

From Śāstra to Syllabus: A Pramāṇa-Based Framework for Evaluating and Integrating Indian Knowledge Systems in Higher Education

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Abstract

The National Education Policy 2020 asks Indian universities to bring Indian Knowledge Systems (IKS) into the curriculum, and the Ministry of Education has set up an IKS Division to fund the work. A great deal of teaching material has followed. What has not followed is any shared criterion for deciding which parts of the enormous Sanskrit, Prakrit, Tamil and vernacular inheritance a university can responsibly teach as knowledge, and which parts are better described as cultural heritage, as matters of faith, or as later interpretation. Some scholars worry that IKS without such a criterion will lose academic credibility. Others answer that the demand for external validation misses the point of the exercise. This paper suggests that both concerns can be met from within the tradition itself. The Indian tradition has its own theory of what counts as valid knowledge, worked out over many centuries in the pramāṇa debates of the Nyāya, Mīmāṃsā, Buddhist and Jaina schools; it also has an explicit method of empirical testing (parīkṣā) in the Caraka-Saṃhitā and a practice of mathematical demonstration (upapatti) in the astronomical commentaries. Using these sources, I propose a four-tier classification of IKS material by epistemic status, and I show how it applies to real cases in medicine, mathematics, grammar and logic. The framework is Indian in origin and, at the same time, acceptable to any modern university. It allows IKS to be taught with both respect and rigour.

Keywords: Indian Knowledge Systems, NEP 2020, Pramāṇa, Nyāya, Caraka-Saṃhitā, Epistemology, Higher Education Policy, Sanskrit, Curriculum Design, History Of Science In India

INTRODUCTION

The phrase “Indian Knowledge Systems” entered official vocabulary with the National Education Policy 2020 (Ministry of Education 2020). The policy asks that “the rich heritage of ancient and eternal Indian knowledge and thought” be brought into curricula at every level, and it adds a qualification that is easy to pass over: this is to be done “in an accurate and scientific manner.” Everything depends on those four words, and they have received almost no discussion.

Implementation has been quick. The Ministry created an IKS Division in 2020; the University Grants Commission issued guidelines for undergraduate and postgraduate programmes; hundreds of courses, textbooks and funded projects now carry the IKS label. The content they carry is of different kinds. Some of it is established beyond dispute: the decimal place-value system, Pāṇini’s grammar, the infinite series of the Kerala mathematicians. Some of it rests on observation and long practice but has not yet been examined by modern methods, as with much of Āyurvedic pharmacology. Some of it belongs to philosophy, ritual and aesthetics rather than to empirical science. And some of it consists of interpretations of literary texts that the tradition’s own scholars would not have accepted as knowledge. At present all of this travels under one name.

The academic discussion has settled into a predictable pattern. One side says that IKS teaching needs clearer standards of evidence if it is to be taken seriously in universities. The other side replies that the standards being proposed are themselves the product of a particular intellectual history, and that Indian knowledge should be understood on its own terms. The argument goes nowhere because both parties assume that the only criterion of knowledge on offer is a modern Western one. One side accepts it; the other rejects it; nobody asks whether there is another.

There is. The Indian tradition produced, over roughly two thousand years, one of the most detailed and self-critical theories of knowledge in the world, and it used that theory on its own sciences. I want to recover that theory as a working instrument and show that it sorts IKS material in a principled way. Every criterion I use comes from a Sanskrit source, so the framework cannot be called an import. At the same time, on the questions that matter, those criteria arrive at the same place a modern university would.

The Problem Of The Criterion

Any attempt to teach traditional knowledge has to answer three questions, whether or not it admits to doing so.

1. First, the question of demarcation: what separates a knowledge-claim from a belief, a practice, a symbol, or a story?
2. Second, the question of evidence: for something that is a knowledge-claim, what would count for or against it, and does that evidence exist?
3. Third, the question of pedagogy: given the answers to the first two, how should the material be put in front of students?

Most current IKS work skips straight to the third question. The results are what one would expect. What is needed is an answer to the first two that both sides of the debate can accept, and I think the *pramāṇa* tradition supplies one. The reason is simple. It was produced by the same intellectual culture whose achievements are now in dispute, and that culture applied it to exactly the fields (medicine, astronomy, grammar, ritual) that IKS now wants to teach. The relationship between *śāstra* and practice in India was never a simple one (Pollock 1985), but on the question of how a claim earns the name of knowledge the tradition spoke with unusual consistency.

The *Pramāṇa* Framework

The Basic Structure

Indian epistemology is built around the idea of a *pramāṇa*, a means by which valid knowledge is produced. The *Nyāyasūtra* (1.1.3) lists four: perception (*pratyakṣa*), inference (*anumāna*), comparison (*upamāna*), and reliable testimony (*śabda*). Other schools counted differently. The Buddhists and the Vaiśeṣikas admitted only perception and inference; Mīmāṃsā added presumption and non-apprehension. But every school agreed on the central point. A cognition counts as knowledge (*pramā*) only if it comes from a recognised *pramāṇa* operating without defect, and the person asserting a claim bears the burden of showing this (Matilal 1986; Ganeri 2001).

Three features of the framework matter for our purposes.

- Testimony ranks below perception and inference. *Śabda* is a *pramāṇa* only when the speaker is *āpta*: competent, honest, and in a position to know. And whether a speaker is *āpta* is settled by perception and inference, not by more testimony. Nyāya never treated the age or sanctity of a text as a reason to believe what it says. Even Mīmāṃsā, which holds the Veda to be authorless and self-validating, restricts that validity to *dharma*, the domain of ritual injunction, and concedes without embarrassment that on matters of empirical fact the Veda is not a *pramāṇa* at all. So there is no Indian epistemological school on which “it is written in an ancient text” counts as evidence for an empirical claim. This is worth stating plainly, because the opposite is often assumed.
- Inference has formal rules. A valid *anumāna* needs a relation of pervasion (*vyāpti*) between the reason and what is to be proved, established by repeated observation of the two together and of their joint absence. The tradition drew up a taxonomy of fallacies (*hetvābhāsa*) and was not gentle with arguments that committed them.
- The framework was turned on itself. Nyāya developed a theory of debate, distinguishing honest disputation (*vāda*) from its degenerate forms, and it specified the conditions (*nigrahassthāna*) under which a debater must concede. Knowledge, on this view, is whatever is still standing after hostile examination (on the long history of this argumentative habit see Sen 2005).

The Medical Methodology

None of this stayed inside philosophy. The *Caraka-Saṃhitā*, the foundational text of Āyurveda, dating in its present form from about the first or second century CE, treats the examination of knowledge (*parīkṣā*) at several points and sets out how a medical claim is to be tested. In *Sūtrasthāna* 11 Caraka names four means of knowledge: instruction from reliable teachers (*āptopadeśa*), direct observation (*pratyakṣa*), inference (*anumāna*), and *yukti*, a reasoned judgement that weighs several factors together. In *Vimānasthāna* 4 he restates the first three as the threefold means by which a physician examines disease, and he is clear throughout that instruction alone, without observation and inference, does not make a physician (Wujastyk 2003). The eighth chapter of the *Vimānasthāna* then gives rules for medical debate: a claim must be examined in terms of its thesis, its reason, its supporting example, and its application, and the examples must come from what people can ordinarily see.

This is a methodology for empirical medicine. It does not contain the controlled trial, which nobody invented until the twentieth century. It does contain the ideas on which the controlled trial rests: that treatment claims must answer to observation, that reasoning from observation follows rules, and that the authority of teachers is borrowed, not original.

Mathematical Demonstration

The third source is the practice of *upapatti*, demonstration, in Indian mathematics and astronomy. The base

texts state their results in dense verse and give no proofs. This is true of the *Āryabhaṭīya* (499 CE), of Brahmagupta's *Brāhmasphuṭasiddhānta* (628 CE), and of Bhāskara II's *Līlāvātī* and *Bījagaṇita* (1150 CE). But the commentators supplied what the base texts left out. From Bhāskara I in the seventh century to the Kerala school in the fourteenth to sixteenth, the commentaries argue for the results, and Nīlakaṇṭha Somayājī, commenting on Āryabhaṭa, says outright that a result must be established by demonstration and that the authority of the original text is not enough (Plofker 2009). Jyeṣṭhadeva's *Yuktibhāṣā* (c. 1530) is a whole book of such demonstrations, among them the derivation of the infinite series for π and for the sine and cosine.

The mathematicians, in other words, had their own internal standard of validity, and that standard was proof rather than authority.

A Four-Tier Classification

Putting these three sources together, one can sort IKS material into four tiers. A claim's tier depends on the *pramāṇa* it rests on and on whether the tradition's own methods of examination have actually been applied to it.

Tier 1: Demonstrated Knowledge. Claims established by *upapatti* or by properly grounded inference, which the tradition regarded as proven and which remain sound. The decimal place-value system and Brahmagupta's arithmetic of zero belong here, as do Āryabhaṭa's sine tables and his approximation of π , the Kerala series, Pāṇini's *Aṣṭādhyāyī* (still the most complete grammar of any language produced before the twentieth century), the Nyāya theory of inference, and the technical language of Navya-Nyāya for the analysis of relations. This material belongs in the core of the relevant disciplines, and it belongs there as content, not as heritage.

Tier 2: Empirically Grounded But Under-Tested Knowledge. Claims resting on observation and *yukti* in Caraka's sense, which the tradition did subject to its own *parīkṣā*, but for which modern controlled evidence is patchy or mixed. Much of Āyurvedic pharmacology and clinical practice sits here, along with the Arthaśāstra's account of statecraft and the metallurgical and architectural knowledge embodied in surviving objects and buildings (the Delhi iron pillar, the *stūpa* and temple traditions). Such claims should be taught as what they are: empirical claims with a stated evidential basis, the distance between traditional and modern evidence made plain. Where the field is medicine, students should also be told clearly that this material does not license clinical practice outside a regulated setting.

Tier 3: Testimonial And Interpretive Knowledge. Claims that rest on *śabda*, and whose validity the tradition itself confined to the domain in which the text has authority: ritual, ethics, philosophy of mind, contemplative practice, aesthetics, hermeneutics. The *pramāṇa* theory is itself Tier 3, as are the *rasa* theory of aesthetic experience, the Mīmāṃsā theory of textual interpretation, and the Vedāntic analyses of consciousness. All of this is knowledge in the sense in which philosophy, theology and literary theory are knowledge: rigorous, argued, open to examination. But its claims are not empirical, and it does a disservice to the material to present them as if they were.

Tier 4: Claims That Do Not Meet The Tradition's Own Tests. Claims resting on no recognised *pramāṇa*, usually a modern reading of a poetic or narrative passage as if it were a technical description. The Nyāya tradition would not have admitted such claims, either because the source has no claim to be *āpta* on the matter in question or because the inference has no *vyāpti* behind it. Such material is better studied in literature and cultural history than presented as science, and the framework gives an Indian reason for the distinction: it is the standard Indian epistemology itself

set.

The point of the classification is that it uses the tradition's own yardstick. A scholar who places a claim in Tier 4 is not applying an external standard. He is applying Gautama's and Caraka's. The *pramāṇa* framework is itself one of the finest things the tradition produced, and honouring it is a way of honouring the tradition.

Application To Curriculum Design

The classification has fairly direct consequences for how courses are built.

Integrate rather than segregate. Tier 1 material should go into the disciplinary courses where it belongs, not into a separate IKS module. The history of the sine function is part of mathematics; Pāṇini is part of linguistics; Nyāya belongs in philosophy and, increasingly, in computer science. Putting this material in a heritage module tells students and faculty alike that it is not real disciplinary content. For Tier 1 that is untrue, and the message does harm.

Method before content. Every IKS course should open with the *pramāṇa* framework and Caraka's *parīkṣā*, for the same reason every science course opens with method. A student who has worked through *Nyāyasūtra* 1.1.3 to 1.1.8 and *Caraka Vimānasthāna* 8 has the tools to judge any IKS claim that follows, including claims made by the instructor.

Read the sources in the original. All of this assumes access to the texts, which in turn assumes Sanskrit, and for the southern and Buddhist material Tamil, Pali and Prakrit as well. The IKS programme cannot succeed without serious investment in classical language teaching at the undergraduate level. NEP 2020 endorses this in principle, and the framework proposed here gives a concrete reason for treating it as a priority. I would put this as the single most important practical implication of the whole argument. An IKS curriculum built on translations and summaries will not be able to apply the tradition's methods, because those methods work on the texts themselves.

Say which tier. Course materials should state, for each unit, which tier the content falls into and why. The tradition itself demanded that the *pramāṇa* behind every claim be identifiable; a course that meets that demand is simply following the tradition.

Objections

“The framework is drawn from one philosophical lineage and leaves out non-Sanskrit knowledge.”

The *pramāṇa* framework was shared, with variations, by the Buddhist logicians Dignāga and Dharmakīrti and by the Jaina thinkers Akalaṅka and Hemacandra, who were among its most rigorous developers, and the argument between the schools was carried on in a common vocabulary. In the relevant sense it is pan-Indian. Nor does the classification privilege Sanskrit. Tamil Siddha medicine, the Sangam poetry, and the vernacular technical literatures can be sorted by exactly the same criteria.

“The criteria are anachronistic.” Some of the source texts predate the material they are applied to and some postdate it. But the proposal is not that Āryabhaṭa consulted Nyāya. It is that Nyāya represents the tradition's considered view of what knowledge is, and that an IKS programme which ignores that view is ignoring the tradition.

“The framework excludes too much.” It reassigns Tier 4 material to the disciplines where it can be studied properly. It does not exclude Tier 3, which is the largest and perhaps the richest body of material, provided Tier 3 is taught as what it is.

CONCLUSION

The IKS mandate puts Indian higher education in front of an opportunity and a danger at the same time. The opportunity is to return to the curriculum a body of work in mathematics, linguistics, logic, medicine and philosophy that matters to the history of the world and that has long been under-represented in Indian higher education. The danger is that, without a clear standard, the strongest achievements are not distinguished from weaker material and the whole programme loses credibility.

The path between the two runs through the tradition's own theory of knowledge. The *pramāṇa* framework, Caraka's method of examination, and the mathematicians' habit of demonstration together make up an indigenous epistemology rigorous enough for any university and authoritative enough for any traditionalist. To teach Indian knowledge by Indian standards turns out to mean teaching it critically. There is nothing paradoxical in that. It is what the tradition did whenever it was working well.

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