Retail Informatics: Basics and Emerging Scenario with Special Reference to Design and Development of Proposed MSc-Information Science (Retail Informatics) in Indian Scenario

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Abstract

Informatics is one of the important name in the field of Applied Science. Informatics is actually nothing but the collection, selection, organization, processing, management and dissemination of information with the help of techniques and technologies. Popularly mechanism towards information processing and management is called Informatics. Informatics is subject based depending upon knowledge cluster; Informatics may attach or associate with other domain like Informatics and Medical Science creates the domain Medical Informatics. Like this, integration and affiliation of Informatics and Retail Management creates another domain called Retail Informatics. This paper talks about Retail Informatics (RI); its aim and objective, features and characteristics and so on. Retail Informatics specialized MSc-Information Science curriculum, is also proposed in this paper for further development of the domain.

Key Terms: Retail Informatics, Business Informatics, MSc-Information Science, Marketing Management, Computing, Information Management

Introduction

Informatics actually has two foci, one is Social Science and Humanities and another is Pure Science. Retail Informatics (RI) is dedicated to Information and Documentation for marketing and supply chain management and especially for Retail Marketing. Informatics and its several cluster domain are increasing, but out of which its Business and Computer related domain are also increasing. Retail Informatics is actually small branch of business informatics and dedicated to information processing and organization of business and organizational content, management and documentation of several institutional items and contents. Virtually, Retail Informatics is actually a new evolving term and responsible for retail marketing development and promotion.

Objectives

- To learn about Retail Informatics and its nature, characteristics and features.
- To find out Retail Informatics and its challenges, emerging trends and issues in contemporary scenario.
- To find out the main emerging role of Retail Informatics for better Retail Marketing and business.
- To find out main development of Retail Informatics over the period.
- To find out main challenges and issues of proposed MSc-Information Science (Retail Informatics).

Fig. 1: From Smaller to Broader periphery of Information and Technology related field

- Information Systems (InfoSys)
- Information Technology (IT)
- Computer Technology (CT)

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To find out potentiality and proposed curricula of MSc-Information Science (Retail Informatics in Indian context).

**Methodology**

To conduct this study various tools and techniques are used; out of which review of literature played an important role. Web Review plays an important role to find out running courses in the field of Information Science. To find out educational situation and SWOT in this field, some websites were selected, these are UGC; Government of India, AICTE; Government of India. Apart from them also searched MSc- Information Science curriculum in Indian University and to build proposed programme structure in the field of MSc- Information Science (Retail Informatics). More than 700 educational institutes are assessed during this study, which includes Universities, Deemed Universities, and Central Universities of Indian Territory.

**Retail Informatics**

Retail Informatics (RI) may be defined as a technique, approach and procedure as well as domain for management and manipulation of information and content for business community including retailer, wholesaler, agencies, third parties, general shop, common user and customer and so on. Retail Informatics is actually integration of Information Science and Retail Management. Retail Informatics is mainly dedicated to computer tools and technologies which is needed to store and process data. Database, data mining, and data warehouse, ERP, SAP are some example of current and future Retail Informatics. Retail Informatics is very much important aspect and tool not only for companies but also for small business and small marketing. As a field Retail Informatics is emerging in Western Universities and educational institutions.

**Features of Retail Informatics**

- Retail Informatics is integrated with both computational gradients, Information Science and Marketing Management fundamentals;
- Computing, Networking, Databases, Intelligent Systems, software are main pillar for Retail Informatics implementation;
- Retail Informatics has two side; on one side it has internal users and uses where organizational part is there and on other hand users are customer, shop owner and other stakeholders;
- Retail Informatics may be manual or it may be fully computerized;

**Emerging Trends, Issues and Challenges**

Retail Informatics play an important role for overall development and progress of Business activities. Now let’s talk about its some tools, trends, issues and challenges:-

- E-Commerce, E-Business, M-Commerce plays wonderful role for healthy business and commerce activities.
- M-Business and M-Banking are also under Retail Informatics.
- Data Mining, Big Data Management, Data warehousing are some popular tools for complete business solutions.
- Computer and Information Systems such as software systems are considered as main pillar of Retail Informatics.
- A common mass also indirectly get help through Retail Informatics by organizing, E-billing and computerized bar coding for product information.
- Still Government agencies are not very well aware about Retail Informatics and its wider benefits.
- ERP and SAP are two emerging pillar of Retail Informatics.
- Retail Informatics implementation needs primary initiation and for that initial money is needed.

**Information Science**

Information Science (IS) is an interesting interdisciplinary knowledge field responsible for information processing and management. However, apart from these activities, information science is also responsible for the information collection, selection, organization and dissemination; more clearly Information Transfer Cycle (ITC)\(^1\). Information Science is mistakenly deemed as Computer science or Information Technology. However, actually broader field and discipline than IT/CS, which is incorporated including Computer Science, IT, Management (MIS), Psychology, Behavioral Science, Information Systems and Mathematics. That means the subjects which are related with information and technology, basically incorporated information science. Fundamentally one information science graduate or degree holder is able to fulfill the duty of an IT professional along with proper Information Architecture building\(^1\). The nomenclature of IS is gaining popularity among the western countries and developing countries; like- India.

**MSc-Information Science: Common Programme in Indian Scenario**

The basic course of MSc-IS includes as follows as in Table 1 in most of the standard universities available in India:-

<table>
<thead>
<tr>
<th>Common MSc-Information Science General Course Component at BIT Mesra, Madras University and WBU(^1)</th>
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</table>

**MSc-Information Science (Retail Informatics): Proposed Curriculum**

A model Retail Informatics enriched IS curriculum is needed to build both with Business especially Retail and Information Science gradients; equally. Retail Informatics may be prepared by integrating some informatics tools in Retail Management curricula. Thus educationalist or Information Scientist may utilize two types of approach. In First approach a model Information Science curriculum is proposed with Retail Informatics gradients or components alongwith Information Science gradients at the last semester as the specialization. In this approach a proposed model curriculum of MSc-Information Science (RI) may look like (Proposed Curriculum) as in figure 4.

**Table 1: General Structure of MSc-Information Science Programmes in India**

<table>
<thead>
<tr>
<th>Semester-1</th>
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<tbody>
<tr>
<td>Information Science and Communication</td>
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<tr>
<td>Knowledge Organization-I</td>
</tr>
<tr>
<td>Information Technology</td>
</tr>
<tr>
<td>Advance Computing</td>
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<tr>
<td>Database Management and ORACLE 11 i</td>
</tr>
<tr>
<td>Semester-2</td>
</tr>
<tr>
<td>Knowledge Management</td>
</tr>
<tr>
<td>Knowledge Organization-II</td>
</tr>
<tr>
<td>Data Mining and IBM DB 2</td>
</tr>
<tr>
<td>Information Systems and Management</td>
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<tr>
<td>Enterprise Resource Planning (ERP)</td>
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<tr>
<td>Semester-3</td>
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<tr>
<td>Web and HCI Techniques</td>
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<tr>
<td>Networking and Communication LAN (CISCO)</td>
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<tr>
<td>Digital Repositories and Meta Data</td>
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<tr>
<td>Information Retrieval Systems and Multimedia</td>
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<tr>
<td>Information Science-Domain and Trends</td>
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<tr>
<td>Semester-4</td>
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<tr>
<td>Business Information Science (Basic)</td>
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<tr>
<td>Management and Computing</td>
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<tr>
<td>Management Technology and Services</td>
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<tr>
<td>DSS and Corporate Marketing</td>
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<tr>
<td>Business Information and Intelligence Systems</td>
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<tr>
<td>Project and Dissertation</td>
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</tbody>
</table>

This approach is easy to use because any I-School or Information Schools / Information Science department may run this specialization along with other specialization like- Advance Computing, Human Computer Interaction, Networked Information Management, Information System Design. Thus at last semester student need to attain separate course work and teaching facilities. Even they may avail both general information science tools and medical informatics job.

While second approach is based on as in figure 5 or deals with Retail and Business aspects specialization from the beginning and thus need to conduct in special department, where only or dedicated Business or Technology management community will be there.

Fig. 4: Proposed MSc-Information Science (RI) with Last Semester Specialization Option
Challenges and Opportunities

- Information Science is an interdisciplinary domain and people of such field mainly come from Information Technology, Information Studies, and Knowledge Management. So, faculty, researcher need to come from management too for further development in Retail Informatics field.

- Still corporation including private and government are not well aware about Retail Informatics and thus special attention is needed in this sector.

- Availability of customized, appropriate software is still a big issue in the field of Retail Informatics.

- MSc-Information Science with Retail Informatics specialization may be started with second approach where specialization is started on last semester and for that Information Science department may take the help of Business and Retail Management department.

- Unwillingness regarding departmental cooperation and interaction is another problem and issue to implement Retail Informatics education and Retail Informatics with MSc-Information Science.

- Proper finance for small, private concern still vital issue; as this process includes Information Systems design and development, computing installation of Retail Informatics systems, Service System checkup and so on.

- Starting full-fledged MSc-Information Science (Retail Informatics) is tough to launch; as it needs full-fledged faculty and research support from the initial semester.

Findings

- Retail Informatics is an important domain with combination of IT, Information Science, Management Science and Marketing Management and allied domain.

- Retail Informatics is smaller version of Business Informatics and changing rapidly.

- Still educational programme in the field of Business Informatics is very much limited.

- Still unwillingness, Government and Enterprises interest is very much limited in the field.

Suggestions

- Government need to establish policy on Retail Informatics implementation for Government firm and establishments.

- Still Technologies and open source software are very much limited in Retail Informatics domain; thus open source technologies may be implemented.

- For modernization of the domain; courses on several way need to implement on Retail Informatics.

- Regarding financial matter, proper step is essential to take care.

Conclusion

Retail Informatics is an important name not only in the field of Business but also overall commercial world. The solid application of Retail and allied Informatics may help Finance, Marketing, HRM, Bank and other management. For better implementation of Retail Informatics healthy interaction is needed between industry and academia. The needful output of skilled in the field of retail may solve many problems and may be able to build a healthy Information Infrastructure in the field of Retail and Business.

References


