

## Original Article

### Awareness, Perception, and Effectiveness of Indian Knowledge Systems (IKS) Syllabus among B.Sc. First-Year Students of Vishwasrao Naik Arts, Commerce and Baba Naik Science College, Shirala, Sangli

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**Abstract**

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*The study investigates the awareness, perception, and effectiveness of the Indian Knowledge Systems (IKS) syllabus implemented for first-year B.Sc. students at Vishwasrao Naik Arts, Commerce and Baba Naik Science College, Shirala, affiliated with Shivaji University, Kolhapur. The research aims to evaluate students' prior knowledge, their perception after studying IKS, and the syllabus's relevance to science education and career readiness. A structured questionnaire administered to 60 students (30 male, 30 female) revealed that 75% had no prior awareness of IKS, with most exposure gained through college lectures. Post-course, 83.3% of students reported improved perceptions, and 70% acknowledged its career relevance. While the syllabus was found effective in conveying traditional knowledge, feedback highlighted the need for stronger integration with modern science and enhanced practical applications. The study concludes that IKS contributes positively to holistic learning in line with the objectives of NEP 2020 but requires revisions to maximize its educational and professional impact.*

**Keywords:** Indian Knowledge System (IKS), NEP 2020, curriculum integration, traditional knowledge, practical applications, higher education, sustainable learning.

#### Introduction

#### Indian Knowledge System (IKS): An Overview

Indian Knowledge Systems: An overview Indian Knowledge Systems refer to knowledge traditions sustained over centuries through texts, practices, and communities in domains such as Ayurveda, Yoga, Astronomy, Philosophy, Metallurgy, and Agriculture. A core hallmark of IKS is its integrative view of health, environment, and ethics, offering a holistic lens that differs from narrowly segmented disciplinary approaches. Canonical sources like the Vedas, Upanishads, and Puranas shaped early thinking, while later practitioners adapted ideas to social needs and ecological realities.

The origins of IKS can be traced back to ancient texts such as the Vedas, Upanishads, and Puranas, which serve as foundational sources of knowledge. Over centuries, this knowledge has been refined and adapted to address the evolving needs of society. For instance, Ayurveda, one of the most well-known branches of IKS, provides a comprehensive framework for health and wellness that is still relevant today. Similarly, traditional agricultural practices, such as crop rotation and organic farming, have gained renewed attention in the context of sustainable development.

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## Importance of IKS and Its Implications:

The significance of IKS is in its sustainability, scientific rigor, and applicability to contemporary global issues. In the world, marked by environmental degradation, climate change, and health crises, the principles presented in IKS gives viable solutions. For example, Ayurveda emphasizes preventive healthcare and natural remedies, which helps to reduce reliance on synthetic drugs and their side effects. Similarly, traditional agricultural methods promote biodiversity and soil health, similar to the goals of sustainable agriculture. The integration of IKS into present education has immense potential. By bridging the gap between traditional and modern knowledge systems, it can inculcate a more holistic and inclusive approach for teaching and learning. This combination is particularly applicable in the context of India, where the National Education Policy (NEP) 2020 has highlighted the revival and incorporation of IKS into the conventional education system.

## IKS and the National Education Policy (NEP) 2020

The National Education Policy (NEP) 2020 builds a significant milestone in the history of Indian education. One of its key objectives is to encourage the integration of IKS into the curriculum at all levels of education. The policy identifies the value of traditional knowledge systems for inculcating a sense of cultural identity and promoting interdisciplinary learning.

Under the NEP, higher education institutions are invigorated to include IKS in their curricula, thereby providing students with a holistic understanding of both traditional and modern knowledge systems. This mixing is expected to enhance scientific learning by providing a holistic approach and fostering innovation found in indigenous knowledge. Furthermore, the policy highlights the importance of research and application of IKS, encouraging institutions to enhance its potential in addressing present challenges.

The inclusion of IKS in the education system is not an academic exercise on the other hand it is a step towards preserving India's cultural heritage and using its wisdom for the development of society. By equipping students with a understanding of IKS, the NEP helps to create a generation of learners who are not only scientifically advanced but also culturally aware and socially responsible.

Shivaji University, Kolhapur has implemented IKS for all the undergraduate level classes. University has designed syllabus and implemented it effectively. The present research focuses on the study of IKS Syllabus implemented for B. Sc. I year students.

## Objectives of the Study

The present study seeks to explore the impact of integrating IKS into the curriculum of first-year B.Sc. students. Specifically, the study aims to:

- To assess the awareness of IKS among B.Sc. I year students before and after learning the course.
- To evaluate students' views about the relevance and effectiveness of the IKS syllabus.
- To study the usefulness of IKS syllabus for career readiness and scientific understanding.
- To identify key areas of IKS syllabus that need improvement.

## Hypothesis

The study is guided by the following hypotheses:

- H1: The majority of students have limited awareness about IKS before taking the course.  
This hypothesis is based on the assumption that IKS is relevantly new subject and students have limited exposure to it.
- H2: The IKS syllabus improves students' perception of traditional knowledge.  
This hypothesis focuses that the course will have a positive impact on students' understanding and appreciation of IKS.
- H3: Students find the IKS syllabus relevant to their science education and career aspirations.  
This hypothesis suggests that students will perceive the IKS syllabus related to their academic and professional goals.
- H4: There is a demand for IKS syllabus revisions, particularly in practical applications and integration with modern science.

This hypothesis is based on the view that students will identify areas where the syllabus can be improved to better meet their needs.

## Methodology

### Selection of Colleges and Participants

The study was conducted at Vishwasrao Naik Arts, Commerce, and Baba Naik Science College, Shirala, Sangli, Maharashtra.

Total 60 students from first-year B.Sc. were selected for the study, with an equal representation of male and female students (30 each). All participants had completed the IKS syllabus as a part of their first-semester curriculum.

### Data Collection and Analysis

Data was collected using a structured questionnaire designed to assess students' awareness, perception, and feedback regarding the IKS syllabus. The questionnaire was divided into five sections:

Section A: Demographic Information

Section B: Awareness of IKS

Section C: Perception of the Syllabus

Section D: Effectiveness of the Syllabus

Section E: Suggestions and Feedback

The data was analyzed using descriptive statistics, with percentages used to interpret the responses. The analysis focused on identifying trends and deriving meaningful insights into the impact of the IKS syllabus on students.

### Results and Discussion

#### Awareness of IKS:

This section focuses on the prior awareness among the students before studying the IKS in the college. There are total three questions based on the awareness among the students:

#### Familiarity with IKS before the Course

Response	Frequency (n=60)	Percentage
Yes	15	25%
No	45	75%

**Response:** 75% students were unaware of IKS before taking the course.

**Interpretation:** The lack of prior awareness highlights the importance of IKS course. It also suggests that IKS is not widely taught at the school level, underscoring the need for greater emphasis on traditional knowledge systems in early education.

#### How Students First Learned about IKS

Response	Frequency (n=60)	Percentage
College lectures	45	75%
Family/Friends	6	10%
Media	7	11.66%
Other	2	3.33 %

**Response:** 75% of students learned about IKS through college lectures, while 30% were introduced to it through media.

**Interpretation:** College lectures emerged as the primary source of awareness, indicating the critical role of institutional education in disseminating IKS knowledge.

#### IKS Topics about Students were aware of before the Course

Topic	Frequency (n=60)	Percentage
Ayurveda	25	41.7%
Yoga and Triguna System	20	33.3%
Herbal medicines	10	16.66
Other topics	05	8.33%

**Response:** Ayurveda was the most recognized topic (41.7%), followed by Yoga and the Triguna System (33.3%).

**Interpretation:** The relatively higher awareness of Ayurveda and Yoga suggests that these topics have gained wider recognition, possibly due to their global popularity.

#### Perception of the Syllabus:

This sections studies how students perceived the knowledge of IKS after studying the IKS as a subject in the first semester of B. Sc. I.

#### Change in Perception of IKS after studying the IKS as a subject:

Response	Frequency (n=60)	Percentage
Significantly Increased	35	58.3%
Moderately Increased	15	25%
Slightly Increased	7	11.7%
No Change	3	5%

**Response:** 58.3% of students reported a significant increase in their perception of IKS after taking the course.

**Interpretation:** The course had a positive impact on students' understanding and appreciation of IKS, validating the hypothesis that the syllabus improves perception.

**Relevance of IKS Syllabus with Science Education:**

Response	Frequency (n=60)	Percentage
Very Relevant	30	50%
Somewhat Relevant	18	30%
Neutral	6	10%
Not Relevant	6	10%

**Response:** 50% of students found the syllabus "Very Relevant" to their science education.

**Interpretation:** The strong agreement on relevance suggests that students perceive IKS as being aligned with their academic goals.

**Relevance of IKS Study for Future Career**

Response	Frequency (n=60)	Percentage
Yes	42	70%
No	6	10%
Not Sure	12	20%

**Response:** 70% of students believed that the syllabus was relevant to their future careers.

**Interpretation:** The majority of students see value in IKS for their professional development, indicating its potential to enhance career readiness.

**Effectiveness of the Syllabus:**

This section of questionnaire was focused on studying how effective is the syllabus of B. Sc. I designed by Shivaji University, Kolhapur. There were total three questions to check the responses of the students regarding the effectiveness of the syllabus.

**Satisfaction with Structure and Delivery of IKS Syllabus**

Response	Frequency (n=60)	Percentage
Very Satisfied	10	16.7%
Satisfied	20	33.3%
Neutral	15	25%
Dissatisfied	10	16.7%
Very Dissatisfied	5	8.3%

**Response:** 33.3% of students were "Satisfied" with the structure and delivery of the syllabus, while 25% were "Neutral."

**Interpretation:** Satisfaction levels were mixed, suggesting room for improvement in the way the syllabus is structured and delivered.

**Effectiveness of syllabus in Conveying Important aspects of IKS**

Response	Frequency (n=60)	Percentage
Very Effective	15	25%
Effective	25	41.7%
Neutral	10	16.7%
Not Effective	8	13.3%
Not At All Effective	2	3.3%

**Response:** 66.7% of students found the syllabus "Effective" or "Very Effective" in conveying the importance of IKS.

**Interpretation:** The syllabus was successful in highlighting the significance of IKS, though there is scope for further enhancement.

**Effectiveness of IKS in Teaching Practical Applications in Daily Life**

Response	Frequency (n=60)	Percentage
Very Effective	10	16.7%
Somewhat Effective	30	50%
Neutral	12	20%
Not Effective	6	10%
Not At All Effective	2	3.3%

**Response:** 50% of students rated the syllabus as "Somewhat Effective" in teaching practical applications.

**Interpretation:** While the syllabus was effective to some extent, there is a clear need for greater emphasis on practical applications.

### Suggestions and Feedback:

Students were asked to provide suggestions and feedback for the improvement in the syllabus of IKS. Following are the responses of the students.

### Need for Updates or Revisions of IKS Syllabus

Response	Frequency (n=60)	Percentage
Yes	25	41.66%
No	23	38.33%
Maybe	12	20.00%

**Response:** 41.66 % of students expressed a need for updates and revisions in the syllabus on the other hand 38.33 % students stated there is no need to update the syllabus.

**Interpretation:** There is mixed view among the students for update and revision of IKS Syllabus.

### Areas Needing Improvement

Area	Frequency (n=60)	Percentage
Practical applications	24	40%
Integration with science	21	35%
Teaching methodology	15	25%

**Response:** Practical applications (40%) and integration with modern science (35%) were the most suggested areas for improvement.

**Interpretation:** Students are keen on seeing a stronger connection between IKS and modern scientific principles, as well as more practical, hands-on learning opportunities.

### Key Insights

- **Awareness:** The students lacked prior IKS knowledge, confirming the course's role in introducing IKS.
- **Perception:** Strong agreement on relevance to science education and careers.
- **Effectiveness:** Satisfaction was mixed, but effectiveness in conveying knowledge was notable.
- **Feedback:** The students demand updates mainly prioritizing practical applications of IKS.

### Recommendations

Based on the findings of the study, the following recommendations are proposed:

- **Enhance Practical Applications:** The syllabus should include more hands-on learning opportunities, such as workshops, field visits, and internships, to help students apply IKS principles in real-world settings.
- **Strengthen Integration with Modern Science:** The syllabus should emphasize the connections between IKS and modern scientific principles, fostering a more interdisciplinary approach to learning.
- **Update and Revise the Syllabus:** Regular updates and revisions should be made to the syllabus to ensure that it remains relevant and aligned with students' needs and expectations.
- **Promote Awareness of IKS:** Efforts should be made to raise awareness of IKS at the school level, ensuring that students are introduced to traditional knowledge systems early in their education.
- **Encourage Research and Innovation:** Institutions should be encouraged to conduct research on IKS, exploring its potential in addressing contemporary challenges and fostering innovation.

By implementing these recommendations, colleges can ensure that the integration of IKS into the education system is not only successful but also transformative, paving the way for a more holistic and inclusive approach to learning.

### Conclusion

The study reveals that the integration of IKS into the curriculum has a positive impact on students' awareness, perception, and understanding of traditional knowledge systems. However, there is a clear demand for revisions, particularly in the areas of practical applications and integration with modern science. By addressing these areas, the syllabus can be further enhanced to meet the needs of students and contribute to their academic and professional development. The findings of this study have important implications for the implementation of the NEP 2020. They highlight the need for a more holistic and inclusive approach to education, one that bridges the gap between traditional and modern knowledge systems. By doing so, we can create a generation of learners who are not only scientifically proficient but also culturally aware and socially responsible.



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