

A Study on Awareness of the Indian Knowledge System (IKS) Among Prospective Teachers of Namakkal District

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Abstract: The present study aims to examine the level of awareness of the Indian knowledge system (IKS) among prospective teachers in Namakkal district. The study adopts descriptive survey method. A sample of 314 prospective teachers was selected using stratified random sampling technique from various teacher education colleges. A structured questionnaire was employed as the research tool, comprising items that measure awareness across cultural, scientific and pedagogical dimensions of IKS. The collected data were analyzed by using both descriptive and inferential statistical techniques. The findings revealed that prospective teachers possess a moderate level of awareness of IKS. No significant difference was found based on gender, whereas significant differences were observed with respect to residential area and year of study. The study highlights the need for effectively integrating IKS components into teacher education curricula to enhance awareness and application.

Keywords: Indian Knowledge System, Prospective Teachers, Teacher Education, NEP 2020.

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I. INTRODUCTION

India possesses a rich and diverse tradition of knowledge systems encompassing fields such as philosophy, science, mathematics, medicine, and arts. The Indian Knowledge System (IKS) reflects indigenous wisdom and cultural heritage that has sustained over centuries. With the introduction of the National Education Policy (2020), there is a renewed emphasis on integrating IKS into the modern curriculum, particularly in teacher education.

Prospective teachers play a crucial role in implementing curriculum reforms. Their awareness and understanding of IKS are essential for its effective classroom integration of these elements. Hence, this study attempts to assess the level of awareness among prospective teachers and identify factors influencing it.

understanding of IKS among prospective teachers remain uncertain.

The present study is needed to assess the level of awareness of IKS among prospective teachers, as they are the future implementers of curriculum reforms. Without adequate awareness, the effective integration of IKS into classroom teaching may not be achieved. This study also becomes essential in identifying whether demographic variables such as gender, residential area, and year of study influence awareness levels.

Further, the study gains importance in the context of rural-urban disparities in education. Identifying differences in awareness between rural and urban prospective teachers helps policymakers and educators design targeted interventions to ensure equitable knowledge dissemination. The findings of this study can provide valuable insights for curriculum developers, teacher educators, and educational planners to strengthen the incorporation of IKS in teacher education programmes.

Moreover, this study contributes to the existing body of knowledge by providing empirical evidence on IKS awareness among prospective teachers, which is still an emerging area of research. It also supports the vision of developing culturally rooted, globally competent teachers.

II. NEED AND IMPORTANCE OF THE STUDY

In the contemporary educational landscape, there is a growing emphasis on integrating indigenous knowledge systems into formal education. The Indian Knowledge System (IKS), which embodies the rich intellectual, cultural, and scientific heritage of India, plays a crucial role in promoting holistic and value-based education. However, despite policy-level emphasis such as the National Education Policy (2020), the actual awareness and

➤ Objectives of the Study

- To determine the level of awareness of IKS among prospective teachers.
- To examine whether significant differences exist in awareness based on gender of the prospective teachers.
- To examine whether significant differences exist in awareness based on residential area of the prospective teachers.
- To examine whether significant differences exist in awareness based on year of study of the prospective teachers.

➤ Hypotheses of the Study

- H₀1: There is no significant difference in the level of IKS awareness among prospective teachers with respect to their gender.
- H₀2: There is no significant difference in the level of IKS awareness among prospective teachers with respect to their residential area.
- H₀3: There is no significant difference in the level of IKS awareness among prospective teachers with respect to year of study.

III. METHODOLOGY OF THE STUDY

- Research Method: Descriptive Survey Method
- Population: All prospective teachers studying in B.Ed. colleges in Namakkal District

- Sample: 314 prospective teachers selected using stratified random sampling
- Tool Used: A self-constructed questionnaire was used to measure awareness of IKS. The tool consisted of 30 items covering:

- ✓ Cultural awareness
- ✓ Scientific awareness
- ✓ Educational application of IKS

- Reliability: Cronbach's Alpha = 0.82 (acceptable reliability)
- Scoring Procedure: The instrument consists of 30 items, each measured on a five-point Likert scale. Each item is assigned a score ranging from 1 to 5, where higher scores indicate a greater level of awareness of the Indian Knowledge System (IKS).

- ✓ Minimum possible score: 30 (30 × 1)
- ✓ Maximum possible score: 150 (30 × 5)

Based on the total scores obtained by the respondents, the level of awareness was classified as follows:

- ✓ Low Level of Awareness: 30 – 70
- ✓ Moderate Level of Awareness: 71 – 110
- ✓ High Level of Awareness: 111 – 150
- ✓ Statistical Techniques Used: Mean, Standard Deviation and Independent Sample t-test

IV. ANALYSIS AND INTERPRETATION

➤ Overall Awareness Level:

Table 1 Overall Level of Awareness

Score Range 30-150			
Variables		Sample	Mean
Gender	Male	31	95.97
	Female	283	93.03
Residential area	Rural	194	90.86
	Urban	120	97.29
Year of Study	First year	208	88.96
	Second year	106	101.87
Mean average			94.66

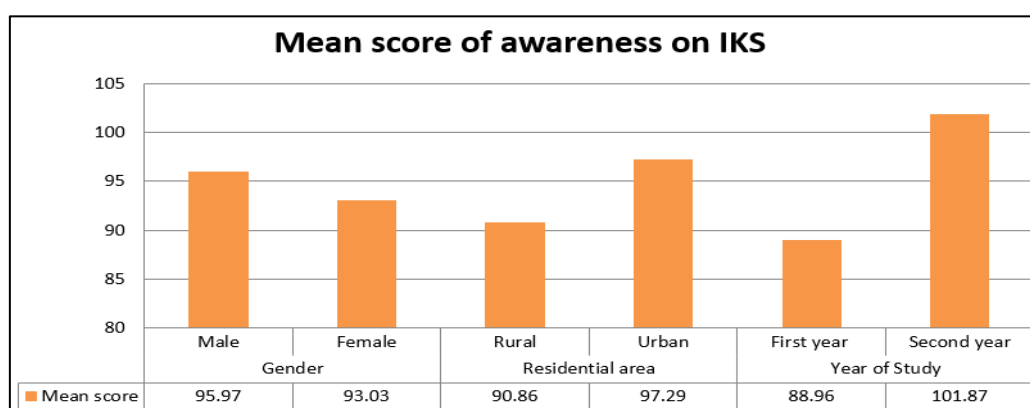


Fig 1 Mean Score of Awareness on IKS

The overall mean score of awareness is 94.66, indicating a moderate level of awareness among the respondents. This suggests that while prospective teachers possess some knowledge about IKS, there is still considerable scope for improvement. Further, subgroup means such as male (95.97), female (93.03), rural (90.86), urban (97.29), first year (88.96), and second year (101.87)

also reflect a reasonably consistent level of awareness across categories.

➤ Gender Wise Analysis

- H_01 : There is no significant difference in the level of IKS awareness among prospective teachers with respect to their gender.

Table 2 Gender Wise Analysis

	Gender	N	Mean	SD	't' value	'p' value
Awareness on IKS	Female	283	93.03	24.7	0.611	.542
	Male	31	95.97	31.46		

The mean score for male prospective teachers is 95.97, whereas for female prospective teachers it is 93.03. Although males show slightly higher awareness, the t-test result ($t = 0.611$, $p = 0.542$) indicates that this difference is not statistically significant. Therefore, gender does not play a significant role in influencing awareness of IKS among prospective teachers.

➤ Residential area Wise Analysis

- H_02 : There is no significant difference in the level of IKS awareness among prospective teachers with respect to their residential area.

Table 3 Residential area Wise Analysis

	Residential area	N	Mean	SD	't' value	'p' value
Awareness on IKS	Rural	194	90.86	24.9	2.19	.029
	Urban	120	97.29	25.9		
	Urban	120	97.29	25.9		

The mean awareness score for urban students (97.29) is higher than that of rural students (90.86). The t-test result ($t = 2.19$, $p = 0.029$) shows that this difference is statistically significant. This indicates that students from urban areas have better exposure and awareness of IKS compared to their rural counterparts.

➤ Year of Study - Wise Analysis

- H_03 : There is no significant difference in the level of IKS awareness among prospective teachers with respect to year of study.

Table 4 Year of Study - Wise Analysis

	Year of Study	N	Mean	SD	't' value	'p' value
Awareness on IKS	First Year	208	88.96	24.8	4.37	< 0.001
	Second Year	106	101.87	24.6		

The mean score for second-year students (101.87) is significantly higher than that of first-year students (88.96). The t-test result ($t = 4.37$, $p < 0.001$) confirms that this difference is highly significant. This suggests that awareness of IKS increases with academic progression.

V. FINDINGS AND DISCUSSION

The findings of the study reveal several important insights into the awareness of Indian Knowledge Systems among prospective teachers:

- **Moderate Level of Awareness-** The overall moderate awareness level indicates that IKS concepts are not yet deeply integrated into teacher education programs. Despite policy emphasis (like NEP 2020), practical implementation appears limited.
- **No Gender Influence-** The absence of significant gender differences suggests that both male and female prospective teachers have equal access to educational

resources and exposure to IKS concepts. This reflects a positive trend toward gender equality in education.

- **Urban-Rural Disparity-** The significant difference between rural and urban students highlights a gap in educational exposure. Urban students are more likely to benefit from:

- ✓ Better institutional resources
- ✓ Access to digital platforms
- ✓ Exposure to seminars, workshops, and academic discussions

Rural students may face challenges such as limited access to updated curriculum materials and fewer academic enrichment opportunities.

• Impact of Academic Progression

The higher awareness among second-year students indicates that teacher education programs gradually introduce IKS-related content. It also reflects the role of:

- ✓ Curriculum exposure
- ✓ Teaching practice
- ✓ Academic maturity

This suggests that structured inclusion of IKS in earlier stages could improve overall awareness.

VI. CONCLUSION

The study concludes that prospective teachers in Namakkal District possess a moderate level of awareness regarding the Indian Knowledge System. While gender does not significantly influence awareness, residential area and year of study are key determinants.

Urban students and second-year students demonstrate significantly higher awareness levels, indicating disparities in exposure and learning opportunities. These findings emphasize the need for:

- Integrating IKS content more effectively into teacher education curriculum
- Providing equal learning opportunities for rural students
- Introducing IKS concepts from the early stages of teacher training
- Conducting workshops, seminars, and experiential learning programs

Enhancing awareness of IKS among prospective teachers is essential, as they play a crucial role in transmitting indigenous knowledge to future generations. Strengthening this domain will contribute to preserving cultural heritage and promoting holistic education.

EDUCATIONAL IMPLICATIONS

- Curriculum should include dedicated IKS modules
- Teacher training programs must focus on practical integration
- Workshops and seminars on IKS should be conducted
- Policy implementation must be monitored at institutional level

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