Critical Analysis of National Curriculum Framework in the Pedagogy of School Education

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Abstract: *Role of pedagogy in school education is very profound. It shapes not only what is taught and but also how it's taught. It also influencing student's engagement, understanding and overall learning outcomes. Effective pedagogy focus on active learning, critical thinking, and problem solving it moving away from rote memorization. It encourages teachers to adopt their method for addressing learning diversity and inclusive learning. This paper tries to critically analysis the recommendations of National Curriculum Framework in the pedagogy of school education with it strengthens and weakness for proper evaluation of student's essential thinking skills.*

Keywords: NCF, Curriculum, School education

1. Introduction

In Gurukul system education took place in teachers home, where students live with their guru and receive education in a residential setting. Primarily knowledge was transmitted orally from guru to students via recitation, memorization and discussion of the texts. Gradually over time transmission of knowledge became increasingly dependent upon written text because the subject like mathematics, science, medicine, arts and philosophy allowed for preservation and dissemination of knowledge beyond oral tradition. With the arrival of Muslim rulers Madrasa were established for offering education subjects like technology, law and philosophy. British colonial period having great impact on education in India. They focused on English language proficiency by establishing English medium schools and universities. In recent decades online platforms, digital libraries and E-learning have transformed the way education is delivered and receive. It facilitates the exchange of knowledge across the countries and evolves diversified pedagogical methods for student's centered, active and experiential interdisciplinary learning. National Curriculum Framework highlights the dynamics nature of knowledge transmission process by adopting student centered approach.

2. How do children grow and learn in 21st century school:-

A good educational institution is one in which every students feels welcome and cared for, where a stimulating learning environment exist, where a wide range of learning experiences are offered, and where good physical infrastructure and appropriate resources conducive to learning are available to all students [NEP2020] . For operating one educational institution effective pedagogy is very crucial. Pedagogy is simply refers to a good understanding of how children grow and learn and clear focus on curricular goals, curricular competencies and learning outcomes to be achieved for students across stage of school education.

Research from across the world has provided us with a set of ideas about how children learn that have practical implications for teaching.

2.1 The brain plays an important role in learning:

Learning is a physical process in which new knowledge is represented by new brain cell connections. The brain both shapes and is shaped by experience, including opportunities the child has for cognitive development and social interaction. The brain is designed to learn and remember new things through life, as long as it continues to be challenged and stimulated.
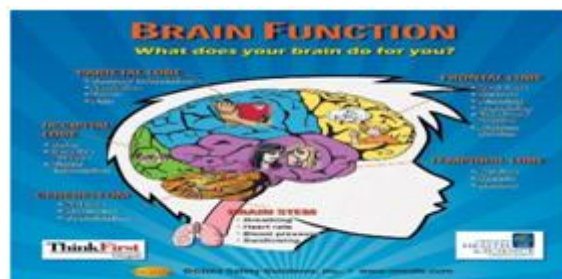
2.2 Learning is based on the associations and connections children make

Interpretation is always in the light of whatever knowledge they already possess. Children are continuously fitting new experiences into existing knowledge and adjusting existing knowledge to allow new experiences.
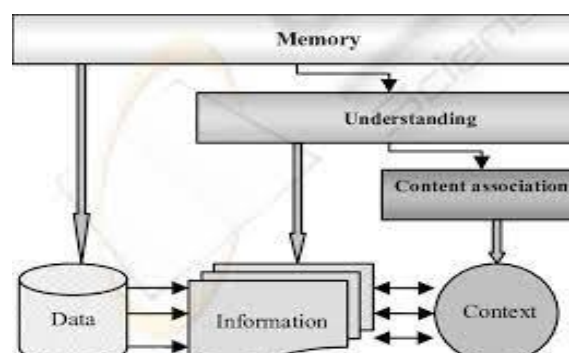
2.3 Emotions are deeply connected to learning:

When students feel they belong in a classroom and they can trust, they feel free to try out and explore and, therefore, learn better. As trust grows, the classroom becomes emotionally safer, and students have fewer obstacles to build their confidence and their learning.

2.4 The learning environment matters

A safe, secure, comfortable, and happy classroom environment can help children to learn better and achieve more. The classroom must be an inclusive, enabling learning environment that provides every child freedom, openness, acceptance,, meaningfulness, belonging and challenge.

2.5 Learning occurs in particular social and cultural environments:

The diverse experiences of children must find a place in the classroom. As children grow up, while there may often be a difference between the culture of a student's home and the culture of the classroom, it is important to continue to listen to student's voices and honors their cultural traditions in the classroom.

2.6 Effective pedagogy for Achieving Aims of School Education

2.6.1 Knowledge (knowing that – concepts, theories, principles)

To help children do this well, teachers need to structure and sequence the teaching of Concepts appropriately, connect new concepts to students' existing experience and understanding, pose questions that challenge their existing understanding and make clear demonstrations that push their thinking beyond their existing understanding. All this, while ensuring their full participation in open discussions and hands-on activities. Teaching concepts, theories or principles in disconnected chunks or expecting students to reproduce them in the same way they were received makes true conceptual understanding impossible.

2.6.2 Capacities (knowing how - abilities and skills)

Abilities and skills are learnt best by doing and they improve with repeated exposure and practice. Good practice involves meaningful variety, must be done in appropriate quantity and is supplemented with continuous discussions on why certain procedures work and others do not.

2.6.3 Values and Dispositions:

'Telling' children about what values they should develop or uphold usually has very little effect. It either becomes 'boring' or seems like 'preaching.'Development of values and dispositions in school education happens primarily in the following ways:

a) Through School and Classroom culture e.g., sensitivity and respect for others is encouraged when opportunities are provided for all students to participate in activities and select students do not end up participating in all activities.
b) Through School and Classroom practices e.g., stories about particular values or regular balsabhas and balpanchayats help to build notions of democracy, justice and equality.
c) As part of learning through school subjects e.g., laboratory experiments and trials help Build scientific thinking.
d) As direct goals of some school subjects e.g., learning to win and lose with grace during Sports and games helps build resilience.

3. Key Elements that enable Effective Pedagogy in the Classroom: -

3.1 Ensuring respect and care

All children will participate in a variety of activities and school processes not just those with the best chances of success. Our schools will create an environment that enhances the potential and interests of each child.Care are central to learning in schools. Care is an attitude of concern and responsibility for people and relationships. Empathy and respect are at the heart of caring.

3.2 Building positive Teacher-student relationships:-

A safe, positive relationship between Teacher and student is enriching both for cognitive and socio-emotional development. Some important ways to build such a positive relationship are:

a) Getting to know each student individually
b) Listening carefully to students
c) Observing students
d) Encouraging student responses -
e) Encouraging questioning
f) Recognizing and responding to the emotions and moods of students

3.3 Using differentiated instruction:-

Teachers will need to plan classes in a way that engages students with varying interests and Capabilities meaningfully and encourages better learning.

Before planning for this, it is important for the Teacher to observe students carefully, analyses their work and gather as much information as possible about them. e.g., The Teacher could plan to use worksheets of varying levels, starting with simple worksheets and progress to more complex ones according to what different groups of students in the class are able to do.

3.4 Providing opportunities for independent and collaborative work:-

Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions improves thinking and deepens understanding. In carefully crafted collaborative learning situations, students require the contribution of each other to successfully complete a learning task because of which they need to learn to take on varied roles e.g., as observers, mediators, score manager, note-takers based on the objectives of the task.

3.5 Using varied resources:-

Using the textbook meaningfully is important for learning. In addition, other resources and materials must be used to engage students beyond the textbook. Classroom processes should incorporate use of resources made by students, teachers, and the local community as well as those available in the immediate environment. Digital resources must also be incorporated appropriately.

3.6 Helping students develop appropriate work habits and responsibility:-

Developing appropriate work habits and taking responsibility are critical to learning. These include aspects like students' organizing space and materials before and after use, organizing time, ensuring time on task, taking responsibility for tasks, persisting with, and completing work, staying on a given task even without a Teacher present, and allowing others to work without disturbance.

3.7 Giving prompt and meaningful feedback:-

Providing feedback means giving students an explanation of what they are doing correctly and incorrectly, with the focus of the feedback on what the student is doing right. Waiting too long to give feedback, the student might not connect the feedback with the learning moment. It is vital that we take into consideration each individual when giving student feedback.

4. Planning For Teaching

Teaching is a deliberate act carried out with the intention of bringing about learning in children. This deliberate act needs to be well planned. Planning is central to good teaching. Planning includes construction and organization of classroom tasks as per competencies and outcomes to be achieved, pedagogy to be followed, resources to be used and assessment to be carried out. Planning also includes support activities for children, home assignments, and displays in the class relevant to what is being taught.

Good planning requires understanding of Aims of Education, Curricular Goals, and Competencies and Learning Outcomes to be achieved along with prior learning of the children for whom the plan is being made, and available teaching learning materials and content to be used.

The major components of a teaching plan are:

a) Competencies, Learning Outcomes and intended lesson objectives
b) Teacher-directed, Teacher-guided and/or Student-led activities to achieve objectives.
c) Prior understanding of the student on which choice of pedagogy is based
d) Content and material to be used
e) Duration and sequence of activities
f) Classroom arrangements e.g., seating, displays, arrangement of material
g) Specific strategies for students who need extra help
h) Methods of assessment

5. Responding to students with Disabilities or Other Individual learning Needs

Classroom processes should respond to the diverse needs of students. Students learn best when they are challenged but not so much that they feel threatened or overwhelmed by the level of challenge. Therefore, Teachers would need to know and understand the learning needs of every student in their class and provide the appropriate level of challenge and support to each student.

During the normal course of teaching, based on routine observations and assessments, Teachers could identify those students that may require additional support or individualized attention. This in no way should lead to labeling of students as "bright", "slow" or "problem" students nor does it imply "lowering" of standards.

Some of the ways in which this additional support could be provided or children could be offered varying levels of challenge are listed below:-
a) A "bridge" course for a month or so at the beginning of the year which will enable students to refresh their previously learnt concepts and prepare for the new class.
b) Specific work on designated days to supplement what has been done in class.
c) Differentiated assignments - the teacher could provide assignments/lass tests of varying levels of difficulty using the same content.
d) Making specific resources available to students who need them; extra worksheets for those who need additional practice; "extra-challenging" worksheets for those who need it.
e) Set up a buddy system wherever appropriate - pair a child who needs help with another child who can provide

it informally – e.g., help with homework, explanations after class, doing projects together.
f) Setting up a conference time once a month.
g) Communicate regularly with all parents but particularly those parents whose students may need special help and support.

6. Pedagogy across the Stages

An effective approach to pedagogy in particular School Stages is based on how children grow and learn (i.e., physical, emotional, social and ethical, and cognitive development) and the overall aims of education to be attained through school education. NEP 2020 focus on achieve Curricular Goals, Competencies, and Learning Outcomes without compromising the holistic and expansive notion of individual development.

6.1 Pedagogical considerations related to physical development

6.1.1 Foundational Stage: During this stage Children continuously engage through their senses and make the understand most of the world around them this way. Pedagogy that encourages them to engage physically in aesthetic experiences of music, dance, arts, and crafts makes for an enjoyable school day. Teaching about health and hygiene practices ensures physical well-being in the long term.

6.1.2 Preparatory Stage: The Teacher needs to teach through modeling how to make sense of concepts more perceptually and practically with low levels of verbal complexity and theorizing. The content that is chosen, the teaching plan, assessment, and classroom arrangement would need to be activity-based, playfully experimental, and lend themselves to a conversation and consolidation after 'doing'.

6.1.3 Middle Stage: In this stage Teachers will need to be prepared a good understanding of gender and sexuality, it would also help teachers to understand their students better. Understanding families and local culture will help with understanding student behavior in school. It is also a time when students must be encouraged to independently practice their learning.

6.1.4 Secondary Stage: At this Stage, students grapple with their changing bodies, may become self-conscious, and may be trying to make sense of their maturation. Pedagogy across subjects must accommodate for changes in students' perceptions of their bodies and abilities, provide adequately challenging physical tasks, and encourage greater participation in both group and individual activities, especially sports and games.

6.2 Pedagogical considerations related to emotional development

6.2.1 Foundational Stage: School allows for a safe space for conversation and learning**.** Learning to regulate feelings and behavior, delaying the need for instant gratification, and practicing positive learning habits will go a long way in the lives of children so these aspects must be facilitated and encouraged actively and regularly**.**

6.2.2 Preparatory Stage: Teachers will need to engage and tease out emotional habits coming in the way of learning through their teaching interactions and provide alternative possibilities to the emotional experiences of the students. Gradually, students must be supported and encouraged to become emotionally independent.

6.2.3 Middle Stage: The Teacher will have to find a balance in the approach to students' emotions - an approach that is neither intrusive nor indulgent, but reasonably firm, rationally clear, and emotionally caring towards students of this Stage.

6.2.4 Secondary Stage: It would be necessary for pedagogic strategies to guide individual reflection and group conversation on thoughts and feelings that emerge through engaging with curricular components.

6.3 Pedagogical considerations related to social and ethical development

6.3.1 Foundational Stage: Social life is a long-lasting reality that children must learn to intelligently navigate early on. Ethical and moral instructions at this Stage are aimed at teaching children simply the 'good' and appropriate from the 'bad' and inappropriate actions.

6.3.2 Preparatory Stage: The pedagogic strategies must enable pair work, small group work, and individual work in mixed proportions so that students are actively learning to work together with sensitivity, mutual respect and listening, are learning to cooperate, and also accept cultural differences and diversity of approaches in thinking and feeling. Teachers must engage students with basic ethical and moral questions about equality, fairness, sharing, and cooperation.

6.3.3 Middle Stage: The pedagogy must explicitly aim (through content selection and interactional strategies) at fostering sensitivity and respect for diversity in gender, class, and cultural difference. Students will need to learn to navigate their social world (including parents, teachers, and community) and will require clear expectations and rules set in these interactions.

6.3.4 Secondary Stage:
Teachers could actively talk with students about ethical and moral actions connected to social participation and change. It is also an important time in the lives of students to address ideas of identity and heritage about what it means to be Indian (*Bharatiyata*) and belong to our vast and culturally rich nation.

6.4 Pedagogical considerations related to Cognitive development

6.4.1 Foundational Stage: Multimodal forms of teaching-learning materials, adequate outdoor experiences, one-on-one Teacher attention, and physical wellness would also address the cognitive developmental needs of children at this Stage.

6.4.2 Preparatory Stage: Multimodal teaching-learning material and one-on-one attention are still necessary to a good extent at this Stage, as these strategies will form a strong conceptual basis for students across curricular areas.

6.4.3 Middle Stage: Teachers need to demonstrate in their teaching transactions (and explicitly teach) a discerning educational use of the internet and media gadgets in learning. This would require conversations about safe and healthy practices in using the internet, new media technology, and gadgets in the context of the curriculum.

6.4.4 Secondary Stage: Newer curricular areas and choices in specialization's begin at this Stage, it would be important to help them make their decisions (in subject choices) and create adequate opportunities to sustain practice in these. Given their age and independence, technology and media use rules will need strong follow-up and reminders.

7. Critically Examine the NCF Framework

National Curriculum Framework having very applicable futuristic recommendation for making school Education more qualitative but it has some drawbacks that is very difficult to implement for NEP 2020 –

7.1 Implementations Challenges: The ambitious goals outlined in NEP2020 might face difficulties in being uniformly implemented across diverse region, states and educational institutions due to varying infrastructural resources.

7.2 Multidisciplinary Approach Challenges: Emphasis on multidisciplinary approach could pose challenges in terms of designing appropriate curriculum, findings qualified teachers and integrating various subjects effectively.

7.3 Assessment Reforms: It might face difficulties during implementing examination that have traditionally rooted based or on memorization.

7.4 Teacher Training and Capacity: NEP 2020 Emphasis on transforming teacher education and professional development, it might take time to materialize, and ensuring all teachers are adequately trained could be a challenge.

7.5 Digital Divide: Digital learning method depends on digital divide, as not all students have equal access of technology or internet.

7.6 Resource Allocation: Shifting to the new 5+3+3+4 curricular structure might require resource allocation for developing new textbooks, learning materials and teacher training which could strain education budget.

7.7 Local Language Implementations: Translating and developing quality teaching materials regional language could be a resource intensive task.

7.8 Standardized Testing Pressure: Continuous and comprehensive evaluation might lead to increase pressure on students.

7.9 Lack of Focus on Vocational Education: NEP2020 might not be providing adequate clarity on how vocational training will be integrated in to the broader curriculum.

7.10 Transitional Challenges: Moving from existing system to new framework could lead to confusion and challenges for both teacher and students.

7.11 Parental Awareness and Acceptance: NEP2020 might take time for parents and guardians to understand and accept regarding their support for bringing quality education.

7.12 Higher Education Integration: While merging any institution and curriculum it could pose administrative and logistical challenges.

8. Conclusion

A critical analysis of national curriculum framework in relation to NEP2020reveals both strength and potential challenges. NCF emphasis on learner centered education, skill development and holistic learning. Needs for effective implementation teacher training and infrastacutral development to fully realism the envisioned changes. This paper try to critically analysis the whole pedagogical documents for knowing about the teaching learning flexibilities and role of teachers for transitioning the curriculum in a holistic manner. Its serves as a guiding document for quality school education in India.

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