Information Science in Indian Scenario with Reference to Possibilities of Proposed MTech (Information Science): Lets Welcome Future Programme of Indian I-School

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**Abstract**

Information Science is a field of fields. Which is actually responsible for various information activities such as collection, selection, organization, processing and management. Information Science is domain which has connection with some other domain related with information and side by side technology. In Information Science technology is mainly restricted with computing and some allied sciences. Information Science consider as interdisciplinary domain if applied Science responsible for societal development through proper information infrastructure building and information removing. Information Science is still offered as Science field (with MSc) in Indian university but there are huge potential the opening up to introduce IS as engineering domain with ME/MTech. This paper actually illustrates several aspect of Information science and mainly of proposed MTech(IS) first time in India and Asia.

**Keywords:** Information, Information Science, Interdisciplinary Subjects, Education Engineering, M-Tech/ME, AICTE, Information Science and Technology, MTech IS, I-Schools.

**Introduction**

Information Science or IS is an advance academic cum practicing field responsible for several development activities. The development through Information Science is mainly possible by better and healthy Information transfer and side by side technology transfer. Information Science mistakenly consider as Information Technology or Computer Science. Thing, Information Science is much wider and interdisciplinary than that. Apart from computing it also clustered with some other gradients such as management Information Systems, Information Technology Applications, Management Science, Cognitive Science, Social Science and so on. Information Science fundamentally originated from some social Science domain and due to time need and development got affiliation with some Technological and Computing domain. Thus Information Science of IS today mainly offered as science domain and come as MSc-IS nomenclature. Information Science has several potentially to come as M-Tech program. Engineering college may start M-Tech (IS) program by using some simple shared strategy.

**Objectives**

The main aim and objective of this study is including:

- To learn about Information Science and its basic nature;
- To learn about Information and its general academic program availability with special reference to India;
- To learn about potentially of Information Science as Engineering domain and probable academic program;
- To learn about Information Science nomenclature with M-Tech degree - possible and opportunities;
- To find out SWOT of M-Tech Information Science, briefly.

**Information Science: Basics**

Information Science is an interdisciplinary facet of facet responsible for proper information designing and delivery including Information Architecture and Planning, Information Analysis, Designing, Development, Recycling and so on. The other view of Information Science is mainly responsible for information Collection, Selection, Organization, and Processing Management and so on. Information Science is treated as
behavioral field as it put importance on user studies and particularly on information attitude and seeking behaviors. Information Science is responsible for proper information and knowledge systems building whether that is traditional information foundation or for MNC’s or organizational Information Infrastructure building ⁷, ⁸.

However these days it is not possible to compare Information Science with existing Information field such as Information Studies or Library Science as in India Information Science is open for those candidates having knowledge and degree of IT/Computing/Computer Applications/ Basic Science instead of Any Branch holders as like Information Studies or LIS or Communication Studies/Science ⁹.

- **I-Schools**

I School refers to Information schools. I Schools are one of the important concepts in today’s IT and information age. I School mainly conduct academic programmes and research in the field of Information and Technology. I Schools offer courses related to information directly or indirectly. The information programmes which are directly associated with Information like Information Studies, Information Science, Information Management and Knowledge Management, Documentation Science are the main courses/Subjects of I-Schools. However, the indirect information associated courses are also emerging in the course catalogues of Information Schools. These courses are Information Technology, Computer Science, Computer Engineering, Information Engineering, Information Science and Technology (IST) and so on; hence all are going to reach interdisciplinary scale.

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 ⁶, ⁷, ¹⁴.

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 ⁶, ¹⁴, ¹⁵, ²⁰.

To keep in mind international trend of I-Schools, in India also we need to launch Information Science by merging of information related department such as computer application, library science, information technology, computer science and communication science for next generation information solutions. and thus we need more and new programmes and thus M Tech-Information Science may be a healthy alternative in respect of running MSc-IS, M Tech-IT, M Tech-CSE, MCA programmes.

- **Is IT an Information Programme?**

Information programmes are commonly considered as Information Science programme. The main difference in between information programme and IT programme is that, information programme deals with information activities including Information Transfer Cycle (ITC) and they take the help of IT and Computing. On the Other hand it is partially called as Information programme as IT does not investigate into the properties and behavior of data and information unlike Information programmes. So information programmes may involve IT but IT basically does not deal with the information and its behaviors.

- **Information Science as an Academic Domain**

As an academic domain information Science is old but as academic program Information Science is still new in so many countries (like India, Canada, Pakistan). Thus Information Science brings both new and old characteristics. As far as its origin is considered, it is originated from some social science domain like - Documentation Science, Information Studies, and Librarianship. But due to global influence and advancement of Information Technological Tools it incorporated with this and emerged as an Applied Science domain. Today various UK, USA, Japanese Universities introduce Information Science Department and related several Information Science specialization in their course catalogue, which are still dream in Indian Universities. The common Information Science program is MS/BS, which European and Asian countries preferred MSc/BSc on IS. The specialization of Information Science is includes - Information Management, Telecommunication, IST, HCI, Cloud Computing, Web Development and Interface Building, Information Literacy, Information Service and so on. These program/specialization are offered both as full-fledged BS/MS/BSc/MSc program or may be as specialization, MS-IS (Cloud Computing) ⁶, ²¹, ²⁴.

- **Information Science Education in India**

Information Science program in India is less known and popular nomenclature and mainly offered as, either as LIS or CIS. Though potentialities exist to offers as Information Science nomenclature. The first Universities which introduce MSc (Information Science) is BIT, Mesra 20years back. This program is clustered with Computing, Information, Management and Cognitive Science facets and thus responsible to manage today Information Systems and entities, properly. Apart from BIT some other like Manipal University, IEM (WBUT), Techno India (WBUT), KITM (WBUT),
also introduce Information Science (MSc) program with higher Information gradients. Though it is possible to introduce IS program by merging IT, LIS, humanities and Science department. This may be a shortcut to start MSc (Information Science) program.

- **Engineering Nomenclature in India and MTech**

India has largest education system in the world and has so many challenges, Universities, technical colleges and other institutions. The Engineering colleges are mainly controlled by the AICTE, New Delhi in India. Courses are also need to approve by AICTE. Still Information Science programme as Engineering/Technical domain is not only in India and even entire world (as Engineering and ME/MTech nomenclature is not offered in other nation).

- **SEMESTER-I**
  - Information Society and Information
  - Computing and its Dimension
  - ICT Based Informatics
  - Knowledge Organization and Automation
  - Information as a Field

- **SEMESTER-II**
  - Cloud Computing and Virtualization
  - HCI Based User Interface
  - VOIP-Advanced
  - Elective-I
  - Information Security

- **SEMESTER-III**
  - Advance Cloud Computing
  - Information Networking
  - E Commerce and E Commerce
  - Elective-II
  - Elective-III

- **SEMESTER-IV**
  - Knowledge Management and Information Profession
  - Elective-IV
  - Elective-V
  - Elective-VI
  - Project

Apart from basic differences in conventional MSc-Information Science paper/modules, this proposed programme’s internship and project are also industrial in nature and not restricted in academic dissertation or thesis preparation. This project may be carried out in the organization where information and simultaneously technology are considered as most valuable entity. These organizations may be IT Industry, IT Enable Services, Telecom and Networking Industries, Information Systems related job/project in MNC’s, Information and Knowledge Network and even traditional information foundation such as Information Centre, Information Kiosk, Knowledge Repositories, Publishing Agencies, Abstracting and Indexing Agencies and so on.

**METHODOLOGIES**

However for designing core courses of MTech programmes, related MTech/BTech of the subjects like IT, Computer Science and Engineering, Software Engineering and others are handled and analyzed from some of the Universities and Engineering Institutes in India. During designing the programmes guidelines of AICTE for offering BE/BTech/ME/MTech is also handled and its findings are incorporated in suggested programme.

The number of papers, credit and selection of papers are purely based on international trend and new domain/paper of MS/MSc programme offered by the leading Information Science/IST schools (which are listed in www.ischools.org). Hence apart from using this style of educational research, special attention is given.

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**Fig. 2: Showing Role of Information Science as Community Developer through Tech and Info Solution**

ME/MTech is more or less same type of programme with 2year duration (and offered as 4 semester mode and some cases 6 trimester mode). The programmes which are strongly associated with engineering domain are offered as ME and some Applied Science and Engineering integrated programme offered as MTech. For example courses on civil Engineering/ME offered as ME where as programme on CSE/IT/ Al/ ES offered as MTech or BTech programme.

In India lakh of student pass out each year with engineering domain from Engineering colleges / University Engineering Department and so on. MTech or BTech on Information Science may be possible in the line of BTech/MTech(IT) with integration of some other science, Engineering and computer and even Social Science domain.

- **MTech(Information Science): Proposed Curriculum**

  - Here a model curriculum is placed with 2 year duration with the possibilities of emerging specialization. The total number /unit of paper is proposed 20 while each credited with 2 and 3(approximate 30 hours for each credit).

  - As Information Science is an applied Science domain with Humanities and Social Science touch thus, this curriculum is prepare to keep in mind The Information and social aspects with business and changing industrial requirement.
on handling MSc- Information Science programmes running in Indian Universities for fixing module, credit and some other academic dealing.

**MTech(Information Science): Wider Possibilities and Threat**

MTech(Information Science) no doubt may bring so many possibilities and these possibilities are including academic, professional, research and development. Academic development in terms of managing information and technology related department and merging them; thus it brings new arena of interdisciplinary academic atmosphere.

**Fig.3: Depicted Possibilities of Information Science in Engineering Domain/ programmes and Departments**

As MTech (Information Science) intended to practice technocratic information professionals thus several new type of professional's employment is possible (in ready to employment position) like chief Technology Officer, Chief Information Officer, Information Scientist, Usability Engineering, System Administrator, Information Analyst and so on. Some new research area may open up like Cloud Computing, Big Data Management, Intelligent Tool, Informatics, Information Engineering, Digital Repositories, Green Computing and so on.

**List of some more Proposed and Possible Applied Science Domain**

- BTech/MTech/BE/ME-Information Science (Mechanical Sciences);
- BTech/MTech/BE/ME-Information Science (Management Information Systems);
- BTech/MTech/BE/ME-Information Science (Medical Informatics);
- BTech/MTech/BE/ME-Information Science (Bio-Informatics);
- BTech/MTech/BE/ME-Information Science (Library Automation);
- BTech/MTech/BE/ME-Information Science (Decision Support Systems);
- BTech/MTech/BE/ME-Information Science (Geo Information Science);
- BTech/MTech/BE/ME-Information Science (Chemo Information Science);
- BTech/MTech/BE/ME-Information Science (Green Information Science);
- BTech/MTech/BE/ME-Information Science (Big Data Management);

**Fig.4: Some Possible Specialization of MTech-Information Science in Engineering Atmosphere**

Apart from these benefits, MTech (Information Science) programmes may also helps in societal development as this is responsible for information infrastructure building.

**FINDINGS**

- MTech (Information Science) course building is possible with computing, Information Science, Information Technology, Information Systems and LIS department activities.
- It also provides societal development through the Community Informatics utilization like- removing Information Divide, Digital Divide.
- MTech (Information Science) may also come as some other nomenclature like-Information Science and Technology, Information Management, Information Science and computing and so on.

**SUGGESTION**

- Information Science with Engineering nomenclature is possible by initiation of IT, Information Science, and LIS department and mainly through techno critic information professionals;
- Initial awareness is very much important and urgent for healthy Information Science academic programme building.

**CONCLUSION**

Information is power and Technology is another valuable entity in today's age. Virtually, Information Science programme is helpful for increasing information and digital literacy. Thus it helps in Information Society and Knowledge Society building. Information Science with MTech may enter a new arena of Intelligent Information Systems and Information Infrastructure building.

**REFERENCES**


