I-Schools: A Brief Overview with Special Reference to I-Caucus Foundation and Information Schools in Indian Perspectives

Prantosh Kr. Pau1 [1] and R Senthamarai [2]

[1]FBAS, Indian Institute of Engineering Science and Technology [IIEST],
Shibpur- An Institute of National Importance, WB, India,
[2] HOD, Deptt. Computer Applications,AVIT, VM University, India
E-mail: prantoshkpaul@gmail.com, redlotus98@gmail.com

Abstract - **Here in this article we describe about the matter of I schools or information schools, including its growing demand and popularity. We also describe how information studies today treated as I programme and also about I school; their programme, job opportunities, curriculam nature and also research trends. This article also describes about I School caucus of United States, which is a forum of I Schools and I programme as a case study also about I programme in Indian perspectives emphasizing the courses of study, research trends and job prospects.**

*Keywords:***Information programmes, I-Schools, Information Science, Information systems, informatics, interdisciplinary science, job prospects in US, I-revolutions, Information Movement.**

I.INTRODUCTION

Information fields today considered as one of the important applied science, due to its global impact in science, communities, innovation and obviously for keeping safe our societal heritage. Information is the prime mover and main concern of many subjects including Computer Science, Information Science, Information Technology, Communication Science, Library Science, E-Commerce and Media Science and so on. Due to the impact of information in all type of establishment; ranging from government to corporates; cultural establishment to NGOs it is consider as vital energy of this knowledge based virtual community. For creating this information wave, information programmes played a wonderful job, no doubt.

II. I-SCHOOLS

I schools or Information Schools are the schools which are mainly dedicated to creating tomorrow's virtual knowledge society. I schools are interested in collaboration among the people, society, information with contemporary technologies is shown in fig: 1. Before going to discuss about philosophy and others matters lets knows some general concept, for clarification.
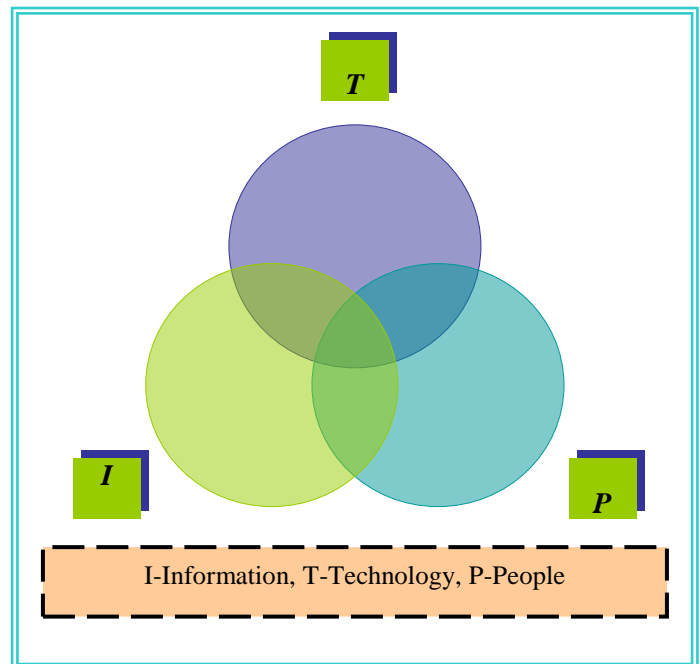

Fig. 1 Main Base of Information Programmes of I-Schools

I schools are the academic and research establishments which are conducts programme and research in the fundamentals aspects of information and communication and computing in to relationship between people, information and technologies. Typically I-Schools are expected and offer programme related to information like –Media Science, Information Science, Information and Communication Science, Library Science, Computing, Information Literacy, Information Architecture, Information and Communication Technology and similar are depicted in fig: 2.

One of the important characteristics of these schools are they focuses on information and technology within societal concentration and information sharing rather than computing and software engineering; but they also provides information fundamentals. As far as the level are concerned these schools are offers Bachelors, Masters and Doctoral programme in the information field with hybrid technological orientation.
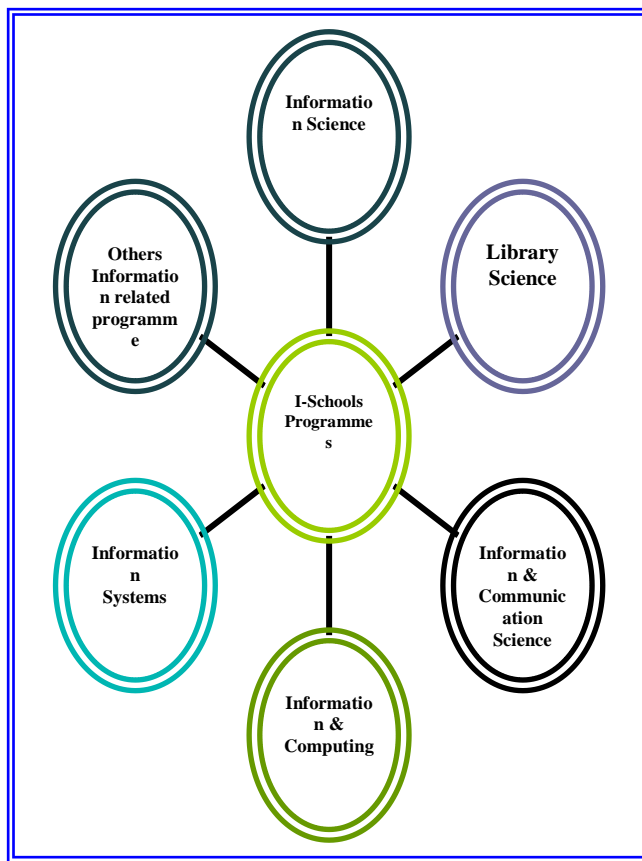
Fig. 2 Structure of Information Programmes of I-Schools

III. I-SCHOOLS: PHILOSOPHICAL VIEW

The Information Schools or I-Schools are the academic department committed to understanding the values and importance of information and communication in nature and society. Basically I school conduct research into the fundamentals aspects of information and information technologies (wiki).with the integration of public, information and technology they believe and offer interdisciplinary approach based programme and promote this focuses to understanding the opportunities and challenges of information management, with a core commitment to the concept like universal access and user centric organization of information.

The main aim of the I-Schools including create a knowledge based societies and sound economic situation through easy information transfer spaces; from digital and virtual spaces to physical spaces. The I-Schools needs to expertise in all forms of information like science, business, education and culture. This expertise must include understanding the use and user of information as well as information technologies and their application.

IV. I SCHOOL: TECHNOLOGICAL VIEW

As our need for technology grow, so does our need for computer scientist working as researcher, computer scientist

so the technological problems and develop successful solution (monster).

The I-schools believe in modernization of information infrastructure with the help of various information technology tools like cloud computing, multimedia, networking technology. The syllabus and job prospects of I schools educates also like IT Manager, Network Engineers. Now one question may be arising that what is the difference in between the I-schools and computing Or IT Schools or information programmes. Virtually the computing programmes and IT school gives focus on various technologies and little bit in business fundamentals. They offer programme on Information Technology, Computer Science and Engineering, Software Engineering and similar type.

Where as the I-schools focuses on the information with technological grounding means the I-graduates knows Information Technology with information know how. As far as the I programmes are concerned I school offers Information science, Information and Communication science, Information studies, Library science, Informatics and similar.

However it is interesting to note that some of the programme like Information Systems, Informatics, and Software Engineering may offer in both the I-school and IT-school. The basic difference between both the schooling are, the Information Systems programmes at IT-school focuses on information systems with software engineering and in case of information systems at I-School focuses on information systems with information fundamentals even business casis.for this reason many recommended Information systems programme in I-school rather than IT school (Drexel).
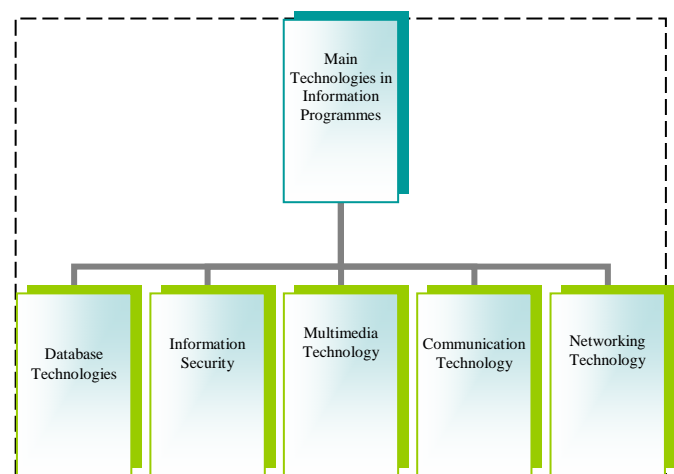

Fig. 3 Main Technological Background in Information Programmes.

Fig: 3 explain the technological background of information science. The same thing is applicable in case of Software Engineering and Informatics. However if these courses when offered in the business school then they

concerned simultaneously little bit on business and managerial skills.

V. I-SCHOOLS: PLACEMENT AND RESEARCH VIEW

The I-school or student of I-discipline has a great job opportunities world wide. As we mention that I school provides all the basic knowledge of information and Information Technology, so that they able to hi-tech jobs as well as traditional jobs. The Jobweb.org One of the Ten Most Likely Fields to include a Signing Bonus Computer Software Development & Data Processing Services One of the top five undergraduate majors targeted by employers in the Northeast Information Sciences and Systems. So the opportunities are tremendous. Many jobsite and placement agencies even Bureau of Labor Statistics (USA) data shows that there are huge opportunities in some IT jobs; which include Information Security Engineers, Security Analysis, Data Integration Specialist, like this. But one question may be arise that, Is these job also for computing students? Answer is yes; but the market and corporate wants I-graduates, due to their hybrid skills. The job areas including following-

☐
    a. Information Officer
    b. Knowledge Broker
    c. Telecommunication Expert
    d. Information Scientist
    e. Database Administrator

The main aims of iSchools are sharing a fundamental interest in "the relationship between information, technology and people of the society or of the respective organisation." These schools, colleges and departments basically located in the university campuses and most of them are newly created or are evolving from programs formerly focused on specific tracks such as information technology, library science, informatics, computer science, and information science. The iSchools Caucus is the governing body for the iSchools; currently 27 schools worldwide are iSchools but initially at the time of origin 24 schools are there. ISchools promote an interdisciplinary approach to understanding the opportunities and challenges of information management and create a knowledge based society with a core commitment to concepts like universal access and user-centered organization of information with the help of various technologies. Fig: 4 show the I-technology flow in information science. The field is concerned broadly with questions of design and preservation across information spaces, from digital and virtual spaces like online communities, digital repositories, the World Wide Web, and databases to physical spaces such as libraries, museums, collections, and other repositories and consortium.

Web Engineer
    a. Usability Expert
    b. System Analyst
    c. Librarian
    d. Information Manager
    e. Content Developer & others

The salaries in United States are varied for information discipline student the formal fields/post offered starting $36,500 and technology based information jobs $58,000 however the Indian average starting salary 10000-18000 respectively as far as the average salary is concerned.

As far as research is concerned the I schools are interested and engaged in the research in the areas like Fuzzy Logic & Neural Networks Applications, Information Representation & Repackaging ,Internet And Web Technology ,Data Base Management System Operating Systems ,Computer CommunicationNetworks,InformationPsychology,DataManagement,Information Society, Digital Divide, Digital Repositories, Informatics Metrics Science. The main focus in the I-Schools research students, faculty and staff collaborative to unique technology, people and information to make a fundamental difference in this knowledge society.

VI. I-SCHOOL CAUCUS, USA

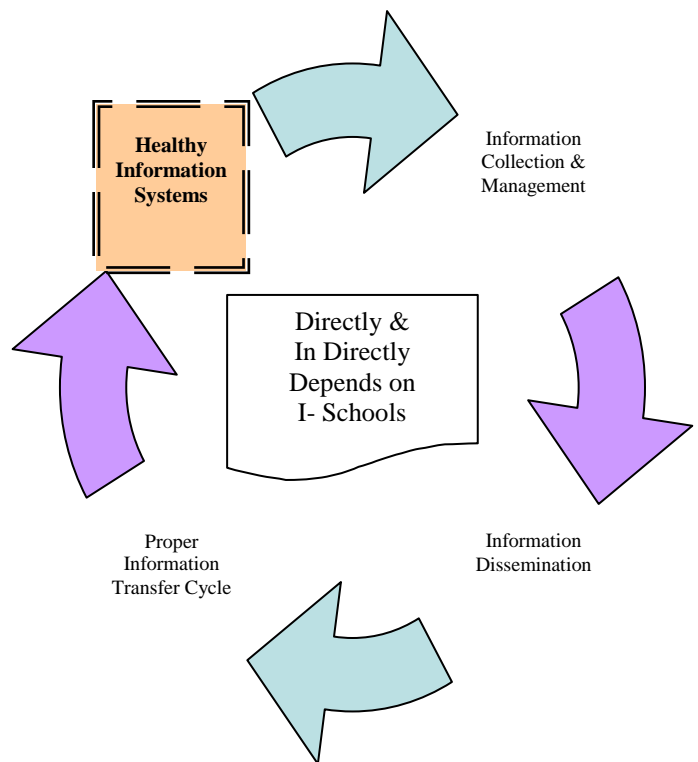Twenty seven information schools have joined together to form the iSchool Caucus which is earlier known as "I-

Fig. 4 Technology & I- Programmes

VII .AIM AND ACTIVITIES

The main aim of the iSchools caucus including-

a. To create and help of the knowledge based society and easy information society directly or indirectly.
b. To integrate information, organization, technology and people.
c. To collaborate and sharing among the computing areas and introducing this is in the information field.
d. To interact each other development of information sciences by conducting seminars, conferences.

As because It is open to professionals in information science practicing in fields including; Library Science, Records, Archive and Documentation management, Information Management, Data management, Information and Communication Technology (ICT) management, Knowledge Management Specialists and others so that for more cooperation among others iSchools organize international conferences every year. The details of past conferences are as follows and shown in fig: 5.

iConferences held at	Year of the event
The Pennsylvania State University	*September 2005*
University of Michigan	*October 2006*
University of California, Los Angeles	*February 2008*
University of North Carolina	*February 2009*
University of Illinois at Urbana-Champaign	*February 3-6, 2010*
University of Washington	*January,2011*
University Of Toronto	*2012*

Fig. 5 I School Conferences around the world

VIII. PARTICIPATED I-SCHOOLS IN I-SCHOOL CAUCUS, USA

Most of the information school located at United States however some of the institute located in the United Kingdom and Asia now member of iSchool caucus. Some popular I-School are

a. School of Information ,University of California, Berkeley ;
b. The Donald Bren School of Information and Computer Sciences, University of California, Irvine;
c. Graduate School of Education and Information Studies, University of California, Los Angeles;
d. School of Information Systems and Management, Heinz College, Carnegie Mellon University;
e. College of Information Science and Technology, Drexel University;

f. College of Communication and Information, Florida State University;
g. College of Computing, Georgia Institute of Technology;
h. Berlin School of Library and Information Science, Humboldt-Universität zu Berlin;
i. Graduate School of Library and Information Science, University of Illinois;
j. School of Informatics and Computing ,University of Illinois;
k. School of Library and Information Science, University of Illinois;
l. College of Information Studies, University of Maryland;
m. Department of Information Systems, UMBC;
n. School of Information, University of Michigan;
o. School of Information and Library Science, University of North Carolina;
p. College of Information, University of North Texas;
q. College of Information Sciences and Technology, The Pennsylvania State University;
r. School of Information Sciences, University of Pittsburgh;
s. Royal School of Library and Information Science, Denmark;
t. School of Communication and Information, Rutgers, the State University of New Jersey;
u. Information School, University of Sheffield, England;
v. School of Information Systems, Singapore Management University;
w. School of Information Studies, Syracuse University;
x. School of Information, University of Texas, Austin;
y. Faculty of Information, University of Toronto;
z. Information School; University of Washington;
aa. School of Information Management, Wuhan University, China

And some others are the school who believe in information dissemination and transfer with technology grounding and so that they affiliated with I-Schhol Causus, USA.

IX.INFORMATION SCHOOLS IN INDIA:

Concept and diversity of information schools in India comparatively upgraded than western countries. In India the most popular schools related to information discipline known as IT Schools or LIS Schools. However some Information schools are established in India by private initiatives. These information schools are not member or part of iSchhols caucus, USA. They are independent and offer courses on Information Management, Information Systems and Management, Information Systems, Information Science and Information Science and Management.

The first ever iSchhols in India treated as International School of Information Management (ISiM); which is located at University of Mysore,Karnataka campus. The private establishment including Informatics, Bangalore and Ford

Foundation, India played a wonderful job for help and initial initiative of making ISiM Possible.

The another institute, Birla Institute of Technology and Science, pilani offer a core Information related programme i.e. Master of Science (MSc) in Information Systems; this programme is quite differs from MSc-IT. Like this BIT, Mesra offer a unique programme MSc information Science since 1993, which is considered as first universities in India offer programme on this subject. Apart from these private initiatives and establishment the West Bengal University of Technology (WBUT a state university run by Government of West Bengal) from 2007 offer a course of Information School's interest i.e. MSc Information Science at Institute of Engineering and Management, Kolkata-a top ranked institute of the states of West Bengal.

However in most of the schools offers LIS programmes and the nomenclature of the schools are Department of Library and Information Science rather than information science or information school. Most popular library science programmes are BLISc, MLISc and research level courses. As on 2010 near about two hundred universities/institutes offers programme in the same via on campus or off campus mode. Where as newly evolved information programme offered only in five to six schools.

So it is observed that India is in the primary step regarding information schools development or movement. Most of the institutes offers library and information, Archive related information programme, except some of department where information or information science related programme are teach and these institutes, departments nomenclature as schools of Information Science, Systems or Management.

X. SUGGESTION

1. Indian universities should introduce programme related to Information Science;
2. Indian Corporate should aware about Information related programme;
3. It is essential to established Information Science Foundation; more specifically I-Foundation like USA.
4. Research work in the field of Information Science and related programme.
5. Governments, UGC and other initiatives.

XI. CONCLUSION

As Information Science Has several benefit to the society; particularly for information system development and entire information system infrastructure building. I-programmes need much more relationship and integration with computing related programmes. India needs several IT schools dedicated to modern Information Science and computing. In India, information science is mainly popularized as LIS nomenclature and to some extend Information Science. However we need some other programme related to this like- Information Science &

Technology, Information Science & Computing and so on. We need human and institutional efforts for modernizing information science and policy towards starting and development of Information Schools.

REFERENCES

[1] Handbook on library and information science. New Delhi: Association of Indian Universities. 1997
[2] Sharma, Dev Raj. 1997. Doctoral research in library and information science in Indian universities. Palampur: The Author.
[3] Shera, J.H. 1976. Introduction to library science. Littleton, CO: Libraries Unlimited.
[4] Steig, Margaret F.. Change and challenge in library and information science education. Chicago, ALA: 96. 1992
[5] Indian Association of Teachers of Library and Information Science. National Seminar (15: 1997: Mysore). [Resolutions] *Iaslic Newsletter* (March–April): 2. 1998
[6] Kaula, P.N. "Hundred years of library and information science education" In Kumar, P. S. G. and Vashisth, C.P. Eds., Library and information science in India. New Delhi: Sterling Publishers. 1992
[7] Keren, Carl. "On information science". *Journal of the American Society for Information Science* 35(2): 137. 1984
[8] Kumar, P.S.G.. Research in library and information science in India. Indexed by A. Tejomurty and H.R. Chopra. New Delhi. 1987
[9] Lahiri, Ramansu. "Research in library science in India (1950–95): an account of Ph.D. Programme".*Annals of library science and documentation* 43(2): 59–68. 1996.
[10] Mitra, C.R. "University-Industry interaction with reference to RECs". *University News* 35(25) June 23:1–4. 1997.
[11] Prytherch, Ray. "Problems of research". *Information Management Report* (Sept): 18. 1997
[12] Satija, M.P. "Sources of Indian library and information science dissertations." *Libri* 39(1) March: 71–78. 1989.
[13] Satija M.P. "Forty years of doctoral research in classification and indexing in India, 1957–1997." *Library Herald* 36(2): 80–87. 1998.
[14] Paul, P. K "Information Science: Trends and Analysis 2003-07" Dissertation, University of North Bengal, India.2008.
[15] Sharma, Dev Raj. 1997. Doctoral research in library and information science in Indian universities. Palampur: The Author.
[16] Paul, Prantosh Kumar,Bibhuti Bhusan Sarangi and Dipak Chaterjee "Cloud Computing and its strategic and technical application in Information Networks in Indian Scenario accepted in *IEEE* sponsored- National Conference on Information and Software Engineering,AVIT ,VMU, 9-10 March. Paper published
[17] Paul, Prantosh Kumar,Bibhuti Bhusan Bhusan Sarangi and Bhaskar Karn "Information Systems & Networks :Emphasizing issues and challenges of subject based ISN" accepted in *IEEE* sponsored- National Conference on Information and Software Engineering,AVIT ,VMU, 9-10 March. Paper published
[18] Paul, Prantosh Kumar,Shyamsundar Bairagya, Bhusan Bhusan Sarangi 'Expert System and Artificial Intelligence: its evolution and contemporary scenario with special reference to its uses in Information Science (IS). in *IEEE/IETE/CSI* Co-sponsored 'Nationnal Conference on VLSI,Embedded System & Communication Technology' ,Department of Electronics & Communication Engineering,AVIT (AICTE-NBA-VMU approved)
[19] Paul, Prantosh Kumar, Bhusan Bhusan Sarangi,Asok Kumar 'Information Systems and Networks (ISN): its types, components with special reference to utilization and role of Networking and Communication Technologies in ISN –Contemporary Scenario' in *IEEE/IETE/CSI* Co-sponsored 'Nationnal Conference on VLSI,Embedded System & Communication Technology' ,Department of Electronica & Communication Engineering,AVIT (AICTE-NBA-VMU approved)
[20] Paul, Prantosh Kumar, Dipak Chaterjee and Bhaskar Karn 'Information Management: emphsizing traditional and technology focused approach – An Overview' accepted in in *IEEE/CSI/AICTE* co sponsored National Conference on Paradigm shift in Education Technology & Content Management,DIT,Techno India (AICTE-NBA-WBUT approved) Paper published

[21] Paul, Prantosh Kumar,Mrinal Kanti Ghose, Dipak Chaterjee 'Education Technology: its benefits and utilization with special reference to EduNxt, Knowledge Delivery Model of Sikkim Manipal University-A Study' in *IEEE/CSI/AICTE* co sponsored National Conference on Paradigm shift in Education Technology & Content Management,DIT,Techno India (AICTE-NBA-WBUT approved) Paper published

[22] Paul, Prantosh Kumar, Dipak Chaterjee and Bhaskar Karn "Cloud Computing: Issues and challenges with probable solution in Indian Perspectives" *IJIDT* International Journal of Information Dissemination & Technology,MMU,Ambala. Vol-2 .No-2.

[23] Paul, Prantosh Kumar, Dipak Chaterjee and Bhaskar Karn "Information Management: Emphasizing its different angel and view with special reference to manpower development programme in India" *IJIDT* International Journal of Information Dissemination & Technology,MMU,Ambala. Vol-2 .No-2.

[24] Paul, Prantosh Kumar,Shyamsundar Bairagya, 'Management Science and its increasing influence and interaction with Information Science (IS): an Overview' in International Conference on Emerging Market and Issues in Management, [ICEMIM-12], VIT University,Vellore,16th March,2012.

[25] Paul, Prantosh Kumar ,Kalyan Kumar 'Information Management & Its Needs with Focus on Job Based Versatile Academic Programmes in India in International Conference on Emerging Market and Issues in Management, [ICEMIM-12], VIT University,Vellore,16th March,2012.

[26] www.ishools.org