

From Ancient Wisdom to Modern Learning: Reviving Indian Knowledge System through SWAYAM

¹Vaishali, ²Dr. Niradhar Dey

¹Ph.D. Research Scholar in Education, School of Education, IGNOU, New Delhi.

²Associate Professor, School of Education, IGNOU, New Delhi.

*Corresponding Author : Vaishali

"Ph.D. Research Scholar in Education, School of Education, IGNOU, New Delhi"

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Abstract: The Indian Knowledge System refers to the Indian body of knowledge passed through generations in India. The Indian Knowledge System integrates reasoning and wisdom in a holistic framework, balancing life's spiritual, intellectual, moral, and physical aspects. The legacy of the Indian Knowledge System is a commitment to progress; therefore, reviving the Indian Knowledge System in the modern era is very important. This can be done by clubbing ancient learning with modern technology i.e., SWAYAM (a MOOC), where courses on the Indian Knowledge System can be developed for the holistic development of the students. Therefore, this paper is an attempt to get an overview of the Indian Knowledge System and SWAYAM, how the courses can be created on SWAYAM, the importance of creating these courses in reviving the Indian Knowledge System, and the challenges faced in the creation of MOOCs through SWAYAM. The findings revealed that enriching educational experiences have the potential to bridge the gap between ancient wisdom and contemporary context. Through clear learning outcomes, structure, engaging pedagogy, interactive projects, assessment, and certification through SWAYAM, the Indian Knowledge system can reach the learners. Disseminating the ancient practices, sciences, philosophies, etc. to the learners will add to the body of their knowledge. Learning through SWAYAM will preserve ancient knowledge, promote interdisciplinary learning, and bridge the gap between traditional and modern knowledge that will depend on overcoming challenges related to teacher training support, curriculum integration, and cultural sensitivity. With the continued focus on overcoming these challenges, the revival of the Indian Knowledge System has profound implications; cultural preservation, economic development, and recognition of the Indian system fostering holistic and sustainable approaches to learning.

Keywords: Indian Knowledge System, Massive Open Online Courses (MOOCs), SWAYAM, Ancient wisdom, Contemporary context.

Introduction

On 16th May 2022, a book on "Introduction to Indian Knowledge System: Concepts and Application" (B. Mahadevan, Vinayak Rajat Bhat, and Nagendra Pavana R.N.) was launched by the Hon'ble Union Minister of Education and Skill Development. He highlighted the importance and the positive impact of India's Knowledge System on the world. He also highlighted that there is a need for science-based knowledge in India's knowledge system in contemporary times. Therefore, there is a need to revive the Indian Knowledge System to preserve India's rich cultural heritage, provide potential solutions to contemporary issues, and foster a sense of national identity. One of the digital platforms for reviving the Indian Knowledge System is SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) an initiative by the Government of India. By leveraging SWAYAM's digital platform, the educational content of the Indian Knowledge System can be made accessible to all learners despite any geographical barriers. SWAYAM provides an opportunity to offer courses on different aspects of the Indian Knowledge System such as yoga, classical music, Vedic mathematics, Sanskrit, and Indian philosophy. With the help of experienced course coordinators, SWAYAM can revive the Indian Knowledge System by providing interactive learning experiences to engage the learners and allow them to explore these ancient systems in a modern context.

Objectives

1. To get an overview of the Indian Knowledge System and SWAYAM?
2. How courses can be created integrating the Indian Knowledge System on SWAYAM?
3. What is the importance of creating MOOCs through SWAYAM on the Indian Knowledge System?
4. What are the challenges of creating MOOCs through SWAYAM on the Indian Knowledge System?

Indian Knowledge System

The Indian Knowledge System refers to the Indian body of knowledge passed through generations in India. It provides a foundation for understanding India's future aspirations, touching upon crucial aspects such as education, health, environment, and all facets of life. In essence, the Indian Knowledge System serves as a reservoir of wisdom that continues to shape the intellectual, cultural, and practical dimensions of Indian society (Khan & Sharma, 2024).

Here are some key areas within the Indian Knowledge System:

1. Philosophy and Spirituality

The ancient Indian philosophies are diverse and rich. There are two schools under the Ancient Indian educational philosophies, the distinction between these schools is based on their acceptance of the Vedas. These schools are classified as orthodox schools and

heterodox schools (Chatterjee & Datta, 2016). The heterodox school does not believe in the teaching of the Vedas, and the orthodox schools believe in the Vedas. The heterodox schools are Jainism and Buddhism, both emphasizing non-violence and the path to liberation and orthodox schools are Vedanta, Nyaya, Vaisheshika, Samkhya, and Mimamsa each contributing to logic, metaphysics, and ethics.

2. Mathematics and Astronomy

The concept of zero and the decimal system are both crucial for modern mathematics.

3. Ayurveda

The traditional system of medicine is based on balancing the body's three doshas (Vata, pitta, and Kapha) to maintain health. It emphasizes holistic wellness through diet, herbal treatments, detoxification, and physical practices.

4. Literature and Linguistics

The ancient texts such as Vedas, Mahabharata, Ramayana, Upanishads, and Puranas. The classical poetries, and drama by Kalidasa e.g. Shakuntala, and Meghaduta contribute to India's rich literacy tradition.

5. Environmental Knowledge

Indigenous knowledge about sustainable farming techniques, crop rotation, organic methods, and water management systems like stepwells and tank irrigation.

6. Science and Technology

Advanced systems for harvesting and conserving water, like the ancient stepwells, tanks, and canals, were designed to cope with India's monsoon patterns.

7. Educational Systems

Traditional Indian education systems like Gurukuls where the guru taught their students in a holistic environment. Prominent centers for learning like Nalanda and Takshashila contribute to fields like logic, medicine, etc.

The legacy of the Indian Knowledge System is a commitment to progress therefore reviving the Indian Knowledge System in the modern era is very important. This can be done by clubbing ancient learning with modern technology i.e. SWAYAM (a MOOC) where courses on the Indian Knowledge System can be developed for the holistic development of the students.

Swayam

SWAYAM (Study Webs of Active Learning for Young Aspiring Minds), launched on 9th July 2017. The Ministry of Human Resource and Development, currently known as MoE (Ministry of Education), Govt. of India has launched SWAYAM to offer free and high-quality e-learning education to students from grade 9th to post-graduation. SWAYAM has 10 national coordinators namely National Programme on Technology Enhanced Learning (NPTEL), All India Council for Technical Education (AICTE), University Grants Commission (UGC), National Council of Educational Research and Training (NCERT), Institute Of National Importance (INI), National Institute of Open Schooling (NIOS), Indira Gandhi National Open University (IGNOU), Indian Institute of Management Bangalore (IIM-B), Consortium for Educational Communication (CEC), and National Institute of Technical Teachers Training and Research (NITTTR) curating the courses.

Accessing SWAYAM courses is free of cost, only a nominal fee is charged to enrol in the examinations to receive a certificate. Anyone can register on the SWAYAM portal; there are no special requirements. SWAYAM courses are accessible to everyone with a device and internet, allowing anyone to start their online learning journey. There are 3 cardinal principles of SWAYAM namely access, equity, and quality and it follows a multidimensional employment focussed approach.

Creating MOOCs through SWAYAM on the Indian Knowledge System

Creating MOOCs through SWAYAM on the Indian Knowledge System is an ambitious initiative to disseminate ancient knowledge and wisdom in modern times. To make the course engaging, and impactful it is essential to structure the content in an organized manner with a special focus on engaging pedagogy.

Creating MOOCs through SWAYAM

1. Define the goals and learning outcomes

The goals and learning outcomes of the course must be clearly defined.

Some possible goals are-

- Connecting ancient knowledge with modern concepts.
- Teaching specific areas, such as mathematics, medicine, art, yoga, or spirituality.
- Introducing learners to the Indian Knowledge System.

Learning outcomes could include:

- Gaining insights into the holistic approach of classical music, sustainable environment, ayurveda, and water management.
- Being able to trace the evolution of specific areas of ancient knowledge systems.
- Understanding the key principles of Indian philosophy.

2. Target audience

- The course should cater to both beginners and advanced learners. Some learners might have prior knowledge of the Indian Knowledge System while for some, it is a new concept. This can be considered while designing the content.

3. Course structure

- In SWAYAM, the courses are organized into modules based on different areas. Each module must follow the multidimensional employment focussed approach of SWAYAM.
- An example structure for modules on Indian Knowledge Systems-
- Module 1: Introduction to the Indian Knowledge System.
- Module 2: Indian philosophy- schools of Indian philosophy, teachings, application.
- Module 3: Mathematics and Astronomy- ancient contributions and integration with modern learning.

- Module 4: Indian Arts and Architecture- classical arts, poetries.
- Module 5: Integrating the Indian Knowledge System with Modern Technology and Innovation.

4. Curriculum design and content development

- An interdisciplinary approach is necessary as the Indian Knowledge System spans multiple disciplines. It helps the learners to connect between different fields of knowledge.
- Collaboration with the subject experts, and scholars of the Indian Knowledge System to deliver video lectures, and interviews for presenting deep knowledge on a particular area.
- Diverse formats such as video lectures, animations, text resources, and quizzes for the learners to make the content more interactive and engaging.
- Interactive components like discussion forums and assignments will enhance engagement.
- Resources and supplementary materials for readings must be available based on the modules.

5. Incorporating ancient wisdom into contemporary text

- It is important to show how the Indian Knowledge System can be applied to contemporary issues such as health, water management, and education. Case studies and real-world applications can be included to show how traditional knowledge systems can be revived or integrated into modern practices.

6. Engaging pedagogy

- Short video lectures to explain the content in a simple, engaging way by the experts. The questions must be embedded in between to generate the interest of the learners.
- Reading materials on the topic discussed must be provided for the learners to get a deeper understanding.
- The content must be offered in multiple languages (such as Hindi, Tamil, etc.) so that it can reach to wider audience.

7. Assessment and Certification

- Formative assessments through quizzes, and reflective essays help learners to engage during and after the video lectures.
- Summative assessments at the end of the course to test the learners' understanding.
- Certificates are given in SWAYAM to the learners upon successful completion of the course. Similarly, the certificates must be awarded to the learners for the completion of the course on the Indian Knowledge System.

8. Collaboration

- There are 10 national coordinators of SWAYAM, and collaboration with any of these coordinators to ensure the accuracy of the course is important.

9. Promoting the course

- For promoting the course social media platforms can be used, and collaborations with universities or organizations can be done. Webinars and free introductory sessions can be conducted to generate interest in the learners.

10. Feedback and improvement

- After the course, gather feedback on the course content, structure, and delivery. This can help in the improvement of the course. Based on this feedback the course can be updated.

Creating MOOCs on the Indian Knowledge System has the potential to bridge the gap between ancient wisdom and contemporary knowledge, offering learners worldwide an enriching educational experience. Through the thoughtful design of curriculum, pedagogy, and resources, these MOOCs can become platforms for learning and inspiration in diverse fields.

Importance of creating MOOCs through SWAYAM on the Indian Knowledge System

1. Preservation and promotion of ancient knowledge

- **Modern relevance:** Offering MOOCs through SWAYAM on the Indian Knowledge System such as Ayurveda, Vastu Shastra, and Yoga contributes to health, well-being, and sustainability. MOOC platforms can share this wisdom worldwide, making it more relevant in today's context.

2. Bridging traditional knowledge and modern science

- **Interdisciplinary Learning:** The Indian Knowledge System bridges the gap between traditional knowledge and modern learning. The ancient Indian practices in Ayurveda and mathematics laid the foundation for modern practices.
- **Innovative solutions:** The Indian Knowledge System offers innovative solutions to modern challenges in areas such as environmental sustainability, and mental health.

3. Comprehensive education

- A holistic educational experience can be provided through SWAYAM. For example, the principles of Ayurveda combine psychology, health, and philosophy while the Vedas discuss the physical sciences and metaphysical knowledge.

4. Encouraging holistic well-being

- The Indian knowledge system focuses on the holistic well-being of an individual. MOOCs through SWAYAM can teach these principles to help individuals achieve a healthier and more balanced lifestyle by overcoming health concerns like anxiety and stress.

5. Lifelong learning and skill development

- The Indian Knowledge System covers a broad range of knowledge areas that can enhance skills across various domains such as language, problem-solving, health, leadership, and governance. MOOCs allow learners to acquire valuable, diverse skills applicable to today's world.

6. Creating a knowledge economy

- MOOCs through SWAYAM can contribute to creating a knowledge-driven economy by sharing the knowledge of the Indian Knowledge System that can even attract intellectual capital all around the world.

7. Research and innovation

- Based on the traditional ancient wisdom, MOOCs can encourage new research and innovation areas.

8. Social empowerment

- By learning about traditional practices like water management, and organic farming, the local communities can preserve their cultural knowledge and values.

A list of a few MOOCs offered in SWAYAM, which has developed on the Indian Knowledge System and its related areas in the January 2025 session.

MOOCs through SWAYAM	Category	Level
Indian Knowledge System: Concepts and Applications in Engineering	Management studies	PG
Indian Knowledge System: Concepts and Applications in Science	Management studies	PG
Indian Knowledge System: Humanities and Social Sciences	Management studies	PG
Buddhist Tourism	Multidisciplinary	UG/PG

Table 1

Source: swayam.gov.in

Challenges of creating MOOCs through SWAYAM on Indian Knowledge System

- The Indian Knowledge System is vast and often lacks a standardized curriculum. Covering the topics of the Indian Knowledge System from Vedic Knowledge to Indian classical arts & sciences is a challenging task.
- Despite numerous scholars & experts in the Indian Knowledge System, there is a shortage of qualified faculty who can teach the topic with real-world applications. Also, understanding digital tools and media is necessary for the coordinators curating the courses.
- The Indian Knowledge System encompasses various disciplines like mathematics, astronomy, philosophy, etc. Therefore, it is a very complex task to design the course coherently.
- The traditional Indian Knowledge texts are in Sanskrit or regional languages. Translating these texts while preserving their essence is a difficult task.
- Designing assessments on the Indian Knowledge System is a challenging task. The Indian Knowledge System is often based on discussions, experiential learning and it is

not easy to fit these concepts into modern assessment techniques.

- For creating MOOCs through SWAYAM acceptance from recognized universities, and institutions is required.
- Maintaining the quality and authenticity of the content given is also a challenge.

Conclusion

The Indian Knowledge System refers to the Indian body of knowledge passed through generations in India. The Indian Knowledge System integrates reasoning and wisdom holistically, balancing life's spiritual, intellectual, moral, and physical aspects. The legacy of the Indian Knowledge System is a commitment to progress therefore reviving the Indian Knowledge System in the modern era is very important. This can be done by clubbing ancient learning with modern technology i.e. SWAYAM (a MOOC) where courses on the Indian Knowledge System can be developed for the holistic development of the students. Enriching educational experiences has the potential to bridge the gap between ancient wisdom and contemporary context. Through clear learning outcomes, structure, engaging pedagogy, interactive projects, assessment, and certification through SWAYAM, the Indian Knowledge system can reach the learners. Disseminating the ancient practices, sciences, philosophies, etc. to the learners will add to the body of their knowledge. Learning through SWAYAM will preserve ancient knowledge, promote interdisciplinary learning, and bridge the gap between traditional and modern knowledge that will depend on overcoming challenges related to teacher training support, curriculum integration, and cultural sensitivity. With the continued focus on overcoming these challenges, the revival of the Indian Knowledge System has profound implications; cultural preservation, economic development, and recognition of the Indian system foster holistic and sustainable learning approaches.

Recommendations and future research

The development of a standardized curriculum integrating traditional knowledge and modern technology is important to effectively revive the Indian knowledge system through SWAYAM. Collaborative efforts between educators, scholars, and institutions are required to achieve this goal.

Future research can focus on the development of innovative assessment techniques that capture the essence of the Indian Knowledge System.

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