Reimagining Early Childhood Care and Education (ECCE) in Rural Bihar: A Case for Contextualised Teacher-Led Innovations

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Abstract:

Early Childhood Care and Education (ECCE) forms the foundation of lifelong learning, cognitive development, and holistic well-being. Despite national policies supporting ECCE, its ground-level implementation, especially in rural Bihar, remains fragmented and underdeveloped. Teachers, often undertrained and under-resourced, lack exposure to developmentally appropriate practices and localized pedagogical innovations. This paper examines the adaptation of a successful ECCE workshop model originally piloted in DIET Shopian and re-contextualizes it for Bihar's rural educational context. Drawing from grassroots-level training sessions conducted with primary school teachers in Bhagalpur district, the study outlines a contextualized framework that integrates collaborative training, local material use, reflective teaching, and child-centered pedagogy. These strategies not only align with policy goals but also foster a culture of teacher innovation and community-relevant education. The paper ultimately advocates for systemic integration of such models into Bihar's teacher training programs, presenting a pathway to transform early education through empowered educators. It presents a framework that emphasizes localized teacher empowerment, activity-based learning, and community inclusion. By aligning the insights from ECCE research, NEP 2020, and NIPUN Bharat with grassroots action, this paper offers a replicable and scalable model to strengthen ECCE in underserved regions.

Keywords: ECCE, NIPUN Bharat, NEP 2020, Teacher Training, Bihar Education, Early Learning, TLM, Holistic Development

Introduction

The early years of life—birth to age eight—are universally acknowledged as the most crucial stage for brain development and learning (Shonkoff & Phillips, 2000). Research in developmental neuroscience confirms that experiences during this period significantly shape a child's cognitive, emotional, and social potential. Children who receive responsive care and stimulation in their early years are more likely to perform better in school and have improved lifelong health and productivity outcomes.

In India, Early Childhood Care and Education (ECCE) has gained policy attention with the Right to Education (RTE) Act (2009), the National Early Childhood Care and Education (ECCE) Policy (2013), and more recently, the National Education Policy (NEP) 2020. The National Education Policy (NEP) 2020 has further elevated ECCE as a critical foundational stage, proposing a 5+3+3+4 curricular structure that places early learning at its core. Despite these progressive frameworks, implementation on the ground, especially in states like Bihar, remains fragmented. Bihar continues to face multiple systemic challenges

such as lack of trained ECCE professionals, inadequate infrastructure, poor access in rural and marginalized communities, and limited parental awareness. According to the Unified District Information System for Education (UDISE, 2021–22), pre-primary enrollments in rural Bihar are alarmingly low, and most existing early learning centers function more as childcare spaces than structured learning environments.

This study seeks to reimagine ECCE in Bihar not by proposing a single intervention but by illustrating how participatory, experience-based, and context-specific training practices for teachers can build a robust foundation for early education. These practices go beyond formal directives and engage teachers as co-creators of knowledge and change-makers within their local contexts. Drawing insights from a previously implemented and successful model in DIET Shopian (Jammu & Kashmir), the present paper recontextualizes the workshop framework for Bihar's rural setting. It outlines practical, scalable strategies that aim to empower teachers, enrich learning environments, and ultimately enhance child development outcomes across elementary education in Bihar. Through this lens, the role of teachers as local innovators and ECCE champions is brought to the forefront.

Theoretical Foundations and Policy Linkages:

Early childhood education is most effective when grounded in well-established theories of child development and aligned with national policies that support equitable and quality learning for all children. Foundational theories, such as those proposed by Jean Piaget and Lev Vygotsky, provide a conceptual understanding of how children grow, learn, and interact with their environments.

Jean Piaget emphasized that children in the pre-operational stage (ages 2–7) learn best through symbolic play, hands-on experiences, and exploration of their environment. In this stage, their thinking is intuitive and not yet logical, which means abstract teaching is ineffective. Instead, children need opportunities to manipulate objects, engage in storytelling, and use visual aids. In Bihar's rural classrooms—where formal rote-based teaching is still predominant—these insights are crucial. They suggest a shift toward more experiential and child-centered learning approaches is necessary.

Lev Vygotsky, on the other hand, highlighted the importance of social interaction in learning. His concept of the Zone of Proximal Development (ZPD) indicates that children learn best when they are guided by a more knowledgeable adult or peer. This theory supports the need for ECCE teachers to act not just as instructors but as facilitators who scaffold children's learning experiences through dialogue, questioning, and collaborative tasks. In Bihar, where early childhood educators often lack formal pedagogical training, understanding Vygotsky's ideas can transform their classroom roles and teaching practices.

In addition to theoretical frameworks, national policies such as the National Education Policy (NEP) 2020 provide critical guidance. NEP 2020 has placed strong emphasis on foundational literacy and numeracy by introducing the 5+3+3+4 curricular model, where the first five years (3 years of pre-school and Grades 1 and 2) constitute the 'Foundational Stage.' This is designed to ensure that children receive age-appropriate, play-based, and discovery-oriented education in their early years. The policy acknowledges the urgent need to replace rote learning with interactive and inclusive pedagogies. The NEP also emphasizes the integration of ECCE with primary education and calls for Anganwadi workers and primary school teachers to be trained in child development and early education practices. In Bihar, this implies that both the Department of Education and the Department of Women and Child Development must work collaboratively to build the capacity of grassroots workers. The success of ECCE in Bihar depends on whether policies are translated into practical, teacher-friendly strategies in schools.

Another vital policy is the NIPUN Bharat Mission (2021), which stands for National Initiative for Proficiency in Reading with Understanding and Numeracy. NIPUN Bharat sets clear goals: by Grade 3, every child should attain foundational literacy and numeracy (FLN). In Bihar, where a large percentage of children fail to read with comprehension even in Grade 5 (ASER Reports), NIPUN Bharat provides both the urgency and framework to transform ECCE. It promotes activity-based learning, language development, and early math skills—all of which align with the play-based methods advocated by child development theories.

Furthermore, the National Early Childhood Care and Education (ECCE) Policy (2013) laid the groundwork for holistic development, focusing not just on education but also health, nutrition, and emotional well-being. This is especially relevant in Bihar, where many children suffer from undernutrition and lack basic health services. An ECCE model in Bihar, therefore, must integrate education with health and nutritional interventions to ensure children are ready to learn.

In summary, the theoretical foundation offered by Piaget and Vygotsky combined with progressive policy frameworks such as NEP 2020, ECCE Policy 2013, and NIPUN Bharat create a comprehensive blueprint for ECCE reform. Research in neuroscience (Center on the Developing Child, Harvard University) confirms that 90% of brain development occurs before age five, reinforcing the need for rich early learning experiences. NIPUN Bharat (2021) further calls for foundational literacy and numeracy by Grade 3, aligning with the goals of ECCE.

However, the success of these frameworks in Bihar depends on their contextual adaptation, practical implementation, and sustained teacher capacity building. These theories and policies must not remain abstract concepts; they must inform and shape daily classroom practices to ensure that every child, regardless of background, receives quality early education. These principles are particularly relevant in Bihar, where many children enter school without prior ECCE exposure. There is a need for systemic efforts to prepare teachers, provide materials, and create enabling environments for early learners. Global research also confirms the long-term return on investments in ECCE (UNESCO, 2020; Heckman, 2006). ECCE is grounded in developmental theories that emphasize active learning, scaffolding, and social interaction.

Methodology:

This paper is based on a detailed report of ECCE workshop conducted in Shopian (2017) under DIET was taken as the reference model. Its components—teacher grouping, theme-based TLM creation, participatory learning, and mentoring—were adapted for Bihar's rural schooling context through simulated action research exercises in select schools during 2024.

Designing Contextualized ECCE Interventions:

Insights from Practice To improve ECCE in Bihar's rural context, various low-cost, replicable, and participatory strategies were designed, piloted, and refined. These are elaborated below:

a) Group-Based Participatory Learning for Teachers

Instead of conventional lectures, teacher workshops were organized in collaborative groups. Each group focused on a child development theme such as health and hygiene, numeracy, local flora and fauna, or storytelling. Teachers created physical and visual learning materials around these themes. This format allowed for:

- Peer learning and exchange of ideas
- Hands-on engagement with ECCE concepts

● Real-time mentoring by experienced facilitators

Peer learning and exchange of ideas: Teachers from different schools and backgrounds brought diverse experiences and teaching styles to the group. Through open discussions, brainstorming sessions, and collaborative tasks, they were able to learn from each other's successes and challenges. This peer interaction built a sense of shared purpose and allowed teachers to discover new strategies they could implement in their own classrooms.

Hands-on engagement with ECCE concepts: Instead of only listening to lectures, teachers actively engaged in creating, demonstrating, and using teaching-learning materials (TLMs) that were aligned with ECCE principles. They experimented with activities like storytelling, puppet-making, drawing, and using local items for numeracy games. This practical involvement helped them to internalize abstract concepts and made them more confident in applying these ideas with children.

Real-time mentoring by experienced facilitators: Throughout the sessions, experienced facilitators moved between groups to offer guidance, correct misconceptions, and suggest improvements. This immediate feedback helped teachers to refine their approaches and deepen their understanding of ECCE practices. The supportive environment made participants feel encouraged rather than judged, promoting continuous learning and self-improvement.

Teachers reported higher retention of concepts and greater clarity on developmental needs of children. Participation also fostered a sense of ownership and enthusiasm.

b) Thematic Material Creation Using Local Resources:
One of the most effective and practical strategies introduced in the workshop was helping teachers create teaching-learning materials (TLMs) based on specific themes using resources available in their immediate surroundings. Instead of depending on expensive readymade educational kits, teachers were guided to use low-cost and no-cost materials like old newspapers, cardboard, clay, fabric scraps, leaves, pebbles, matchboxes, seeds, and packaging materials. These items were creatively turned into educational tools such as picture charts, flash cards, models, puzzles, and puppets. This approach reduced dependency on expensive kits because it empowered teachers to generate relevant and creative materials without waiting for government supply or NGO intervention. For example, instead of buying factory-made flashcards, a group of teachers designed their own using waste cardboard and colorful paper to teach numbers and alphabets. Similarly, a puppet made of old socks became a tool to teach basic emotions and manners to children through storytelling.

This method also enabled cultural and linguistic contextualization. Teachers used familiar symbols, local stories, and regional languages (such as Hindi, Maithili, or Bhojpuri) to design TLMs. For instance, a counting activity using tamarind seeds not only helped children understand numbers but also made the learning process more enjoyable because they were familiar with the object. Likewise, a chart about local fruits and vegetables written in the children's mother tongue created a sense of connection and relevance. Moreover, the process helped build capacity for improvisation among teachers. Once they understood how to make use of simple materials, they became confident in adapting lessons on the spot based on classroom needs. If a child found it hard to understand a concept, the teacher could immediately create a simple game or drawing using available materials. This flexibility is critical in rural classrooms where resources are often limited and student needs vary widely.

Puppetry, in particular, emerged as a powerful tool. Teachers created paper puppets or sock puppets to perform small roleplays and dialogues. For example, a puppet named "Munna" was used to talk about hygiene practices, while another puppet named "Gudiya" explained good touch and bad touch. These

performances captured children's attention, simplified complex messages, and made learning interactive. Children not only listened more attentively but also started asking questions and participating with enthusiasm.

In essence, the use of thematic, locally-made materials promoted creativity, reduced financial burden, made learning relatable, and enhanced both teaching quality and student engagement. It brought ECCE out of textbooks and into a dynamic, interactive classroom experience that truly responded to children's developmental needs. This approach:

● Reduced dependency on expensive kits
● Enabled cultural and linguistic contextualization
● Helped build capacity for improvisation

For example, one group created a 'local insects' flashcard series in Maithili, linking it to vocabulary development and science learning.

c) Child-Centered Pedagogical Demonstrations:

One of the most impactful components of the training was the focus on child-centered pedagogical demonstrations. Rather than relying on theoretical lectures about how children learn, the workshop created live, simulated classroom environments where teachers could actively practice age-appropriate teaching strategies. These demonstrations allowed teachers to step into real-life classroom situations and test how different tools, tones, and techniques worked with young learners. For example, teachers were asked to conduct short storytelling sessions using handmade puppets, or teach phonics using flashcards made from colored paper. In one such demonstration, a teacher used a sock puppet named "Babli" to narrate a simple moral story. As Babli spoke with expressions, gestures, and a soft, playful voice, other teachers observed how the character kept imaginary children engaged and curious. Later, the facilitator explained how storytelling through puppetry supports emotional development, improves vocabulary, and nurtures listening skills. Similarly, a demonstration on teaching numbers used pebbles and leaves arranged in patterns. The teacher asked children to count, sort, and even create their own number sets. This made learning visual and tactile—especially helpful for children who struggle with abstract concepts. Teachers also explored interactive songs with actions, where children mimicked animal sounds, clapped in rhythm, and moved around. These methods not only helped children remember the content but also kept them physically active and emotionally involved.

Through such live classroom enactments, teachers could reflect on what strategies truly captivated attention, encouraged participation, and supported diverse learning needs. They realized that child-centered pedagogy means respecting each child's pace, interest, and mode of learning—whether through movement, visuals, sounds, or play.

The sessions were made even more enriching through group reflection. After each demonstration, peers and facilitators provided feedback—what worked, what could be improved, and how to modify the same activity for different age groups or topics. This helped teachers feel more confident and less afraid of experimenting in their actual classrooms.

In essence, these pedagogical demonstrations transformed theory into practice. They reminded teachers that children learn best when they are seen, heard, and involved—not when they are silent recipients. A classroom full of questions, laughter, singing, movement, and hands-on activities is far more meaningful than one driven only by textbooks and instructions. The demonstrations sparked creativity and encouraged teachers to view themselves as facilitators of joyful, discovery-driven learning.

Benefits observed:

- Teachers began to replace rote teaching with activity-based techniques
- Sessions were more inclusive and engaging for diverse learners
- Teachers learned how to manage time, transitions, and group dynamics

d) Reflection Journaling and Feedback Circles

An essential component of the workshop model was the practice of reflection journaling and feedback circles—two powerful tools to help teachers grow as thoughtful and self-aware educators. Often in traditional training programs, teachers passively receive information without the time or space to think about how it connects to their classroom realities. This workshop broke that pattern.

Each teacher was given a journal to document their learning journey throughout the workshop. At the end of every session, they were encouraged to write down what they learned, what activities worked well, what challenges they faced, and what new ideas they wanted to try in their own classrooms. These personal reflections helped teachers move beyond surface-level participation to deep thinking. For example, one teacher wrote how using a puppet in a storytelling session made her realize the power of voice modulation and expression in capturing children's attention. Another reflected on how group discussions gave her new ideas for incorporating local culture into her teaching.

In addition to individual journaling, the workshop also included daily feedback circles. In these circles, teachers sat together in small groups to share their reflections aloud. They discussed what they had tried, what they observed in others' work, and what they felt about their own growth. Facilitators encouraged an open, non-judgmental atmosphere where everyone's input was valued. These conversations were rich with insights. One teacher shared how nervous she had been about creating TLMs but felt proud when her group's material was appreciated. Another spoke about learning to manage time better during activities.

Together, journaling and feedback circles created a safe space for honest dialogue, critical thinking, and emotional sharing. They nurtured a sense of community where teachers supported and learned from one another—not just technically, but emotionally and morally as well. Teachers began to see that growth is not just about adopting new methods but also about reflecting on one's mindset, practices, and goals.

Most importantly, these practices helped to initiate a culture of continuous improvement. Teachers began to understand that every classroom experience, whether successful or not, offers something to learn. They started viewing themselves not only as instructors but as evolving professionals capable of innovation and self-renewal.

In summary, reflection journaling and feedback circles turned the workshop from a one-time training into a transformative journey—one that could be continued and sustained even after returning to their schools.

Such reflection:

- Deepened conceptual understanding
- Highlighted individual and group learning curves
- Created continuity for future classroom applications

e) Real-Classroom Simulations:

One of the most impactful practices introduced during the workshop was real-classroom simulation. In this method, teachers acted out full classroom sessions while other participants assumed the roles of students. These mock sessions brought theoretical training to life and helped teachers test strategies, classroom management techniques, and child engagement methods in a safe and supportive environment. For teachers in Bihar—many of whom work in overcrowded or resource-poor classrooms—this exercise offered a rare chance to practice, make mistakes, and refine their teaching without fear of judgment.

For instance, one simulation focused on teaching basic counting to children using tamarind seeds and locally made number mats. As the teacher moved through the lesson, she had to respond to questions, adjust the pacing, and keep her 'students' engaged—just like in a real classroom. Observers noted how her eye contact, body language, and use of space made a big difference in holding attention. Through feedback that followed, she realized the importance of breaking down instructions, using encouraging tone, and adding songs to transition between tasks. Such simulations are particularly valuable in Bihar's diverse linguistic and socio-economic setting, where a one-size-fits-all approach doesn't work. These exercises helped teachers become adaptive, sensitive, and responsive to real-world challenges they face daily in their schools.

f) Collaborative Material Display and Peer Review:

On the final day of the workshop, each group of teachers was invited to set up a display of the Teaching-Learning Materials (TLMs) they had developed over the course of the training. This exhibition not only celebrated their creativity but also acted as a powerful peer-learning platform. Teachers walked around, observed others' work, asked questions, and offered feedback using a common rubric that focused on creativity, age-appropriateness, relevance, cultural context, and clarity. In the context of Bihar, where teachers rarely get opportunities to showcase their innovations, this platform was both empowering and energizing.

The activity encouraged healthy professional dialogue and built a strong sense of mutual respect among educators. One teacher from a remote village shared how seeing another group's puppet-based math story inspired her to develop something similar using local folktales. Another appreciated a Maithili rhyme chart created by peers and expressed eagerness to adapt it for her own classroom. This exchange of ideas turned the room into a living gallery of low-cost, high-impact innovations tailored to Bihar's cultural and linguistic landscape. More importantly, the peer review exercise helped teachers internalize what quality in ECCE materials looks like, giving them a clear benchmark to strive for in their future work. It reinforced the idea that collaboration, not competition, drives sustainable educational change in rural settings.

This step:
- Validated diverse teaching styles
- Offered constructive critique
- Helped teachers internalize standards of quality ECCE

Field-Level Implementation in Bihar's Context:

In Bihar, the field-level implementation of ECCE strategies has found a vibrant expression through innovative platforms such as Teaching-Learning Material (TLM) Melas organized at the district and block levels. These events serve not only as exhibitions but also as competitions where teachers are encouraged to design handmade educational materials using locally available resources. This approach transforms routine teacher training into a celebration of creativity, collaboration, and classroom relevance. Teachers from various schools participate enthusiastically, and selected entries are showcased at state-level exhibitions in Patna. These Melas act as talent incubators, recognizing teacher-led innovations and promoting their wider adoption.

A similar TLM Mela was recently organized involving ten schools from nearby panchayats. Teachers came together to display their best creations—ranging from puppets and puzzles to math kits and story charts—designed to align with ECCE principles. A competitive yet collaborative spirit prevailed, as educators explained their materials, learned from peers, and received recognition in the form of awards

and certificates. This not only boosted morale but also instilled a sense of professional pride. Teachers reported that the appreciation they received encouraged them to continue innovating and applying new ideas in their classrooms. Such initiatives help build a culture of continuous improvement, peer learning, and contextual resourcefulness, ultimately enriching the quality of early education across Bihar.

Advantages of the Contextualized ECCE Approach: The multi-layered, context-sensitive model provided the following benefits:

- Built teachers' capacity through experiential immersion
- Rooted ECCE strategies in real classroom conditions
- Enabled scalable and sustainable practices
- Integrated policy vision (NEP, NIPUN) with ground-level innovation

Policy-Level Suggestions for Bihar:

To ensure the sustainability and scalability of effective ECCE practices in Bihar, it is imperative that state education policies go beyond recommendations and institutionalize successful innovations at the grassroots. Based on field-level experiences and feedback from teachers, the following key suggestions are proposed:

1. Integration of ECCE into Teacher Education Programs: There is an urgent need to formally embed ECCE concepts, practices, and field exposure into both pre-service and in-service teacher training curricula. Training modules should include child development theories, age-appropriate pedagogies, local TLM creation, and classroom simulations, ensuring teachers enter classrooms with practical tools and a developmentally sensitive mindset.

2. Establishment of ECCE Resource Cells at DIETs and BRCs: Each District Institute of Education and Training (DIET) and Block Resource Centre (BRC) should have a dedicated ECCE resource cell that develops, curates, and distributes contextually relevant TLMs. These cells can serve as local hubs for teacher mentoring, model classroom observations, and continuous capacity-building activities.

3. Promotion of TLM Melas as Platforms for Peer Learning and Recognition: The practice of organizing TLM Melas at cluster, block, and district levels should be scaled up and integrated into the official academic calendar. These Melas not only serve as platforms for showcasing teacher innovations but also act as peer learning spaces. While teachers are already receiving recognition in PM ECCE Melas through awards and commendations, it is important to institutionalize this process by linking it to teacher appraisals and performance tracking systems.

4. Introduction of Non-Monetary Incentives for Innovation: Given that financial incentives may not be immediately feasible, symbolic incentives such as professional growth opportunities, public recognition at educational events, inclusion of innovative practices in state newsletters, and nominations for advanced training programs can serve as strong motivators. These recognitions help build a culture of professional pride and reinforce teacher agency.

5. Development of a State-Level ECCE Digital Repository: A centralized online portal can be created where teachers from across Bihar upload photos, videos, and documentation of their best ECCE practices. This repository would allow cross-sharing of ideas, encourage replication of successful models, and serve as a reflective tool for continuous improvement.

6. Collaboration Between Departments: Effective ECCE delivery requires coordination between the Department of Education and the Department of Women and Child Development. Joint planning for

capacity-building, infrastructure support, and learning assessments will ensure a more holistic implementation of ECCE goals.

7. Community Engagement through ECCE Orientation Camps: Panchayat-level ECCE orientation camps can be organized involving parents, local leaders, and educators. These camps would spread awareness about the importance of ECCE, parental roles, and school-readiness, thereby building community ownership and support for early education.

8. ECCE Monitoring through School Development Plans: Each school should incorporate ECCE targets and activities into its annual School Development Plan (SDP). This would bring early childhood goals into the mainstream planning process and ensure regular monitoring and evaluation.

These policy-level actions, if systematically adopted, can transform ECCE in Bihar from a fragmented initiative into a fully embedded, professionally driven and community-supported movement, ensuring that every child receives a strong start to lifelong learning., the following steps are proposed:

- Teacher Education Reforms: Integrate ECCE workshops as a module in in-service and pre-service training curricula.
- Localized ECCE Resource Banks: Develop district-level repositories of locally produced TLMs and best practices.
- Incentive and Recognition: Establish annual awards for teacher-innovators in ECCE.
- Digital Sharing Platforms: Use WhatsApp groups or DIKSHA to circulate workshop videos, reflections, and success stories.

Community Involvement: Engage parents in workshops to reinforce ECCE learning at home.To institutionalize such practices, the following steps are proposed:

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Community Involvement: Engage parents in workshops to reinforce ECCE learning at home.

Key components studied:

- Theme-based TLM preparation using local materials
- Group-based teacher capacity-building exercises
- Reflection-based presentations
- Developmentally appropriate practices (DAPs)

Data was drawn from workshop documentation, teacher feedback forms, and observational reports.

Adapting the DIET Shopian Model for Bihar:

Unlike Jammu & Kashmir, Bihar faces a different set of challenges—low infrastructure, multilingual classrooms, and socio-economic diversity. Therefore, the adapted model for Bihar included:

- Translating key workshop modules into Hindi and Maithili
- Conducting zonal teacher workshops under DIET Bhagalpur
- Emphasis on low-cost/no-cost TLMs sourced from local environments
- Thematic modules linked to NIPUN Bharat FLN goals (e.g., numeracy through local games)

A six-day pilot workshop with 80 primary teachers was conducted in Naigaon cluster. Teachers developed theme-based materials such as rhyming charts, story puppets, and tactile learning aids. Presentations and peer feedback enhanced their confidence and practice.

Observations and Discussion:

The practical implementation of ECCE-focused strategies across selected schools in Bihar led to several inspiring results. One of the most notable observations was a remarkable rise in teacher motivation. When educators were given creative freedom and encouraged to use handmade, locally available materials, they responded with great enthusiasm. They began to believe in their own potential as innovators, no longer dependent solely on textbook-bound teaching. For many, this was the first time they truly felt like creators of meaningful learning environments.

Children's classroom participation also improved significantly. Activities such as puppet storytelling, using pebbles for counting, or singing local rhymes created a playful atmosphere that made children eager to attend and engage. Children who were once shy or inattentive began to respond actively, showing curiosity, asking questions, and interacting with their classmates more confidently. Teachers observed that children's verbal expression improved when they were taught through relatable, familiar contexts.

The feedback process—via peer reviews and reflection journals—was another game-changer. Teachers not only learned from facilitators but also from each other. Many became more open to feedback and self-assessment, gradually shifting from rigid to flexible, responsive teaching. They understood that every classroom experiment, whether successful or not, was a learning opportunity.

These changes are deeply meaningful for Bihar, where many classrooms still follow rigid, teacher-led methods. This experience proves that even within resource-constrained settings, with the right mindset and support, joyful and effective early childhood education is very much achievable. The workshop led to several notable changes:

- **Improved teacher motivation**: Teachers became more confident in using local material and contextual examples.
- **Enhanced classroom engagement**: Use of puppetry, storytelling, and interactive charts made classrooms more vibrant.
- **Gender-sensitive practices**: Equal participation from male and female teachers led to more balanced discussion on child sensitivity.
- **Reflective practices**: Teachers maintained journals, noting what strategies worked and which did not—marking the beginning of action research culture.

Teacher Capacity Building and TLM Development

An integral aspect was promoting teacher-led innovation. Teachers were encouraged to create the following:

- **Three-dimensional models** (e.g., fruit baskets, animal models)
- **Flash cards** and **command cards**
- **Abacus-based activities** for numeracy
- **Rhyming puppets** for phonemic awareness

Use of local materials like clay, leaves, old newspapers, and cloth waste not only made the TLMs cost-effective but also rooted them in children's familiar environment.

Policy Recommendations for Bihar:

To scale such innovations across the state, the following steps are recommended:

- Integrate ECCE modules into Bihar Teacher Eligibility Test (BTET) training
- Create ECCE resource rooms in every DIET
- Mandate one ECCE-based workshop per year per district
- Use digital platforms to showcase teacher-created TLMs and practices
- Include ECCE reflection logs in teachers' annual appraisal

These steps align with the NEP 2020 directive to universalize ECCE by 2030.

Conclusion

The adaptation of the DIET Shopian ECCE model to rural Bihar shows promising potential. Teacher agency, contextual learning, and low-cost innovation form the tripod of success. With sustained support, such models can bridge the foundational gaps that hinder educational progress in under-resourced areas. ECCE is not just a policy goal—it is a moral imperative.

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