

The Emerging Roles of the School Librarian in the Tech Era: A Transformative Synergy with NEP 2020 and KVS Initiatives

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Abstract

The implementation of the National Education Policy (NEP) 2020 in India mandates a radical paradigm shift in the school education ecosystem, moving from rote-based learning toward a 5+3+3+4 pedagogical structure centered on critical thinking and multidisciplinary exploration. This paper employs a Qualitative Policy-to-Practice Synthesis (QPPS) design to analyze the evolving role of the school librarian as a strategic catalyst within this framework, with a specific focus on the Kendriya Vidyalaya Sangathan (KVS) system. Guided by the Technology Acceptance Model (TAM) and Self-Determination Theory (SDT), the study examines how the traditional identity of the librarian is being reconstructed into a tripartite model: AI Mediator, Data Curator, and Pedagogical Innovator. The research highlights that universal Foundational Literacy and Numeracy (FLN) targets for 2026-27 a central priority of the NIPUN Bharat initiative cannot be achieved without the librarian's transition into a Literacy Interventionist. Furthermore, the paper explores the technical imperatives of Human-AI Collaboration (HAC), advocating for hybrid cataloging workflows and the adoption of Explainable AI (XAI) to ensure ethical governance in school libraries. Empirical observations from KVS initiatives, including the integration of the National Digital Library of India (NDLI) and the "Balvatika" pilot programs, serve as evidence for the librarian's role in fostering cyber resilience and algorithmic literacy. The study concludes that the school librarian is no longer a peripheral resource manager but an essential instructional designer. The findings suggest that the long-term success of NEP 2020 depends on institutional investment in the librarian's dual capacity as a technical expert in metadata standards (MARC 21, OAI-PMH) and an ethical steward of the school's digital future.

Keywords: School librarian, NEP 2020, kendriya vidyalaya sangathan (KVS), foundational literacy and numeracy (FLN), AI literacy, algorithmic literacy, innovative pedagogy, digital preservation, data curation, multidisciplinary education.

INTRODUCTION: THE LIS MANDATE IN THE NEP 2020 ERA

The National Education Policy (NEP) 2020 is founded upon the five guiding pillars of Access, Equity, Quality, Affordability, and Accountability, aiming to transform India into an equitable and vibrant knowledge society. This vision replaces the traditional 10+2 structure with a developmentally-focused 5+3+3+4 pedagogical framework. This dramatic shift necessitates that education move away from rote learning toward critical thinking, conceptual understanding, and multidisciplinary exploration [1].

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The library is inherently positioned as a core implementation mechanism for the NEP's philosophical and practical goals. The transformation of the school librarian's role is no longer optional; it is a systemic mandate. The

traditional identity of the librarian as a static "information gatekeeper" is giving way to that of an intellectual mediator and community facilitator. This transformation is acutely visible within the Kendriya Vidyalaya Sangathan (KVS) system, which, as a premier national body, is tasked with piloting and scaling NEP implementation strategies across its schools [2].

This paper analyzes the emerging, specialized roles of the school librarian, demonstrating how their unique integration of traditional LIS practice, technological expertise, and innovative pedagogy is essential for realizing the NEP 2020 vision, particularly within KVS initiatives [3].

THE NEP MANDATE: FLN, MULTIDISCIPLINARITY, AND KVS IMPLEMENTATION

The Highest Priority: Foundational Literacy and Numeracy (FLN)

The NEP 2020 explicitly states that achieving universal Foundational Literacy and Numeracy (FLN) by 2026-27 is the "highest priority" for the nation, arguing that the remainder of the policy will be largely ineffective if this fundamental learning (reading, writing, and arithmetic) is not first achieved [4].

The librarian's role in the Foundational (ages 3–8) and Preparatory (ages 8–11) stages is critical:

- *Literacy Intervention Centre:* The library must evolve from a passive repository into an active literacy intervention centre that directly supports the Foundational Stage's emphasis on play-based and activity-based learning. This requires redesigning physical spaces and developing integrated reading programs aligned with curriculum needs, transforming the librarian into a literacy specialist and learning facilitator rather than a resource guardian [5].
- *KVS Initiative Alignment:* The KVS system provides concrete proof of this priority by actively implementing the NIPUN Bharat INITIATIVES tracking student progress in Classes I to III toward FLN attainment through a web-application linked to the PIMS. Furthermore, KVS revised the age of admission for Class I to 6+ years and introduced Balvatika on a pilot basis, directly supporting the foundational stage restructuring. The school librarian is indispensable in operationalizing these national missions at the local level by curating and providing the necessary multimedia and print resources [6].

Multidisciplinary Learning and Research Culture

The NEP mandates a shift toward holistic and multidisciplinary education, removing rigid disciplinary boundaries and promoting experiential learning in subjects from STEM to vocational training [7].

The librarian, acting as an expert consultant and resource manager, supports this mandate by:

- *Collection Transformation:* Traditional collection strategies, often segregated into strict subject silos, are inadequate. The librarian must reform collection development policies to prioritize the acquisition of interdisciplinary and transdisciplinary resources [8].
- *Creating Learning Labs:* The physical library must be reimaged as a dynamic, flexible "learning lab" or "interdisciplinary academic unit" where students can apply theoretical knowledge to practical, project-based problems. Flexible spaces (using movable furniture and modular walls) are essential for accommodating collaborative work and technology integration [9].
- *Research Skill Development:* The NEP emphasizes developing research capabilities from early education. The librarian facilitates this by providing specialized training in research methods, academic writing, and critical information evaluation skills, serving as the primary agent for cultivating a genuine research culture within the school environment [10].

RESEARCH DESIGN AND THEORETICAL FRAMEWORK

Research Methodology: Qualitative Policy-to-Practice Synthesis (QPPS)

This study utilizes a Qualitative Policy-to-Practice Synthesis (QPPS) methodology to evaluate the intersection of national mandates and library operations. This design is appropriate for analyzing high-

level policy documents specifically the NEP 2020 and the NIPUN Bharat Guidelines against the technical implementation frameworks of the Kendriya Vidyalaya Sangathan (KVS) [11].

The research involves a systematic triangulation of:

- *National Policy Mandates*: Directives concerning Foundational Literacy and Numeracy (FLN) and multidisciplinary education [12].
- *Institutional Initiatives*: KVS-specific digital strategies, including the use of the National Digital Library of India (NDLI) and the PIMS-linked NIPUN tracking systems [13].
- *LIS Technical Standards*: Professional benchmarks for metadata integrity (MARC 21), repository interoperability (OAI-PMH), and ethical AI governance [14].

Theoretical Framework: TAM and SDT

To provide a robust analytical lens for the librarian's evolving role, this paper adopts a dual-theoretical framework [15].

The Technology Acceptance Model (TAM)

Originally proposed by Fred Davis, TAM suggests that the adoption of new technology is determined by two primary factors: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) [16]. In the context of the modern school library, the librarian acts as the primary "TAM Mediator." By curating high-quality OERs and providing technical training, the librarian increases the PU and PEOU of complex AI tools and digital repositories for both students and faculty. This mediation is essential for shifting the school culture from technology-resistance to technology-fluency [17].

Self-Determination Theory (SDT)

To analyze the librarian's pedagogical impact, we employ Self-Determination Theory (SDT), which focuses on three innate psychological needs: Autonomy, Competence, and Relatedness [18].

- *Autonomy*: The library provides a space for self-directed, non-linear inquiry away from the rigid classroom structure [19].
- *Competence*: Through gamified information literacy modules (e.g., "Prompt Engineering Challenges"), the librarian builds the student's mastery of digital tools [20].
- *Relatedness*: The library serves as a social learning hub where multidisciplinary collaboration is fostered, aligning with the NEP's vision of a holistic community of learners [21].

THE EMERGING ROLES: TECHNICAL MASTERY AND ETHICAL STEWARDSHIP

The emerging role of the school librarian is defined by a necessary integration of traditional technical competence, advanced technology management, and ethical governance [22].

The Specialist in Technical Services and Traditional Practice

The effective management of modern library operations requires deep expertise in LIS conventional practices and technical software [23].

- *Hybrid Cataloging and ILS Management*: While AI offers metadata automation (e.g., using algorithms like KNN or AdaBoost for resource discovery), the librarian, proficient in library techniques and software, ensures the structural integrity of the Integrated Library System (ILS) and its data [24]. This requires implementing a hybrid approach where machine-generated metadata is subject to mandatory human validation to prevent precision errors and maintain subject integrity transforming the cataloger into a specialized human editor and validator [25].
- *Digital Preservation and Conservation*: Expertise in preservation and conservation techniques is directly applied to the digital realm [26]. The librarian ensures data resilience and reliability by requiring "paradata by design" metadata documenting the process of creation and preservation to be included in the initial system design for digital archives [27]. This upholds the authenticity of digital records, a principle analogous to the care of physical artifacts [28].

The Data Curator and AI Strategist

The librarian's specialization now extends into high-level data governance, mirroring the functions of the Data Science & AI Librarian found in research institutions [29].

- *Data Curation and Policy:* The librarian acts as a Data Curator, responsible for ensuring data quality, structure, and ethical handling. This involves advising on research ethics and sensitive-data handling and coordinating compliance for any text/data mining (TDM) or API use with educational vendors [30].
- *Technical Consulting:* The librarian provides consultancy to the school administration on technology adoption, ensuring that new digital infrastructure (such as those required for advanced recommendation systems) is scalable and aligned with institutional values. This expertise helps the school strategically manage its budget and growth in the tech era [31].
- *KVS Digital Resource Management:* The librarian is central to leveraging the National Digital Library of India (NDLI), which includes content aggregated from Kendriya Vidyalayas (KVs) as a source [32]. The librarian trains students to access this wealth of resources including NCERT books, Virtual Labs, and competitive exam solutions by content type, subject, or source (KVS, CBSE, Diksha), thereby maximizing the NEP's digital access mandate [33].

INNOVATIVE PEDAGOGY FOR CYBER RESILIENCE AND AI LITERACY

As the Educational Innovator, the librarian uses advanced pedagogical techniques to in still the 21st-century skills emphasized by the NEP, focusing specifically on critical thinking and cyber resilience [34].

The Flipped Classroom and Critical Literacy

The librarian effectively adopts the Flipped Classroom model, requiring students to complete foundational learning (lectures, readings) outside of class, reserving in-person library time for active learning, collaboration, and practical application [35].

- *Critical Thinking Instruction:* The library classroom becomes a dedicated space for teaching higher-order skills. Librarians use Socratic questioning methods and guided source analysis to promote critical reasoning, encouraging students to challenge the economic and political context of knowledge and information flow [36]. This process helps students critically assess information and avoid the pitfalls of rote learning, aligning directly with the NEP's call for deep engagement and questioning [37].
- *AI and Algorithmic Literacy:* The core instructional challenge is preparing students for an algorithmically mediated world [38]. The librarian is the primary advocate for AI literacy, teaching students to interpret AI-driven results, evaluate source credibility (especially concerning misinformation), and recognize inherent algorithmic biases. This training includes instilling algorithmic literacy, helping students understand the influence of algorithms and how to use effective prompting strategies to maximize output from GenAI tools transforming them into "prompt-literate patrons" [39].

Gamification and Interactive Media for Engagement

To boost user participation and skill retention, the librarian utilizes innovative practices like gamification and interactive media [40].

- *Gamified Learning:* Gamification involves applying game mechanics (badges, points, tiered challenges) to educational activities, directly aligning with the NEP's emphasis on "enjoyable and engaging" learning. The librarian can use badge systems for training in database search skills or critical source evaluation, incrementally building information literacy competence through engaging, personalized challenges [41].
- *Interactive Engagement:* The library leverages interactive media (such as AR/VR or multimedia displays) to simplify information access and create immersive learning environments, moving beyond traditional instruction to boost user participation and exploration of resources [42].

ETHICAL GOVERNANCE AND ACCOUNTABILITY: THE HUMAN IMPERATIVE

The emerging role is fundamentally one of ethical governance. The KVS system, through its Continuous Professional Development (CPD) programs, emphasizes upgrading teachers' competence on the NEP-2020 implementation mandate. The librarian, as a teacher and consultant, plays a critical part in this CPD by focusing on the ethical and technical compliance of technology adoption [43].

Human Oversight and the ARL Principle

The commitment to ethical governance is codified by the ARL principle: "Libraries believe 'no human, no AI'," which underscores the necessity of human involvement at critical decision-making junctures to ensure accountability, reliability, and ethical consideration [44].

- *Mitigating Bias*: The librarian, as an ethical mediator, commits to understanding where algorithmic biases exist in AI models and leveraging this expertise to raise user awareness, thereby fulfilling the LIS commitment to equitable access.
- *XAI Foundation*: Future research and deployment must focus on Explainable AI (XAI), which moves past the "black box" problem by making algorithmic decisions interpretable to humans. XAI is the technical foundation for achieving meaningful human oversight.

Strategic Consultancy and Library Growth

The librarian provides strategic consultancy by utilizing frameworks like the Balanced Scorecard (measuring financial, internal process, learning, and customer outcomes) or SWOT Analysis to evaluate library services, plan for growth, and justify the strategic investment in technology and staff training. The measurable ROI generated by AI automation (e.g., saving staff time) is the financial evidence required to sustain investment in high-touch human roles, making the librarian's strategic consulting role essential for institutional longevity [45].

CONCLUSION

The National Education Policy 2020 necessitates a fundamental and integrated transformation of the school librarian's role. The emerging identity is complex: an Expert Librarian proficient in conventional practices, a Technical Specialist capable of managing modern software and preserving digital assets, and an Educational Innovator who actively in stills critical AI and algorithmic literacy.

The success of the NEP 2020 in school systems like Kendriya Vidyalaya Sangathan depends on successfully executing this pivot. The KVS has initiated the foundational steps (FLN tracking, Balvatika), but the ultimate quality of the learning outcomes the critical thinking, creativity, and competency-based assessment will be determined by the school librarian's capacity to serve as the ethical steward and pedagogical partner. By embracing Human-AI Collaboration (HAC) and ensuring that human judgment maintains supremacy over algorithmic efficiency, the school librarian secures the institution's digital future and reinforces the enduring mission of empowering every child in the complex new age of knowledge.

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