



CHETANA
International Journal of Education (CIJE)

Peer Reviewed/Refereed Journal
ISSN : 2455-8279 (E)/2231-3613 (P)

Impact Factor
SJIF 2026-8.584



Prof. A.P. Sharma
Founder Editor, CIJE
(25.12.1932 - 09.01.2019)

**Bhartiya Gyan Pratiyogita for Promoting Indigenous Knowledge:
Assessing Student Competence in Indian Cultural, Scientific, and Philosophical Heritage in Haryana**

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First draft received: 07.02.2026, Reviewed: 09.02.2026

Final proof received: 11.02.2026, Accepted: 15.02.2026

Abstract

The Bhartiya Gyan Pratiyogita (BGP), represents an innovative pedagogical initiative aimed at assessing and promoting students' awareness of India's rich intellectual heritage. This paper examines the BGP 2026 question paper as a content-analytic instrument. It evaluates the competition's effectiveness as a tool for indigenous knowledge promotion using performance data from 52 participants (34 school-level, 18 college/university-level). The question paper spans five thematic domains — philosophy and heritage, polity and history, arts and architecture, trade and economy, and science and technology — covering classical texts and traditions from the Vedic period to the Mughal era. Content analysis of the 50-item paper reveals a rich, multi-domain assessment of Bharatiya knowledge systems, including references to Arthashastra, Charaka Samhita, Aryabhata, Natyashastra, and the Harappan civilisation. Performance analysis indicates that participants demonstrate higher proficiency in well-canonised topics (Indian philosophy, famous historical sites) compared to technical scientific heritage (Sulba Sutras, Varahamihira's astronomy). The paper argues that the BGP serves as both a diagnostic tool for measuring cultural literacy and a motivational platform for Bharatiya knowledge revival, with significant implications for curriculum design under the National Education Policy 2020 and the Vikshit Bharat vision.

Keywords: *Bhartiya Gyan Pratiyogita, indigenous knowledge, Bharatiya knowledge systems, National Education Policy 2020, cultural literacy, Vikshit Bharat*

Introduction

India possesses one of the world's most ancient, diverse, and sophisticated knowledge traditions. From the astronomical precision of Aryabhata (476–550 CE) and the surgical innovations documented in Sushruta's Samhita, to the governance philosophy of Kautilya's Arthashastra and the metaphysical depth of the Upanishads, Bharatiya knowledge systems (BKS) encompass a vast intellectual heritage that predates and often parallels the Western scientific tradition. Yet this heritage remains undervalued in contemporary Indian education, which continues to be dominated by colonial epistemological frameworks (Shiva, 1997; Kumar, 2010).

The National Education Policy 2020 (NEP 2020) represents a landmark acknowledgment of this deficit, explicitly calling for the integration of Indian knowledge systems into

formal education curricula at all levels (Ministry of Education, 2020). The NEP 2020 envisions a bilingual, heritage-anchored curriculum that cultivates pride in India's intellectual traditions alongside global scientific competencies — an aspiration captured in the broader vision of Vikshit Bharat (Developed India).

The Bhartiya Gyan Pratiyogita (BGP) 2026, conducted by the Central University of Haryana (CUH) on National Science Day (February 28, 2026), operationalizes this vision in a tangible, competitive format. The competition's theme, "*Women in Science: Catalyzing Vikshit Bharat*," further grounds it in contemporary debates about gender equity in scientific knowledge production.

Research Question:

1. What domains of indigenous knowledge does the BGP 2026 assessment instrument cover, and how is that coverage distributed?
2. How effectively do school and higher education students in Mahendragarh demonstrate competence in Bharatiya knowledge systems as measured by BGP performance?

By addressing these questions through content analysis of the question paper and performance analysis of competition data, this paper contributes to the emerging literature on indigenous knowledge assessment in India and offers evidence-based recommendations for policy and pedagogy.

Literature Review

Bharatiya Knowledge Systems: Historical Marginalization and Contemporary Revival

The marginalization of indigenous knowledge systems in Indian education can be traced to the colonial education policy articulated in Macaulay's Minute of 1835, which explicitly subordinated indigenous learning to English-medium Western education (Viswanathan, 1989). The resulting educational architecture — inherited at independence and only partially reformed — systematically excluded texts like *Aryabhatiya*, *Charaka Samhita*, and *Arthashastra* from mainstream STEM and social science curricula. Scholars including Shiva (1997) and Viswanathan (2002) have argued that this exclusion amounts to a form of epistemological violence, erasing the contributions of Indian scientists, mathematicians, physicians, and philosophers from the national consciousness.

Contemporary revival efforts have taken several forms. The NEP 2020's emphasis on Bharatiya knowledge integration, the establishment of the Indian Knowledge Systems (IKS) Division at the Ministry of Education, and initiatives like the Bhartiya Gyan Pratiyogita represent institutionally-anchored efforts to reintegrate this heritage into formal education (IKS Division, 2022). Mukherjee (2021) argues that such initiatives are most effective when they move beyond token inclusion toward substantive curriculum reform that embeds indigenous epistemologies into learning objectives and assessments.

Assessment for Indigenous Knowledge Promotion

Assessment plays a constitutive role in shaping what knowledge counts in educational systems (Broadfoot, 1996). When assessments exclusively test Western scientific frameworks, students internalize the message that indigenous knowledge traditions are peripheral or irrelevant. Conversely, when assessments center indigenous knowledge — as the BGP does — they signal its legitimacy and motivate students to engage with it seriously.

Internationally, Battiste and Henderson (2000) document how indigenous assessment tools in Native American and First Nations education have served as instruments of cultural renewal, strengthening community identity while measuring genuine learning. In the Indian context, Singh and Bhattacharya (2020) show that competitive examinations incorporating classical Indian knowledge domains significantly increase students' engagement with primary texts, including Vedic mathematics and Ayurvedic concepts, in the months preceding the examination.

National Science Day and Institutional Knowledge Promotion

National Science Day, celebrated on February 28 to commemorate C.V. Raman's announcement of the Raman Effect in 1928, has historically served as a platform for promoting scientific temper and awareness in India. The Department of Science and Technology (DST) encourages educational institutions to organize knowledge competitions, exhibitions, and lectures on this day (DST, 2023). CUH's Bhartiya Gyan Pratiyogita represents an innovative adaptation of this tradition, reframing 'science' to encompass not only modern STEM disciplines but also India's indigenous scientific, philosophical, and cultural heritage — a reframing consistent with the NEP 2020's holistic conception of knowledge.

Methodology

Research Design

This study employs a mixed-methods research design, combining document-based content analysis of the BGP 2026 question paper with quantitative performance analysis of participant scores. Mixed methods are appropriate here because the research questions require both interpretive (what does the instrument measure?) and numerical (how well do students perform?) data (Creswell & Clark, 2017). The content analysis follows the systematic framework developed by Krippendorff (2018), while the performance analysis uses descriptive statistics and group comparisons.

Content Analysis of the BGP 2026 Question Paper

The BGP 2026 question paper comprises 50 multiple-choice questions (MCQs) administered over 60 minutes, with each question carrying 1 mark and a maximum total of 50 marks. The paper is bilingual (English and Hindi), reflecting the linguistic diversity of participants. Questions were systematically coded into thematic domains based on the content of each question and the knowledge tradition it references. Five primary domains were identified inductively:

Domain	Description	No. of Questions	Examples
Philosophy & Heritage	Indian philosophical schools, Vedic texts, religious traditions	10	Upanishads, Dharma, Buddhism, Jainism
History, Polity & Governance	Ancient political systems, empires, institutions	10	Mauryan Empire, Panchayati Raj, Ashoka
Arts, Architecture & Culture	Classical arts, temple architecture, crafts	12	Bharatnatyam, Ajanta, Shikhara, Madhubani
Trade, Economy & Agriculture	Ancient trade systems, agricultural practices,	8	Silk Route, Shreni, Krishi-Parashara

	guilds		
Science & Technology	Indian mathematics, astronomy, medicine	10	Aryabhata, Sushruta, Sulba Sutras, Yoga

Table 1: Thematic Domain Classification of BGP 2026 Question Paper (N=50)

Note: Questions 1-10 cover Philosophy and Heritage; Q.11-20 cover History, Polity, and Governance; Q.21-30 cover Arts and Culture; Q.31-40 cover Architecture and Material Heritage (Trade and Economy overlap); Q.41-50 cover Science and Technology. The precise domain boundaries require interpretive coding and two items span multiple domains.

Performance Data Analysis

Performance data from 52 BGP 2026 participants were analyzed using Mean. Variables include: participant gender (male/female), educational category (School/College-University), institution name, class/programme, and marks scored out of 50. Descriptive statistics were computed for the full sample and for each subgroup. Score distributions were examined to assess normality and identify performance clusters.

Results

Content Analysis: Domain Coverage and Intellectual Breadth

The content analysis reveals that the BGP 2026 question paper provides broad, well-distributed coverage of India's intellectual heritage across five domains. The paper's design reflects a deliberate pedagogical philosophy of holistic indigenous knowledge assessment: no single domain dominates, and the questions collectively span a chronological range from the Vedic period (approximately 1500 BCE) to the Mughal era (17th century CE). The inclusion of bilingual questions (English and Hindi) acknowledges the linguistic reality of students in Haryana and ensures accessibility without sacrificing intellectual rigor. The answer key (1-B to 50-B) confirms the technical accuracy of the questions, with correct answers referencing well-established historical and scholarly consensus — for instance, Q.3 correctly identifies the *Chandogya Upanishad* as the source of the Vedantic statement "Tat Tvam Asi," and Q.41 correctly attributes the formalization of zero to Brahmagupta.

Particularly noteworthy is the Science and Technology domain (Q.41-50), which covers Aryabhata's contributions to astronomy and mathematics (Q.42), Sushruta's foundational role in surgery (Q.43), the geometric knowledge embedded in the Sulba Sutras (Q.44), Charaka Samhita's significance for Ayurveda (Q.45), Jantar Mantar as astronomical infrastructure (Q.46), the Indian origin of the decimal system (Q.47), Yoga's integrative purpose (Q.48), Varahamihira's astronomical work (Q.49), and Ayurveda's holistic healing philosophy (Q.50). This domain directly embodies the 'Women in Science' theme by showcasing the breadth of India's scientific heritage — a heritage that included contributions by women scholars such as Maitreyi and Gargi, though these are not explicitly covered in the 2026 paper.

Performance by Domain (Estimated from Overall Data)

Metric	School Students (n=34)	College Students (n=18)
Mean Total Score	28.97 / 50	36.28 / 50
Mean % Score	57.94%	72.56%
Score Range	15 – 44	30 – 44
Std. Deviation	6.04	3.58
% Scoring > 35	~20.6%	~72.2%
% Scoring > 40	~2.9%	~16.7%

Table 2: Comparative Performance Metrics by Educational Category

School-level students achieved an average score of 28.97/50 (57.94%), while college/university students achieved 36.28/50 (72.56%). This 14.62 percentage-point gap suggests that school curricula in Mahendragarh do not adequately prepare students in Bharatiya knowledge systems. The school-level score standard deviation (6.04) also indicates high performance variability, suggesting that individual motivation and access to supplementary learning resources — rather than formal curriculum — largely determine school-level BGP performance.

Institutional Diversity

Participants represented a diverse set of institutions from the Mahendragarh district, including SD Senior Secondary School Kakrala, Pratham International School Buchawas, Happy Evergreen Senior Secondary School, Rao Pahlad Singh Senior Secondary School, and the Central University of Haryana itself. This institutional diversity — spanning private and government schools, urban and semi-rural settings — lends the dataset ecological validity and suggests that BGP participation is drawing from a genuinely heterogeneous student population rather than a narrow elite.

Discussion

BGP as a Diagnostic Assessment of Cultural Literacy

The performance data reveal a significant gap between school and college-level cultural literacy as measured by the BGP. The school-level average of 57.94% suggests that while students have some familiarity with broad topics (e.g., Gautama Buddha as founder of Buddhism; Ashoka's Lion Capital at Sarnath), they lack the depth of knowledge required for higher-order questions about classical texts, scientific contributions, and trade systems. This diagnostic function of the BGP is valuable: it provides institutions and policymakers with an empirical baseline against which the effectiveness of indigenous knowledge curriculum integration can be measured over time.

Mukherjee (2021) argues that such diagnostic competitions are most impactful when their results are systematically analyzed and fed back into curriculum design. The present analysis suggests several content areas warranting particular attention in school curricula: the Sulba Sutras (geometric knowledge), Shreni (guilds) and the Hundi system (banking), and the contributions of Varahamihira — topics that fall outside standard NCERT textbooks but are well within the intellectual tradition that NEP 2020 seeks to revive.

The BGP Theme and Its Alignment with Vikshit Bharat

The 2026 theme, "Women in Science: Catalyzing Vikshit Bharat," situates the BGP within the Indian government's broader developmental vision. Vikshit Bharat 2047 — India's aspiration to become a fully developed nation by the centenary of independence — rests on three pillars: economic prosperity, social equity, and technological leadership. All three are deeply implicated in the revival of Bharatiya knowledge systems: indigenous agricultural technologies (Krishi-Parashara), medical systems (Ayurveda, Charaka Samhita), architectural knowledge (Vaastu Shastra, Shilpa Shastra), and mathematical innovations (the decimal system, Sulba Sutras) are not merely historical curiosities but living traditions with contemporary applications.

The specific emphasis on 'Women in Science' is both symbolically important and empirically grounded. As this study's gender analysis (Paper I) demonstrates, female college students outperform male students in BGP, suggesting that women who access quality higher education demonstrate superior engagement with India's knowledge heritage. Amplifying women's participation in indigenous knowledge competitions and research represents a powerful convergence of gender equity and cultural revival goals — precisely the synthesis envisioned by the Vikshit Bharat framework.

Recommendations for Curriculum and Policy

Based on the content analysis and performance data, this study offers four concrete recommendations for educational policy and practice:

Recommendation	Rationale	Target Stakeholder
Integrate BGP domains into NCERT/SCERT curricula at Classes 9–12	School students' lower scores reflect curriculum gaps in BKS topics	NCERT, SCERT Haryana
Establish annual BGP preparation workshops at school level	Structured preparation improves both cultural literacy and competition outcomes	School principals, CUH outreach cell
Develop bilingual resource materials on BKS for school libraries	Access to primary text summaries and contextual notes supports self-directed learning	Ministry of Education (IKS Division)
Expand BGP to include domain-specific sub-competitions	Targeted competitions (e.g., Indian Science BGP, Indian Arts BGP) allow deeper assessment	CUH, DST

Table 3: Policy Recommendations from BGP 2026 Analysis

Limitations

This study's primary limitation is the absence of domain-wise score data; the dataset provides only total marks, precluding analysis of which knowledge domains students find most or least accessible. Future iterations of the BGP should collect and publish item-level response data to

enable diagnostic analysis at the question level. Additionally, with 52 participants, the sample is relatively small; broader regional rollout of the BGP would generate richer, more statistically robust datasets. Finally, the study does not assess the long-term impact of BGP participation on students' ongoing engagement with Bharatiya knowledge systems, which would require longitudinal tracking.

Conclusion

This paper has examined the Bhartiya Gyan Pratiyogita 2026 both as an assessment instrument and as a cultural promotion initiative. The content analysis of the 50-item question paper reveals a carefully designed, multi-domain instrument that provides comprehensive coverage of India's philosophical, historical, artistic, economic, and scientific heritage — from the Vedic period to the early modern era. The performance analysis demonstrates that college/university students significantly outperform school-level peers, indicating a school curriculum gap in Bharatiya knowledge systems that BGP participation can help identify and motivate institutions to address.

The BGP's alignment with the NEP 2020's vision of Indian knowledge system integration, and its 2026 theme of 'Women in Science: Catalyzing Vikshit Bharat,' positions it as a microcosm of India's larger educational transformation agenda. As an annual institution organized by a NAAC 'A' Grade central university, it carries the credibility and institutional authority to influence curriculum reform at the regional level.

The path to Vikshit Bharat runs through its classrooms, and the Bhartiya Gyan Pratiyogita is a meaningful step in ensuring that the knowledge which built one of history's greatest civilizations is not lost to the next generation but rather revived, celebrated, and extended.

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