

A Study of Knowledge Networks in India

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ABSTRACT

Collaborative innovation is considered to be critical to the development of the scientific capabilities. The relationships formed within knowledge networks determine the depth and breadth of knowledge exchange and learning between networking organisations and the overall performance of the network. The development of network relationships is influenced by a number of factors such as participant motivation and goals, and the culture and design of networking organizations. The paper presents major knowledge networks in India.

Keywords:

Introduction

Knowledge network is a notion of shared nodes and links for sharing knowledge and information resources. Besides providing access to information, it must also be responsible for its authenticity and security. It links the nodes through satellite network.

In order to improve access to knowledge, a need has been long felt to develop and establish knowledge network inter-connecting all knowledge and research institutions in the country through a high bandwidth network. Globally, research & development activities and innovations are increasingly becoming multidisciplinary and collaborative, and require substantial communication/computational power.

Major Knowledge Networks in India

1. National knowledge network
2. Indian Council of Agricultural Research
3. Skill India Portal
4. Global Initiative of academic networks
5. Overseas Indian Facilitation Centre (OIFC)

National Knowledge Network

National Knowledge Network (NKN) project is aimed at establishing a strong and robust Indian network which will be capable of providing secure and reliable connectivity. Globally, frontier research and innovation are shifting towards multidisciplinary and collaborative paradigm and require substantial communication and computational power. In India, NKN with its multi-gigabit capability aims to connect all universities, research institutions, libraries, laboratories, healthcare and agricultural institutions across the country to address such paradigm shift. The leading mission oriented agencies in the fields of nuclear, space and defence research are also part of NKN. By facilitating the flow of information and knowledge, the network addresses the critical issue of access and creates a new paradigm of collaboration to enrich the research efforts in the country. The network design is based on a proactive approach that takes into account the future requirements and new possibilities that this infrastructure may unfold, both in terms of usage and perceived benefits. This will bring about a knowledge revolution that will be instrumental in transforming society and promoting inclusive growth.

Role of NKN:

- Establishing a high-speed backbone connectivity which will enable knowledge and information sharing amongst NKN connected institutes
- Enabling collaborative research, development and innovation amongst NKN connected institutes
- Facilitating advanced distance education in specialized fields like engineering, science, medicine etc.
- Facilitating an ultra-high speed e-governance backbone
- Facilitating connection between different sectoral networks in the field of research

The Indian Council of Agricultural Research (ICAR)

The Indian Council of Agricultural Research (ICAR) is an autonomous organisation under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare, Government of India. Formerly known as Imperial Council of Agricultural Research, it was **established on 16 July 1929** as

a registered society under the Societies Registration Act, 1860 in pursuance of the report of the Royal Commission on Agriculture. The ICAR has its headquarters at New Delhi.

The Council is the apex body for co-ordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country. With **101 ICAR institutes** and **71 agricultural universities** spread across the country this is one of the largest national agricultural systems in the world.

The ICAR has played a pioneering role in ushering Green Revolution and subsequent developments in agriculture in India through its research and technology development that has enabled the country to increase the production of foodgrains by 5 times, horticultural crops by 9.5 times, fish by 12.5 times, milk 7.8 times and eggs 39 times since 1951 to 2014, thus making a visible impact on the national food and nutritional security. It has played a major role in promoting excellence in higher education in agriculture. It is engaged in cutting edge areas of science and technology development and its scientists are internationally acknowledged in their fields.

Skill India Portal

Skill India Portal was conceptualized to provide a collaboration platform to help empower the all stakeholders to freely connect with each other. The overall focus of this initiative is to help provide an engaging ecosystem to cater to skilling needs of citizens by publishing and sharing relevant information. The outcome of this collaboration should ideally lead to inclusive growth especially for those at the bottom of the pyramid (approximately 800 million citizens). The portal attempts to disseminate reliable information and by providing an interface to enquire, explore, and access and engage with various affiliated and accredited training partners, infrastructure providers, understand skill options, opportunities, information on various providers, reliable and credible digital content.

Skill India Portal initiative is mainly targeted at citizens seeking to enhance their existing skills. Ministry of Skill Development & Entrepreneurship along with National Skills Development Corporation (NSDC) has partnered with CMC to develop this platform which is completely integrated with NSDC's Skill Development Management System (SDMS).

Global Initiative of Academic Networks (GIAN)

Govt. of India approved a new program titled Global Initiative of Academic Networks (GIAN) in Higher Education aimed at tapping the talent pool of scientists and entrepreneurs, internationally to encourage their engagement with the institutes of Higher Education in India so as to augment the country's existing academic resources, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence.

In order to garner the best international experience into our systems of education, enable interaction of students and faculty with the best academic and industry experts from all over the world and also share their experiences and expertise to motivate people to work on Indian problems, there is a need for a Scheme of International Summer and Winter Term. During the 'Retreat' of IITs with Minister of Human Resource Development Smt. Smriti Zubin Irani on 29th June, 2014 at Goa, it was decided that "A system of Guest Lectures by internationally and nationally renowned experts would be evolved along with a comprehensive Faculty Development Programme not only for new IITs, IIMs, IISERs but also other institutions in the country.

Overseas Indian Facilitation Centre (OIFC)

The Ministry of Overseas Indian Affairs has set up an Overseas Indian Facilitation Centre (OIFC) as a not-for-profit-Trust under the Indian Trust Act, 1882 in partnership with Confederation of Indian Industry (CII). The Centre will be a 'one stop shop' for serving the interests of the Overseas Indian Community and has the mandate to cover two broad areas viz. investment facilitation and knowledge networking.

The objectives of the Centre are :-

- i.** Promote Overseas Indian investment into India and facilitate business partnership by giving authentic and real time information ;
- ii.** Function as clearing house for all investment related information. This would be done by processing information on a real time basis through ICT platform;
- iii.** Establish and maintain a Diaspora Knowledge Network (DKN) by creating a database of Overseas Indians who would act as Knowledge Diaspora and whose knowledge resources could be using ICT platform;

iv. To bring the Indian States, Indian business and potential Overseas Indian Investors on the same platform and to facilitate the investors to identify the investment opportunities

v. Provide a host of advisory services to PIOs and NRIs. These could include matters such as consular questions, stay in India, investment and financial issues etc.

3. The Centre serves as a focal point, especially for diaspora professionals and small/mid-sized entrepreneurs to build strong inter linkages with India, enabling them to expand their economic engagement with India.

4. Currently OIFC's activities include, query addressal on various issues faced by the NRI's & PIO's, a robust online business networking portal, projection of member States' projects, 16X5 live facilitation services. Road Shows through Investors Interactive Meets in various countries, Market Place forums in India and overseas and a Global Indian Network of Knowledge Portal.

5. The OIFC was formally launched on 28th May, 2007 with the signing of MoU between the MOIA and the CII. The Centre is being managed by the CII.

Conclusion

Building and maintaining strong relationships between network participants underpins mutuality of goals, motivation, and the amount and quality of knowledge exchanged. Other issues such as cultural compatibility and ICT interoperability of participating organisations are critical in the development of successful knowledge networks. A boundary-spanning web of relationships within the knowledge network will facilitate the flow of information, knowledge, learning, strategies and motivation. Nurturing those relationships through network champions, ICT, culture, structure and internal strategy will help to build trust and pre-empt developments required to support future knowledge requirements. Hence network relationships will be able to evolve in advance of innovation process need.

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