to ensure that the overall aims of education are achieved? What kind of learning experiences in school education will prepare learners for higher education?
7. What should be the broad design of the Secondary Stage such that it prepares the ground for multidisciplinary, choice-based, flexible undergraduate education?
8. What steps should be taken by higher education institutions to support the transition of students from school into higher education? What kind of academic, financial, socio-emotional support should higher education institutions provide for this?
9. What are the coordination mechanisms envisaged between higher education and school education to ensure that there is a continuous link between teacher education programmes and the school system?
10. How should Special Education Zones (SEZ) be identified? How will it be ensured that both high quality school and higher education opportunities are provided in these areas?
11. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?
12. How would the Credit-transfer system, which is being implemented in higher education, have an impact on school education? Will it be feasible to implement Credit Transfer Systems in Schools as well? If yes, at what stage and how?

4.5.3.2. Other Suggestions

In this subsection, please provide other suggestions about linkage between school education and higher education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

4.5.3.3. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

4.6. Alternative Ways for Schooling

4.6.1. Vision of NEP 2020

1. *“Education is the single greatest tool for achieving social justice and equality. Inclusive and equitable education - while indeed an essential goal in its own right - is also critical to achieving an inclusive and equitable society in which every citizen has the opportunity to dream, thrive, and contribute to the nation. The education system should aim to benefit India’s children so that no child loses any opportunity to learn and excel because of circumstances of birth or background. This Policy reaffirms that bridging the social category gaps in access, participation, and learning outcomes in school education will continue to be one of the major goals of all education sector development programmes.” [NEP 2020, 6.1]*
2. *“full equity and inclusion as the cornerstone of all educational decisions to ensure that all students are able to thrive in the education system” [NEP 2020, Principles of this Policy, p.5]*
3. *“To make it easier for both governments as well as non-governmental philanthropic organizations to build schools, to encourage local variations on account of culture, geography, and demographics, and to allow alternative models of education, the requirements for schools will be made less restrictive. The focus will be to have less emphasis on input and greater emphasis on output potential concerning desired learning outcomes.....” [NEP 2020, 3.6]*

4.6.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Sections 1 and 6 of NEP 2020, and Chapters 1 and 6 of DNEP 2019 in detail.

1. *“Alternative and innovative education centres will be put in place in cooperation with civil society to ensure that children of migrant labourers, and other children who are dropping out of school due to various circumstances are brought back into mainstream education”. [NEP 2020, 3.2]*
2. *“Furthermore, students in such schools would be encouraged to appear for State or other Board examinations and assessments by the NTA, and thereby enroll in higher education institutions”. [NEP 2020, 6.15]*
3. *“To make it easier for both governments as well as non-governmental philanthropic organizations to build schools, to encourage local variations on account of culture, geography, and demographics, and to allow alternative models of education, the requirements for schools will be made less restrictive. The focus will be to have less emphasis on input and greater emphasis on output potential concerning desired learning outcomes.....” [NEP 2020, 3.6]*
4. *“ECCE will also be introduced in Ashramshalas in tribal-dominated areas in a phased manner. The process for integration and implementation of ECCE in Ashramshalas and alternative schooling will be similar to that detailed above.” [NEP 2020, 1.8]*
5. *“As per the RPWD Act 2016, children with benchmark disabilities shall have the choice of regular or special schooling. Resource centres in conjunction with special educators will support the rehabilitation and educational needs of learners with severe or multiple disabilities and will assist*

parents/guardians in achieving high-quality home schooling and skilling for such students as needed. Home-based education will continue to be a choice available for children with severe and profound disabilities who are unable to go to schools. The children under home-based education must be treated as equal to any other child in the general system. There shall be an audit of home-based education for its efficiency and effectiveness using the principle of equity and equality of opportunity. Guidelines and standards for home-based schooling shall be developed based on this audit in line with the RPWD Act 2016. While it is clear that the education of all children with disabilities is the responsibility of the State, technology-based solutions will be used for the orientation of parents/caregivers along with wide-scale dissemination of learning materials to enable parents/caregivers to actively support their children's learning needs will be accorded priority." [NEP 2020, 6.12]

6. "One-on-one teachers and tutors, peer tutoring, open schooling, appropriate infrastructure, and suitable technological interventions to ensure access can be particularly effective for certain children with disabilities." [NEP 2020, 6.5]
7. "Alternative forms of schools will be encouraged to preserve traditions or alternative pedagogical styles. At the same time, they will be supported to integrate the subject and learning areas prescribed by the NCFSE into their curricula in order to reduce and eventually eliminate the underrepresentation of children from these schools in higher education. In particular, financial assistance will be provided to introduce science, mathematics, social studies, Hindi, English, State languages, or other relevant subjects in the curriculum, as may be desired by these schools. This would enable children studying in these schools to attain the learning outcomes defined for Grades 1–12. Furthermore, students in such schools would be encouraged to appear for State or other Board examinations and assessments by the NTA, and thereby enroll in higher education institutions. Capacities of teachers in the teaching of science, mathematics, language, and social studies will be developed including orientation to new pedagogical practices. Libraries and laboratories will be strengthened and adequate reading materials like books, journals, etc., and other teaching-learning materials will be made available." [NEP 2020, 6.15]
8. "New circumstances and realities require new initiatives. The recent rise in epidemics and pandemics necessitates that we are ready with alternative modes of quality education whenever and wherever traditional and in-person modes of education are not possible. In this regard, the National Education Policy 2020 recognizes the importance of leveraging the advantages of technology while acknowledging its potential risks and dangers. It calls for carefully designed and appropriately scaled pilot studies to determine how the benefits of online/digital education can be reaped while addressing or mitigating the downsides. In the meantime, the existing digital platforms and ongoing ICT-based educational initiatives must be optimized and expanded to meet the current and future challenges in providing quality education for all. 24.2. However, the benefits of online/digital education cannot be leveraged unless the digital divide is eliminated through concerted efforts, such as the Digital India campaign and the availability of affordable computing devices. It is important that the use of technology for online and digital education adequately addresses concerns of equity." [NEP 2020, 24.1]

4.6.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

4.6.3.1. General questions

1. Please respond to the NEP points above on alternative ways of schooling, including any suggestions you may have regarding additions or modifications.
2. What is meant by alternative ways of schooling and how will alternative ways of schooling help in achieving the vision of NEP 2020?
 - a. social justice and equality, Inclusive and equitable education
 - b. every citizen has the opportunity to dream, thrive, and contribute to the nation
 - c. no child loses any opportunity to learn and excel because of circumstances of birth or background
 - d. bridging the social category gaps in access, participation, and learning outcomes in school education
 - e. full equity and inclusion as the cornerstone of all educational decisions to ensure that all students are able to thrive in the education system
3. What are the present alternative ways of schooling and what could be suggestions to improve so that the objectives as mentioned in NEP are achieved? How to make it easier for “both governments as well as non-governmental philanthropic organizations to build such schools”? How to encourage “local variations” on account of “culture, geography, and demographics”, and to allow alternative models of education? How to make the requirements for schools be “made less restrictive”?
4. What will be the process of putting up “Alternative and innovative education centres” and what role civil societies can play in the same so that “children of migrant labourers, and other children who are dropping out can be mainstreamed” ? How can it be ensured that “these children appear for State or other Board examinations” and assessments by the NTA?
5. NEP talks about children with “benchmark disabilities”, “severe or multiple disabilities, migrant labourers, children who are dropping out” as a few examples who need alternative ways of schooling? What could be other categories of children at risk who will benefit from alternative ways of schooling? What could be other kinds of alternative schooling that children from each category need? What are the different infrastructural and learning resources and technological interventions required to ensure learning for children in each category ?
6. What will be the process of “audit of home-based education and other alternative ways” for their efficiency and effectiveness? What will be guidelines and standards for such schooling? How can it be ensured that students accessing these alternative ways of schooling receive equivalent education and certification as other children in mainstream schools?

7. How to ensure support for students who transition from an alternative way of schooling into a mainstream school? What measures can be taken to enable transition of these students into higher education?
8. What kind of capabilities are required in teachers who are part of these alternative systems? What will be the process of their accreditation, improvement and training of these teachers?
9. “Epidemics and pandemics necessitate that we are ready with alternative modes of quality education” - What could be alternative ways of schooling in situations like the one that happened between 2020-2022

4.6.3.2. Other Suggestions

In this subsection, please provide other suggestions about alternative ways of schooling that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

4.6.3.3. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

4.7. Emerging Role of Community in Education

4.7.1. Vision of NEP 2020

1. *“The Policy sees the engagement of the community extending to ownership for the success of educational endeavours, whether through deeper ownership of school complexes through School Complex Management Committees or through volunteering to ensure the success of educational programmes. It envisages convergence of similar efforts by community-based organisation and educational institutions, and drawing from the expertise of community members, while institutions contribute towards progress of the community in multiple ways.” [DNEP 2019, Preamble]*
2. *“Substantial investment in a strong, vibrant public education system as well as the encouragement and facilitation of true philanthropic private and community participation.” [NEP 2020, Principles of this Policy]*

4.7.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read “Principles of this Policy”, Sections 2, 3, 4, 7 and 21 of NEP 2020 as well as the “Preamble”, Chapters 2, 3, 4 and 7 and Sections 21.3 and 21.5 of Chapter 21 of DNEP 2019 in detail.

1. *“If every literate member of the community could commit to teaching one student/person how to read, it would change the country’s landscape very quickly”. [NEP 2020, 2.9].*
2. *“Efforts will be made to involve community and alumni in volunteer efforts for enhancing learning by providing at schools: one-on-one tutoring; the teaching of literacy and holding of extra-help sessions; teaching support and guidance for educators; career guidance and mentoring to students; etc. In this regard, the support of active and healthy senior citizens, school alumni and local community members will be suitably garnered. Databases of literate volunteers, retired scientists/government/semi government employees, alumni, and educators will be created for this purpose.” [NEP 2020, 3.7]*
3. *“Qualified community members who wish to volunteer ... as one-on-one tutors - as a service to their communities and to the nation”. [DNEP 2019, Introduction to Chapter 2]*
4. *“The school should be a point of celebration and honour for the whole community. The dignity of the school as an institution should be restored and important dates, such as the foundation day of the school, will be celebrated along with the community and the list of important alumni may be displayed and honoured. Furthermore, the un-utilized capacity of school infrastructure could be used to promote social, intellectual, and volunteer activities for the community and to promote social cohesion during non-teaching / schooling hours and may be used as a “Samajik Chetna Kendra”. [NEP 2020, 7.12]*

5. *“Regular ‘language melas’ and ‘mathematics melas’, where children can participate and demonstrate their abilities in both of these subjects; this could become a community event involving parents, teachers, community members, and neighbouring schools”. [DNEP 2019, P2.2]*
6. *“Interaction with local artists: Local artists and crafts-persons will be recruited and utilised in schools - from short demonstrations to full-fledged classes - in order to ensure that local arts are enjoyed, well represented, and nurtured in each community.” [DNEP 2019, P4.6.2.4]*
7. *“The School Complex Management Committee (SCMC) and the School Management Committees (SMC) of individual schools within the complex will be involved in school governance.” [DNEP 2019, P7.5.3 and P7.7.1.]*
8. *“All efforts will be undertaken to ensure the participation of community members in adult education. Social workers/counsellors travelling through their communities to track and ensure participation of non-enrolled students and dropouts will also be requested, during their travels, to gather data of parents, adolescents, and others interested in adult education opportunities both as learners and as teachers/tutors”. [NEP 2020 21.8]*

4.7.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

4.7.3.1. General questions

1. Please respond to the NEP points above on role of community in education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in involving the community that must be addressed?
3. How can we ensure that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in involving the community in education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. What are the current challenges of involving communities in schools? How is the system of the School Management Committee (SMC) working?
6. What kind of changes are necessary for the relationship between school and community to be strengthened? What steps should be taken for this to happen?
7. What are the various ways that the community can be involved with the school and the school complex?
8. How can the school volunteer programme Vidyanjali be leveraged in providing quality education?
9. How can the community support the school? How can the school support the community at each stage of education?

10. Who should be eligible to become a member of the School Management Committee (SMC) and School Complex Management Committee (SCMC) from the community?
11. What kind of support/training would SCMCs require to be fully functional? What would the relationship be between a SCMC and a school leader? What should the SCMC be tasked with?
12. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?

4.7.3.2. Other Suggestions

In this subsection, please provide other suggestions about emerging role of community in education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

4.7.3.3. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.

4.8. Adult Education

4.8.1. Vision of NEP 2020

1. *“The abilities to attain foundational literacy, obtain an education, and pursue a livelihood must be viewed as fundamental rights of every citizen”... [DNEP 2019, Introductory paragraph of Chapter 21 p.373-374]. Also, “Successful literacy programmes result not only in the growth of literacy among adults, but also result in increased demand for education for all children in the community, as well as greater community contribution to positive social change.” [NEP 2020, 21.3]*
2. *“Successful literacy programmes result not only in the growth of literacy among adults, but also result in increased demand for education for all children in the community, as well as greater community contribution to positive social change.” [NEP 2020, para 21.3]*
3. *“ ... Strong and innovative government initiatives for adult education - in particular, to facilitate community involvement and the smooth and beneficial integration of technology - will be affected as soon as possible to expedite this all-important aim of achieving 100% literacy.” [NEP 2020, 21.4]*

4.8.2. Anchors to NEP 2020

The following quotes have been taken from relevant chapters of the NEP 2020 and Draft NEP 2019 prepared by the Kasturirangan committee (DNEP 2019). Please read Section 21 of NEP 2020 and Chapter 21 of DNEP 2019 in detail.

1. Scope of the curriculum framework: *“The curriculum framework for adult education will include at least five types of programmes, each with clearly defined outcomes: (a) foundational literacy and numeracy; (b) critical life skills (including financial literacy, digital literacy, commercial skills, health care and awareness, child care and education, and family welfare); (c) vocational skills development (with a view towards obtaining local employment); (d) basic education (including preparatory, middle, and secondary stage equivalency); and (e) continuing education (including engaging holistic adult education courses in arts, sciences, technology, culture, sports, and recreation, as well as other topics of interest or use to local learners, such as more advanced material on critical life skills)”. [NEP 2020, 21.5]*
2. Flexibility in curriculum framework: *“All parts of the framework will be flexible enough to accommodate local needs (including employment needs), with a clear view also to incorporate local art, literature, language, culture, knowledge, interests, and customs”. [DNEP 2019, P21.1.2]*
3. Access to quality teaching-learning materials: *“improving the availability and accessibility of books is essential to inculcating the habit of reading within our communities and educational institutions. This Policy recommends that all communities and educational institutions - schools, colleges, universities and public libraries - will be strengthened and modernized to ensure an adequate supply of books that cater to the needs and interests of all students, including persons with disabilities and other differently-abled persons. The Central and State governments will take steps to ensure that books are made accessible and affordable to all across the country including socio-economically disadvantaged areas as well as those living in rural and remote areas. Both*

public and private sector agencies/institutions will devise strategies to improve the quality and attractiveness of books published in all Indian languages. Steps will be taken to enhance online accessibility of library books and further broad basing of digital libraries. For ensuring vibrant libraries in communities and educational institutions, it will be imperative to make available adequate library staff and also devise appropriate career pathways and CPD for them. Other steps will include strengthening all existing libraries, setting up rural libraries and reading rooms in disadvantaged regions, making widely available reading material in Indian languages, opening children's libraries and mobile libraries, establishing social book clubs across India and across subjects, and fostering greater collaborations between education institutions and libraries.” [NEP 2020, 21.9]

4. Infrastructure requirements: *“Second, suitable infrastructure will be ensured so that all interested adults will have access to adult education and lifelong learning. A key initiative in this direction will be to use schools/ school complexes after school hours and on weekends and public library spaces for adult education courses which will be ICT-equipped when possible and for other community engagement and enrichment activities. The sharing of infrastructure for school, higher, adult, and vocational education, and for other community and volunteer activities, will be critical for ensuring efficient use of both physical and human resources as well as for creating synergy among these five types of education and beyond. For these reasons, Adult Education Centres (AECs) could also be included within other public institutions such as HEIs, vocational training centres, etc.” [NEP 2020, 21.6]*
5. Suitable instructors/educators: *“Third, the instructors/educators will be required to deliver the curriculum framework to mature learners for all five types of adult education as described in the Adult Education Curriculum Framework. These instructors will be trained by the National, State, and district level resource support institutions to organize and lead learning activities at Adult Education Centres, as well as coordinate with volunteer instructors. Qualified community members including from HEIs as part of each HEI's mission to engage with their local communities will be encouraged and welcomed to take a short training course and volunteer, as adult literacy instructors, or to serve as one-on-one volunteer tutors, and will be recognized for their critical service to the nation. States will also work with NGOs and other community organizations to enhance efforts towards literacy and adult education.” [NEP 2020, 21.7]*
6. Creation of a cadre of qualified and certified preraks: *“A cadre of qualified and certified preraks (who manage and teach at the AECs) and adult education instructors (who teach at the AECs) will be created via special training modules conducted by special units dedicated to adult education in BITEs, DIETs, BRCs, and CRCs”. [DNEP 2019, P21.3.1]*
7. Participation of community members: *“...all efforts will be undertaken to ensure the participation of community members in adult education. Social workers/counsellors travelling through their communities to track and ensure participation of non-enrolled students and dropouts will also be requested, during their travels, to gather data of parents, adolescents, and others interested in adult education opportunities both as learners and as teachers/tutors. The social workers/counsellors will then connect them with local Adult Education Centres (AECs). Opportunities for adult education will also be widely publicized, through advertisements and announcements and through events and initiatives of NGOs and other local organizations.” [NEP 2020, 21.8]*

8. Involvement of parents of school children in adult education programmes: *“Parents of school children will be especially encouraged by social workers to join adult education programmes so that they naturally can be more involved in their children’s education...Social workers, community organisations, and public service announcements will also invite enthusiastic literate adults to join adult education programmes”.* [DNEP 2019, P21.4.1]
9. Leveraging technology to strengthen and even undertake adult education initiatives: : *“technology will be leveraged to strengthen and even undertake the above initiatives. Quality technology-based options for adult learning such as apps, online courses/modules, satellite-based TV channels, online books, and ICT-equipped libraries and Adult Education Centres, etc. will be developed, through government and philanthropic initiatives as well as through crowd sourcing and competitions. In many cases, quality adult education could thereby be conducted in an online or blended mode.”* [NEP 2020, 21.10]

4.8.3. Responses to questions

The following questions have emerged from the vision and anchors to NEP 2020 referenced above. Please respond to these questions in the Position Paper. Specific and in-depth responses would be most useful. If, in the process, you choose to respond to only a few of these questions, it will still serve the purpose.

4.8.3.1. General questions

1. Please respond to the NEP points above on adult education, including any suggestions you may have regarding additions or modifications.
2. What are the problems currently faced in adult education that must be addressed by the new NCF?
3. How can we ensure in the new curriculum and pedagogy that the problems listed in #2 are addressed/overcome?
4. What is currently being done well in adult education, and how can these present good practices/innovations/initiatives be strengthened/scaled up?
5. What should be the broad approach to adult education (e.g., outcome-based; application-oriented; learner-centred; flexibility for adapting to local/regional/geographic/national and cultural contexts, educational levels of adult learners and the needs of specific target groups; sustainability of learning; etc.)?
6. How will the local context be brought into the adult education curriculum? How will national and Constitutional values such as democracy, pluralism, social and gender equity and equality, women’s empowerment, etc. be incorporated in the curriculum framework?
7. What would be the approach to adult education and to the transaction of the adult education curriculum?
8. What will be the total learner engaged time required for the achievement of the learning objectives/outcomes relating to each component of the adult education curriculum?

9. What kind of strategies should be used for assessment of the adult learners?
10. The National Skills and Qualifications Framework (NSQF) indicates the expected levels of attainment of specific vocational capacities. Should the vocational skills development component of the adult education curriculum be aligned to the NSQF? What are the reasons for stating that it should be or should not be aligned to the NSQF?
11. What kind of institutional structures will be required to ensure that the aims/goals of adult education are met? How can existing structures/mechanisms be leveraged to meet the goals of adult education? What will be the role of bodies like NCERT and SCERTs? How will synergy between adult education efforts and schemes like Sakshar Bharat and Padhna Likhna Abhiyaan be built? Where should AECs be located?
12. What kind of data relating to learners/institutions/educators/instructors and learning outcomes can be collected without compromising confidentiality concerns?
13. What are the expectations from instructors/educators for each type/stage of adult education? Who will be the instructors/educators? How will they be prepared? What kind of continuous professional development programmes can be organised for them?
14. What would be the role of social workers/counsellors in ensuring the aims of adult education are met? What will be the criteria for selection of social workers/counsellors? How will social workers/ counsellors be prepared for their roles? What kind of data can be collected without compromising confidentiality concerns?
15. How can the community be mobilized to volunteer as instructors/educators for adult education – from encouraging enrolment to volunteering, as well as other relevant aspects? How will volunteers for adult education be identified? How will they be prepared to carry out their tasks?
16. How will campaigns for adult education be designed and implemented? How can adult learners be motivated to join adult education programmes and then to continue till they have attained the learning objectives/goals of the programme?
17. What role will libraries and other educational institutions play in meeting the aims of adult education and ensuring adult learners stay engaged with learning? How can optimal use of resources be assured/how can resource sharing across centres of adult learning and/or school complexes be facilitated? How can materials be updated as needed? How can the supply of quality material be assured across remote and disadvantaged areas? Which agencies/institutions can be made responsible for developing quality materials? How can mobile libraries, social book clubs be leveraged to meet the goals of adult education?
18. What mechanism should be put in place for quality assurance, including assessment of the quality of teaching-learning material and monitoring and evaluation?
19. What other enabling conditions (e.g., school culture, practices, infrastructure, equipment, governance, etc.) should be in place in order to effectively enable all the above transformations?

4.8.3.2. Stagewise approach

20. What should be the broad approach for the curriculum framework for adult education in terms of stages/levels and sequencing of learning objectives and learning content?

21. What should be the overall goal and specific objectives of each of the stages in the adult education curriculum relating to areas such as: (a) foundational literacy and numeracy; (b) critical life skills; (c) vocational skills development; (d) basic education (including preparatory, middle, and secondary stage equivalency); and (e) continuing education?

4.8.3.3. Other suggestions

In this subsection, please provide other suggestions about adult education that are not covered in the above questions. It is recommended that these suggestions are in alignment with the vision and specific anchors provided above from the NEP 2020.

4.8.3.4. Bibliography and References

Please include references (books, research papers, studies, pilots, resource material, anecdotal evidence, etc.) throughout to help substantiate recommendations wherever possible/applicable, with a bibliography for easy referencing.