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Library and information science curriculum for the developing countries

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ABSTRACT:

The contemporary scenario predominated by information and knowledge perspectives indicate the pressing need to educate and train the library and information manpower towards a sustainable professional competence. The manpower of today will meet in the near future the new challenges and the onslaught of the impact of Information Technology on LIS envisages to make substantial contribution to the ever perpetuating Information Society. They need to be equipped in this context with necessary skills and competency to satisfy the high level, complex and evergrowing multifarious information needs of the user. This paper discusses the pros and cons of LIS Education Scenario in the developing countries and stresses the need for model curriculum.

INTRODUCTION: Techno-friendly discipline

The influence of Information and Communication Technology (ICT) on every discourse of human knowledge is a undisputed and is also considered all pervasive. But a profession which is in “search of identity” has imbibed a friendly internship with technology or mechanization as it was termed then, since the late nineteenth century. The nineteenth century called the scholarly era saw seen the emergence of the two scientific disciplines from the genus of Librarianship – Classification and cataloguing, which today are the most wanton areas in knowledge processing and organization of the electronic era. However the field still suffer from such concepts as the ‘digital divide’, meaning the differences in the technological competencies of the countries. It is this fact today which makes education distinct in quality and skills vary among the developed and developing countries. Though India is on the fore in ICT developments, its full complement of application and utilization is still at a distance. Take for example, the price, the developing countries have to pay for journal subscriptions and membership to consortia modes of journal acquisitions. Hence some of these issues have to be addressed to younger generation through education and training in Library and Information Science. For a sustainable development of a nation, today ICT has become essential knowledge to every nation and more so to the developing nations. ^[1] In this context a new model curriculum integrating the traditional and, modern knowledge and thought has to be devised and implemented. Despite overall progress achieved by developed nations in this context they are often undergoing brainstorming sessions to evolve new competencies for the information professionals. For example the Special Libraries Association has published a revised edition of the “Competencies for the Information Professionals of the 21st Century”. ^[2]

SCENARIO IN THE DEVELOPING COUNTRIES:

The situation in some of the South-Asian countries is different. For instance “Poor information system has poor curriculum development in Sri Lanka” as stated by Pradeepa Wijetunge. ^[3] But the situation in Southeast Asian countries is somewhat different from this, as it was found that ‘Fast developing countries of this region are requiring a core of qualified information professionals to meet the new demand of educators, politicians and private sector, as there is growing awareness about information, there is change in the way people communicate, learn, find and use information.’ It was found from the recent research study by Pawinun that due to information overload, there is need for a credit course on Library Use and Information Literacy. ^[4] There are indications that in this region there is a shift in focus from recordable information and knowledge media to access to electronic media, especially the Internet, where the access to this facility is limited by non-existence. To the end of the 20th Century, the Southeast Asian countries have three main characteristics of developments related to information: a) Information being considered as an economic resource b) Increase in use of information by the common public, and c) Growth of the information sector in the economic sector. To stress the second point, the growth of newspaper circulation and the content and size in India can be a good example. That is clear evidence of the information savvy general public in this country. It is often felt that many of the developing countries are following the West, and seek expert consultation from those coming from West, but this is not so compatible, and as Lester Asheim said, despite the parallels and contrasts of systems and services, there is a uniqueness about these countries, in

the diversity of situations the countries hold in education, culture, economy, technology, and other conditions.^[5]

The situation in developing countries is therefore different as far as countries of different regions are considered. Though the developing countries are making efforts to adapt to changing situations, learning from within and from the experts of the West, the situation requires a gradual ascent from the base to the top, from learning the fundamentals to the specific applications.

CONVERGING FACTORS:

Many convergent factors have influenced it over again and again. Some are from within yet many are from outside. Aristotle, Plato and Callimachus were all ancient legendaries and in the middle ages, Guttenberg, Francis Bacon, and Emanuel Kant were all outsiders. In the modern era, the names of J.C.Liklider, H.P.Luhn, Vannever Bush and Gerald Salton have shown and influenced the profession to a very great extent. Hence today it has turned out to be a multi-convergent profession, yet its search for identity still pursues. In this context, to structure a truly dynamic curriculum for manpower development is truly a complex task. This has been a consistent concern of Library and Information schools. It is observed light of the above deliberations that all over the world, a serious exercise to review the status of Library and Information Science education is on the anvil for over last two two decades due to the impact of Information Technology and with the emergence of Information Society.

CHANGED SITUATION IN INDIA:

The changing scenario from 1960-2000 and the influence of other disciplines on Library and Information Science education in India is well documented in the Status Report on Library and Information Science Education in India.^{[6][7]}

In India three factors, a) the enactment of library legislation by a number of states in the country, b) the UGC assistance to college and university libraries towards the development of an academic library system in the country, and c) documentation work and services, were responsible for the first phase of development. The first two factors emphasized was on public and academic libraries and the third focused on scientific and technological information systems and services.

These three factors have not only enhanced the professional status but also increased the employment opportunities for library science professionals in public, academic and special libraries in the country. They also brought out contrasting differences in the professional approach in Library Science from that which existed in its early years. The influence of these factors is also reflected in the curriculum of Library Science education and subsequently led to change in the course content and nomenclature. Many university departments of library science upgraded the P-G Diploma in Library Science to Bachelors Degree during this period. The Indian National Scientific Documentation Centre (INSDOC) and Documentation and Research Training Centre (DRTC) courses were also started in this decade, marketing the beginning of specialization in education too.

From the mid 1970s the emphasis was laid on information components and on the facets of information collection, storage and retrieval . The mechanization in these areas was also an added factor. The decade of 70s especially is very important in the context of Library Science as it brought the change in its nomenclature from Library Science to Library and Information Science. The professional status and education programmes started receiving global attention because of internationalization of information and also due to the involvement of inter governmental agencies such as UNESCO, UNIDO, and FAO, in the information handling activities. The establishment of international cooperative information systems like, INIS, AGRIS and DEVSIS under the umbrella of UNISIST Philosophy was a clear indicator of this fact. This shifted the emphasis of the Library and Information profession from the national level to that of the international level. The status of the profession, as already indicated, also changed from its earlier concept of Librarianship to Library and Information Science.

The induction of Information Science also set to include information related to an organization system offering specialized services. The establishment of data banks, information analysis centers, and translation centers and others marked the beginning of a new milestone in the global view of information activities. In summary it implied that the Library Science manpower development programmes have to include the areas from traditional to modern subjects and the education programmes have to be remodelled to fit the contemporary requirements. Thus the importance of a Library and Information Science manpower development programme was looked at with much more significance and the status of the profession reached new heights during this period.

THINKING ON COURSE STRUCTURE AND CONTENTS:

The preceding paragraphs provide an overview of the major changes and shifts that define the changing landscape and competencies expected of the Library and Information professionals of the future. This has brought into focus the question of the continued relevance and adequacy of the present educational programmes. There can be no two opinions about the fact that the demand for information professionals will continue to exist and even grow. But what will be the knowledge and skills expected of them? A recent UNESCO document sees the emergence of four complementary groups of information professionals, viz., Creators, Collectors, Communicators, and Consolidators. While it is difficult to foresee the emergence of such distinct specialties in India in the near future, this classification does provide an useful approach and basis for defining the skills expected of information professionals and thus in the design of course contents. It is not the objective here to provide detailed contents. It is however important to agree about the premises on the basis of which educational programmes could be restructured.

In view of the emerging network environment, the fundamental shift in the goals of the library, and the changes in information storage and delivery mechanisms, the educational programmes should cater to the needs of these changed settings by including in their course contents the knowledge and skills required to function effectively in such an environment. Even within the traditional library the nature of operations and activities will be significantly different from what they were. ^[7]

Though there are parallels in the developing and developed countries on this count with the name change and designing and adopting a heterogeneous course content, since as the situation in information systems and services, was not improved as indicated in the case of Sri Lanka, the curriculum could not be made more effective. The adoption of technology was also very slow in developing countries until the end of the 1980s with microcomputers which became cheaper and more affordable.^[3] The situation in India is different but the conditions of the systems and services have not changed markedly during the last one or two decades, particularly after the adoption of the Information and Communication Technologies. The efficient, effective distribution of information involves collection, processing, storage and dissemination of information. These functions are normally in the realm of library and information work. For a sustainable development of developing countries, the effective utilization of information is essential and the effective use of information communication technologies is also desirable. Today despite, the availability of desirable and international level of expertise in the information and communication technologies adaptable to library and information work, there still exists a gap in its adoption in many countries including India, due to the suitability of the curriculum. There is a need for its remodeling akin to the conditions and situations prevailing in developing countries, where it can be easily adopted commensurate to their infrastructure and the situational factors. Such a course content should have affordability, adaptability and flexibility for sustainable growth and development of the profession and the professionals.^[4]

In India, a countrywide exercise was made to articulate the knowledge (theory, skills, and practicals), which could be packed in the Library and Information Science Education and Training Curriculum with the help of experts. The well defined modules prepared by the expert committee (subject panel and Curriculum Development Committee) were presented before the forum of chairpersons of the Board of Studies (Library and Information Science) in different universities. This has facilitated the debate and enabled them to develop a viable curriculum finding a balance between the traditional and modern practices, skills and techniques.^[7]

GUIDING FACTORS CONSIDERED IN THE CURRICULUM DESIGN:

Dominance of Practice:

The issue of the relationship between theory and practice is not properly addressed in the Indian context. An expert once stated that we are drowning in theory at library schools and not giving enough exposure to practice. The dilemma lies in the choice between teaching students the knowledge and skills needed in their first posts to which meet the immediate needs of employers or instilling principles from which they can expand their skills and knowledge base as their career develops.

It is also seen that during the challenge of managing the complex and diverse new environment, some of the schools have been merged with different disciplines like information management and technology, information studies and mass communications. Given the pace of change in the nature of library and information services, there is a need to instill not only in

building library professionals but also in established practitioners, a commitment to life long learning because the circumstances are demanding greater professional and technical awareness. As professional obsolescence becomes a real and ever present danger, only a systematic continuing education provides a method of combating such obsolescence.

In the western countries many schools have made a thorough revision and development of course programmes and also introduced new courses to meet the needs of employers in industries, and the public and private sectors. The introduction of new programmes should therefore be seen to some extent as reflecting the 'Pull-Push Effect' of recognizing the increasing need for the professional workforce to match the growth and significance of information industry and the expanding higher education system to provide the appropriate workforce.

Across the world, it is seen that a wide range of courses are beginning to map on broad paradigms. Several schools have begun to diversify their portfolio of courses with programmes intended to serve the needs of the publishing and communication industries. And other schools have established programmes focused on the operation and management of telecommunications and computer networks.

INTERFACING TRADITION WITH TECHNOLOGY:

A proposal to blend the traditional activities with the new roles in the technological environment has been spelt earlier. It is very clear that the scenario of Library and Information Centers and the services provided by them is undergoing a transformation primarily due to emergence of new media. The information needs the user community the overall changes that have taken place due to need based adoption of IT, and the work in the libraries have also necessitated the making of appropriate changes in the Library and Information Science syllabus for various levels of courses. These factors invite serious attention of our Departments of LIS, which produce manpower for managing Library and Information Centers. It is a common feeling that the departments of LIS have continued to lay more emphasis on the teaching of traditional subjects, philosophical aspects and historical topics to their students, and that teaching focussed on information technology and the practical aspects of library automation has been receiving meager share in the syllabus. This situation has caught the attention of Library and Information Scientists and has generated discussion on the need for a change in the LIS curriculum.

IMPACT OF OTHER SUBJECTS:

Library and Information Science has developed its own professional techniques and methods. It has shown its affinity towards the application of other fields to improve professional performance. In the early 1960s, Library Science invited the theoretical and philosophical approaches of other disciplines and implanted them in its core. It was Ranganathan who infused scientific method in the field and that marked the first change, from Librarianship to Library Science. He is also responsible for introducing the concept of documentation as slanted to library science, with emphasis on pinpointed service to specialist readers.

One of the earliest disciplines that has had a strong influence on Library Science is the management science. In the later years the statistical techniques and methods of research were gradually implanted in the Library Science curriculum as the research in Library Science gained momentum. The impact of statistics on Library and Information Science need not be over emphasized here. Library and Information Science is one of the earliest fields to adopt statistical techniques in administration, in the study of users and their information needs and behavior and in research methodology. The use of statistics is responsible for the emergence of new areas like Bibliometrics, Informetrics, Scientometrics, and so on. Another discipline that has outwardly influenced Library and Information Science is psychology. The study of users which began in late 1940's was rather quantitative but the mode of study changed considerably in 50's and 60's in the present, there is a paradigm change in its application, oriented to information technology environment and to study the behavioural aspect of the user. It may be particularly noted here that the present studies include very specific areas such as cognitive processes, information seeking behavior of users in the information technology environment and so on. The emergence of Information Society has extended the horizon of the information science field to the study of socio-political and economic aspects of information. Similarly, the influence of socio-politico-economic aspects has extended the study of transborder information flow. In summary, it can be stated that the major disciplines that have become the part of LIS curriculum are: Management Science, Information Technology, Statistics, Linguistics and Psychology.

FUTURE DEMANDS FOR INFORMATION SKILLS:

A transition shift from agriculture to an industrial economy, based on Information technology also influenced governmental policies and programmes, and is directed to production and distribution of information. All these factors have contributed to the emergence of new areas termed as: Information Science, Information Society, and Information Technology, with the common denominator of 'Information' which has the reckoning of an economic power. Genesis of all these manifested transformation should be attributed to Library Science and Information Science which has traditionally carried out the task of collection, and distribution of information held in by the printed documents. The times have changed and the emergence of electronic media has opened up new avenues, and made people to rethink on manpower development programmes in this and selected other selected fields. The time is therefore ripe to consider all of these aspects in framing a curriculum for LIS discipline

The new requirements are viewed also in the context of the development of library networks and the World Wide Web, which means that information professionals should turn their attention to what the Information Technology Task Force of the Government of India have referred to as 'Content Creation and Development'. The ability to design and develop information products for the network environment including the web, will be an essential requirement expected of the information professionals of the future. There has emerged in recent years, a broader environment – which includes the library but is not limited to it – that offers tremendous opportunities for the application of information accessing and handling skills. In this context, to view the library as the institution for which professionals are being trained is to take an extremely restricted view of the scope for the application of information organizing and handling skills. ^[8]

The findings of the European Commission on the growth of the information industry classified it into three broad areas, viz., Information Content Industry, Information Delivery Industry and Information Processing Industry. It is also necessary to work out similar strategies in Indian context. The Information Content Industry is primarily concerned with developing products for the web and on-line environment. This segment is in its early stages of development in India, and offers plenty of room for growth. The Information Delivery Industry consists of the creation and management of telecommunication networks through which information is transferred and delivered. This segment has received considerable attention in India in recent years and is in a position to enable the growth of the Information Content Industry. The Information Processing Industry consists of producers of hardware and software. According to the European Commission, the Information Content Sector accounts for nearly half the information industry and is growing. The message for India with its vast manpower resources is clear.^[8]

NEW APPLICATIONS:

The profession which began with an objective of preserving the recorded knowledge of human civilization adopted a philosophical motto that the knowledge (Books) is for use, and then provided global access to that information. During the course of this three fold transformation, it has adopted the contemporary societal, economic, technological and educational changes in its application. These efforts have enabled it to acquire the capabilities of adopting them in the courses of teaching due to their imminent application in practice.

The management of Library and Information Centers has assumed a new dimension due to the adoption of different services directed to different kinds of Information needs and different kinds of users. This can be considered a direct impact of economic development and the growing dependency of information on the national economy. As stated in the report " Library and Information entering into new phase," in the modern economy the importance of information has increased and which calls for better use of existing services, and continuous improvement of information serves to meet explicit and implicit needs.^[9]

The impact of Management Science has been a significant achievement in the profession of Librarianship. Apart from the application of principles and functions of management, the areas of human resource management, financial management and the aspects of information resource management have been considered as important areas in Library and Information Science in recent years. As observed in the context of industrial and production management the application of quality standards is also now being applied to the library services. There are also high expectations of "Quality" in the library services. The first impact of Information Technology on Library and Information Science begins with computerization of libraries.

The computers were successful in processing and retrieving of information, but restricted their work to "In-house". The major change was brought in by the application of Communications and Storage Technology. The impact of Information Technology and its varied changes in application cannot be expressed in these few pages but can be envisaged by the services available today through the Internet. The impact of Inernet on Library and Information

services and the concept of a digital or virtual library should be reckoned as the nascent fields of study in recent years. ^[10]

The background knowledge presented in the earlier sections provides a picture of the total transformation in the profession. It may also seem to be unpredictable what course of future developments or direction in which the Library and Information Science profession is going to take. In light of these developments it is necessary to examine the adequacy and appropriateness of the present curricula. In the first place, it is necessary to restructure and remodel the curricula to suit the present times.

MODULAR APPROACH TO LIS CURRICULUM:

After going through a process deliberation on the subject and on observing the needs of the departments, the task of structuring the curriculum was so suited the adoption by different departments of LIS with varying levels of infrastructure facilities prevailing in the country. Hence it was seriously considered to devise an approach that would help the departments to adopt the curriculum suitably. The crux of this paper revolves round a modular approach in formulation of the Model Syllabi. Basic objectives, detailed contents and outcome of each module and entire course structure has been coherently stipulated in this approach. Besides the modules, break-up of study, marks pattern, and optimum hours of teaching programme have also been suggested to be included.

As early as in 1982 Lang in the UNESCO report proposed a modular approach to the curriculum for Information Studies. A similar approach was also advocated in the Asia-Pacific report on “A Curriculum for an Information Society”(1998). Dr. Vasanth Gowariker has expressed a view to changes in the approach in the higher education and suggested a “Cafeteria” model for the courses offered by the universities. ^[11] Accordingly in this paper a proposal of a modular approach is made for LIS with 6 core modules and 1 Elective module. The worked out modules are;

- MODULE – 1: Foundations of Library and Information Science
- MODULE – 2: Knowledge Organisation, Information Processing and Retrieval.
- MODULE – 3: Information Sources, Products and Services
- MODULE – 4: Management of Library and Information Centres/Institutions
- MODULE – 5: Information Technology: Basics and Applications
- MODULE – 6: Research Methods and Statistical Techniques
- MODULE – 7: Electives: Information Systems

For each of the modules, the following concepts can also be added to enhance the effectiveness, thorough teaching, practice and evaluation.

- Course objectives
- Unit-wise course content
- Special note on practical component
- Learning outcome of each module

It is implied that the modules might be adapted to any one of the education patterns; viz., Two years integrated MLIS, one year each of BLIS and MLIS, or two-year integrated MLIS (Semester scheme).^[7]

CONCLUSION:

The last 50 years of Library and Information Science education since the dawn of independence have seen many transitions, contrasts, and contradictions. The transition is one of the most welcome and significant development. As of today, Library and Information Science education is on the threshold of facing new challenges of the new century. Great expectations however are in store to establish its durability and survival in the next millennium.

If the departments of Library and Information Science in India are to sustain the challenges they have to set global standards in Library and Information Science education at least for the Asian region. The task is stupendous and involves drastic and progressive changes in the curriculum and building adequate and appropriate infrastructure facilities.

There is a need for rejuvenating the LIS courses in India in light of the happenings in the International arena, the adoption of modular approach is a way of meeting the present and future needs of a dynamic curriculum.

Thus, the education and training programmes in Library and Information Science must make a provision to prepare the professionals to assume the pro-active role in coping with new technology and the information explosion. In brief the designed course contents should concentrate in developing knowledge, skills and tools corresponding to the four basic identified areas creation, collection, communication and consolidation. It is hoped that this approach will would serve as a guideline to the future curriculum designing activities in the developing countries.

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