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## **EDUCATING 21<sup>ST</sup> CENTURY LIS PROFESSIONALS - THE NEEDS AND EXPECTATIONS: A SURVEY OF INDIAN LIS PROFESSIONALS AND ALUMNI**

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**Abstract.** LIS education focuses on developing manpower suitable to the demands of the contemporary information environment. There is need to audit the LIS curriculum for its relevance to the 21<sup>st</sup> century hybrid environment. This paper analyzes the opinions of young and experienced professionals on existing LIS courses' ability to meet the demand and increase employability. The paper proposes a general framework to overcome the lacunae.

### **Introduction**

The past few decades have brought in revolutionary changes in information handling activities as a result of advances in Information and Communication Technologies (ICT). Such monumental changes demand new roles for LIS professionals. The twenty – first century information professional must possess skills on selection, content management, knowledge management, organization of information on intranets and internet, research services, developing and maintaining digital libraries, and bringing information resources to the desktop. People with the right skills are crucial to the success and competitiveness of contemporary information environments. It is predicted that by 2010 the majority of jobs in Libraries and Information Centres (LICs) will be ICT-related. Hence educators must assess what kinds of skills are needed for students to be prepared for these employment trends. This paper sketches out some emerging visions for the twenty-first century LIS professional from the employers and alumni point of view.

### **LIS Education: State-of-the-Art**

The structural feature of globalization is its affect on higher education as it depends on the latter for the human capital. Thus it affects policy making, governance, organization, academic work and the identity of higher education. LIS education is also a part of this transformation. The need is to blend global tendencies with local responses. It presupposes a convergence thesis. LIS curricula have taken these challenges into consideration and revised their course structures thus competing with the demands for manpower from the contemporary information society. In 2002, the Indian University Grants Commission (UGC) recommended a Model Curriculum for Library and Information Science. Departments of library and information science are concerned about the challenges of recruitment and of keeping curricula relevant for new jobs in new settings and new responsibilities in old settings. The majority of universities switched over to a two year integrated masters degree in Library and Information Science and adopted the suggested curricular programmes in total or with little modifications to suit local needs and demands.

However, job opportunities for librarians in the traditional market have insignificant growth in India. The growth and development of public libraries is neglected and school library development has declined despite the recognition of the role of library and librarian in Education Policies. The placements and trainee opportunities in technology based corporate organizations, besides university and special libraries, are promising. However, it is evident that employers are not satisfied with the skills of the products from LIS departments and prefer candidates who possess specialized training like those from the National Council for Scientific Information, Bangalore. The big question the departments wrestle with is how prescriptive they should be about the curriculum in order to have market for their products. The importance of developing employability skills has been given new emphasis in all professions and LIS is not an exception. The focus is to be on identifying current and future trends in recruitment and the skills required by the professionals to meet the employer's needs. The universities in the west are offering courses in traditional librarianship but with a new face as hybrid, electronic, virtual or net based library courses. It is high time for the LIS schools / departments

in other countries to evaluate and assess the relevance of their courses for the employment market and to the employer's needs in the corporate environment.

### **Objective of the Study**

There are two influential groups to be considered when analysing the curriculum. One is LIS students, who wish to work in libraries. Any change or implementation to our education system must address the issue of student achievement. If they are not getting an education that enables them to work in libraries, and knowledge management centres they are being let down. The other is library employers who are anxious over the all-round skills of the graduates from LIS departments. Hence the present study aims to study both groups to ascertain the relevance of the education and training in LIS for the 21<sup>st</sup> century and to find out how the departments of LIS have to respond.

### **Methodology of the Study**

The study relies on the concept that it is best to look for evidence and not necessarily proof that is collected using a variety of methods. It consists of three parts to analyze the relevance of LIS curriculum for contemporary employment market:

- Study of alumni who graduated from Department of LIS, Andhra University, Visakhapatnam, from 2002-2005 (three academic years) and working in LICs or related field, through a mailed questionnaire.
- Study of the LIS professionals working in higher academic institutions and special libraries seeking their opinion on various aspects of curriculum and training components through mailed questionnaire.
- Analysis of Employment Advertisements of 2004-2005 to identify the qualifications prescribed by employers.

The sample includes 30 alumni of the Department of LIS, Andhra University, Visakhapatnam, who got employment and 30 professionals (15 each) from reputed academic and special libraries of India who are actively involved in recruitment or provide stipend-based training. Two sets of questionnaires were prepared and mailed.

The response rate from alumni is encouraging as 27 (90%) of them responded. Of the professionals only 15 out of 30 (50%) responded in spite of repeated reminders. The data was analysed on a five point scale, tabulated and presented in the following paragraphs.

### **Alumni Opinions and Expectations**

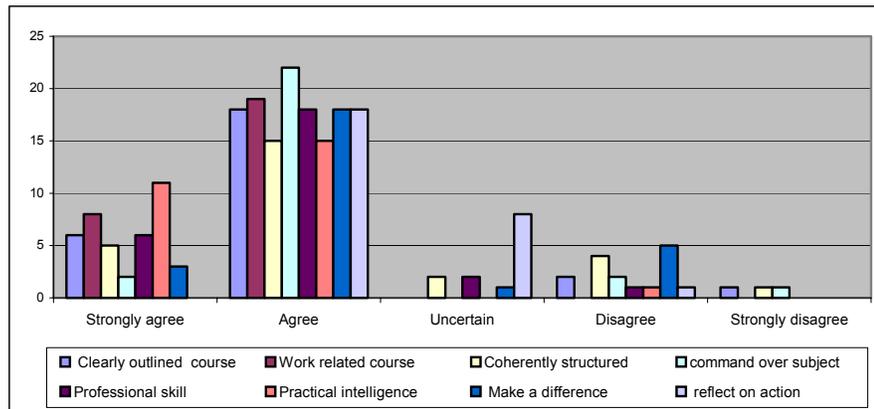
The alumni who responded to the study are working in different institutions. The majority are working in engineering colleges and other academic institutions for a consolidated pay ranging from Rs 3,500 to Rs 5,000 while 9 of them drawing a scale above Rs 5,000.

**Opinion on Curriculum:** The students have been asked to evaluate the curriculum they have studied and its applicability to the present work environment. The responses are displayed in chart 1.

The responses indicate that the alumni are prima facie satisfied with all aspects of the curriculum though there are significant differences with regard to 'coherently structured' and 'developed qualities to 'be able to make a difference''. To a supplementary on need for revision of the existing curriculum, 90% of them responded positively and suggested 'increase in the scope of I.T. and management courses', 'more practical from first semester onwards', 'data warehousing, data mining may be introduced as full length optional papers' 'emphasis on e-information sources of science and corporate sector' 'soft and communication skills in first semester' etc. To a question on any obsolete topics that need pruning, 10 (37.03%) of them opined that CDS/ISIS package is out dated and can be replaced with packages that are currently used in the majority of libraries.

The curriculum should be organized to make better connections between the learning of content and knowing how to apply the content in real settings. In this context it is necessary to assess how far the theoretical principles are helpful in analyzing and solving the professional activity. 22 (81.48%) of young professionals' opinioned that the theoretical principles are helpful in work up to 60% while the others stated it as 70%.

**Chart 1. Alumni opinion on curriculum (N=27)**



**I.C.T. Skills:** LIS education has to embrace ICTs as part of course content that includes theoretical and practical aspects of ICT to develop automated, digital or hybrid information environments. One comment is that the pressure to integrate technology has left departments with some of the tools but not the understanding regarding how to use them. Hence to ascertain the realities, alumni have been surveyed on their experiences with ICTs and how far the curriculum has helped them to cope with ICT. 22 (81.48%) expressed that the curriculum is suitable to discharge duties in I.T. environment while 5 (18.5%) negated it.

**Chart 2. ICT skills vs. application (N=27)**

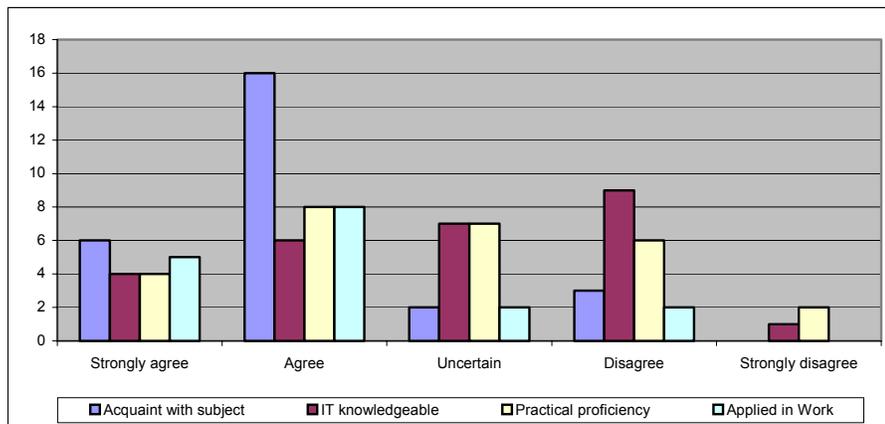


Chart 2 reveals that the opinions of alumni are varied as to the ICT knowledge and skills gained during the course period and their application in the library environment. Although there is some level of satisfaction with the I.T. Knowledge and skills gained during the course that enabled them to work in an I.T.environment, 17 (62.96%) opined that the knowledge gained is not adequate and 15 (55.55%) stated that they did not get adequate practical proficiency through the course. It indicates the need to enhance I.T. practice in the curriculum. For a supplementary, the respondents stated that practical hardware handling skills need to be included in the curriculum to handle day to day troubleshooting.

**Teaching Methods:** The instruction will provide students with an understanding of the subject, its structure, analyzing current practices in information handling, active learning and critical thinking skills. Owing to its importance the sample was asked to give their opinion on methods of teaching adopted for theory and practicals.

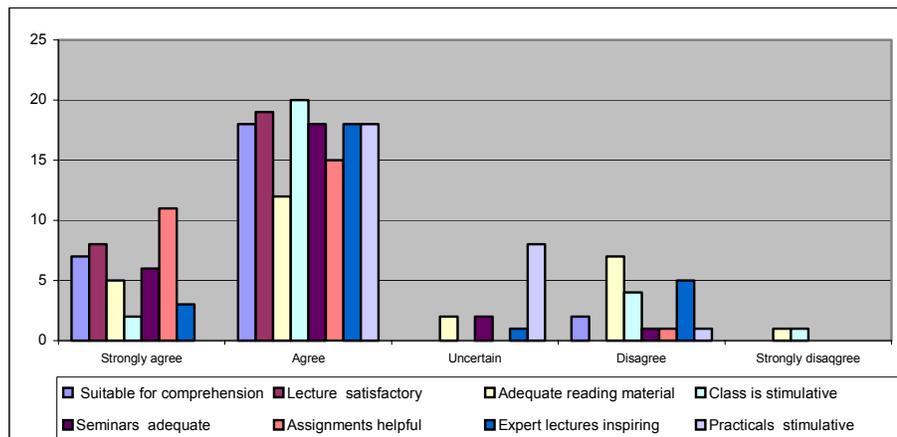
**Chart 3. Opinions on teaching methods (N=27)**

Chart 3 reveals that by and large the teaching methods are appealing to gain knowledge and skills as indicated by the majority of respondents. Difference of opinion on inadequacy of reading material can be attributed to the regional language problem as students find it difficult to follow literature available in English.

**Practicals/internship and Study tour** are found to play an important role as the majority of participants accepted that they have gained adequate practical know how that helped them to work in real situations. 18 (66.66%) respondents expressed a satisfactory level of 60-70%, while 6 (22.22%) stated it as 50-60%; 3 (11.11) are uncertain of their option. The other methods of teaching preferred include extended internship, special course / training on ICTs, discussion of task oriented seminar papers/case studies to refine problem solving skills, projects based on team work that have social relevance and give insight into global perspectives.

**Soft skills:** The professional to excel in the 'republic of the Internet' needs to acquire a new spectrum of competencies, knowledge, innovative nature, team work, social sensibility, wider knowledge on all subjects with specialization in narrow subjects, possession of soft skills, skills to adopt new ethos, etc. Alumni were asked to indicate how far the curricular programmes supported them in acquiring the soft skills like communication, analytical thinking, decision making, social interaction, positive responsiveness, global perspective. There is distributed opinion as 16 (59.25%) stated positively while 11 (40.74%) negated. Further they opined unanimously that the department has to take the responsibility for developing these skills by making provision to learn them on campus.

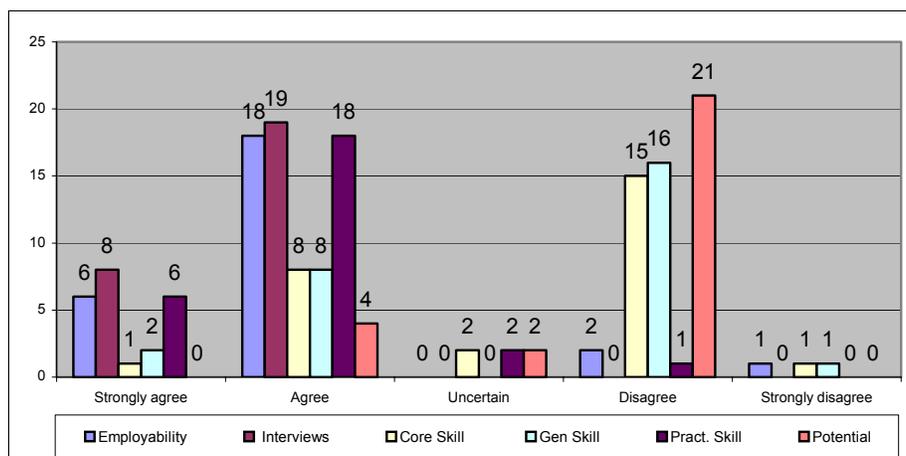
**Management skills:** 90% of them agreed that they learnt management skills through the course.

**Employability:** The aim of the professional course is to maintain the standards and employability demands of the profession. Indeed the curricula needs intermittent auditing to enhance the employability of their products. To find out the real contribution of curriculum towards employability of the products the opinion of alumni was sought.

The chart reveals that the respondents are not satisfied with the employability aspect of the curriculum especially regarding the core skills, generic skills and achieving full potential as the figures 18 (66.66%), 17(62.96%) and 23(87.18%) on disagreement side indicates. A supplementary question was asked to specify the type of employment for which they can be considered; medium level position is the answer by all participants.

Another supplementary question directed them to specify what changes they are expecting from the LIS course to be suitable to employability for which multiple responses have been marked in order of priority. Focus on soft skills (92.59%) was ranked as first followed by more I.T. skills (88.88%) and extended internship (88.88%).

**Chart 4. Employability of curriculum (N=27)**



**Suggestions:** The alumni offered suggestions sought through an open-ended question. The majority have suggested more training in ICTs keeping in view the changing trends and also for communication skills. However few significant suggestions are: ‘Each paper should have 60 marks for theory and 40 for practical component to be learnt in a library and submitted as report / assignment. ‘Extended internship and compulsory study tour followed by presentation of experiences in a colloquium’

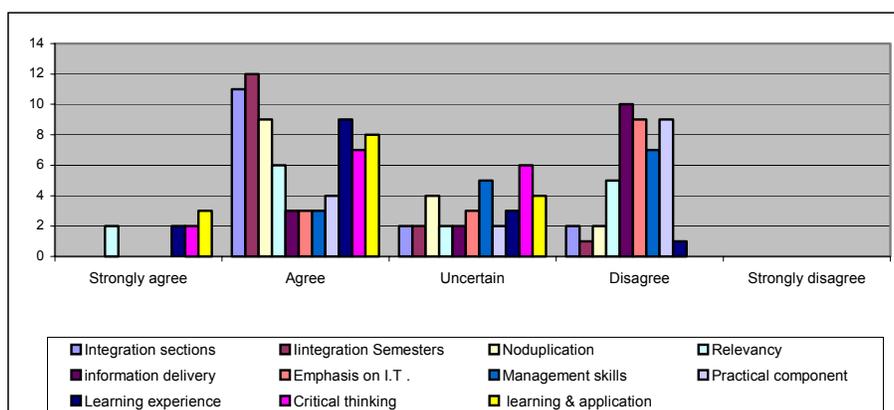
### LIS Professionals Opinions and Expectations

The respondents from professionals are experienced and are heads of reputed organizations like UGC centers, Indian Institute of technology(IIT), Indian Institute of Management (IIM), University and Corporate libraries. Though quantitatively the responses are few qualitatively they have immense value.

**Opinion on Curriculum:** A copy of the syllabus of Andhra University based on UGC Model Curriculum (2001) which is being followed with little modifications in the majority of universities was enclosed with the questionnaire to LIS professionals for reference and the responses are in relation to the same.

The professionals are not satisfied with the curriculum, more specifically with regard to ‘emphasis on information delivery system,’ ‘on I.T.’, ‘focus on management skills’, ‘focus on practical component’. Their expectation is for ‘latest topics in curriculum and the present one is neither relevant, nor adequate to the nature of market segment’.

**Chart 5. Professionals’ opinion on curriculum (N=15)**



The respondents identified deficiencies in the syllabus and emphasized the need for 'practical – experiential learning'; 'separate paper on communication skills', 'indexing and abstracting (practical) as the skills are in demand from the database publishing industry'. They further opined to prune C.C., basic of information sources and services and to revise I.T. papers (theory and practical) as they lack advanced features. The need for theoretical principles in professional activity was accepted and stated that the curriculum is helpful at a level of 60% to 70% according to 12 respondents, while 3 of them expressed there is less than 50% helpfulness.

The Board of Studies in Universities is the constitutional body that deals with curriculum revisions. The professionals who participated in the study unanimously stated that it should be constituted with LIS teachers, professionals and interdisciplinary faculty.

***I.T. Knowledge and skills:*** The professional are divided in their opinion on I.T. knowledge and skills in the curriculum as 50% feel the syllabus is adequate to become knowledgeable and proficient in I.T., while their counterparts from the corporate sector differed with this view. They suggested to include E-resources, E-publishing, Digital libraries, Institutional repositories, Linux, Open source software, MySQL, etc.

***Teaching methods:*** The professionals responded more vigorously to teaching methods and suggested that teachers are accountable equally as students and they have to update themselves constantly with new developments in information environment. The teachers have to bring in more practical perspectives into the class room. They have suggested to enhance the existing teaching with new methods such as 'presentations from students', 'deputation of students to reputed institutes for practical training', 'knowledge transfer through interaction with working LIS professionals', 'to make available course ware on the web/online', 'online test / evaluation', 'online submission of projects / dissertation', 'online interaction (virtual class room)'.  
The professionals preferred combination of teachers and librarians to teach the courses and suggested measures to enhance coordination between teachers and librarians that include 'LIS teachers should work in good libraries to gain practical knowledge', 'Librarians should be called as visiting faculty to teach practice oriented subjects', 'provide library hours as part of the curriculum', 'invite industry leaders to address students', 'university library should serve as the living laboratory for LIS students and teachers' etc.

***Practicals and Internship:*** The librarians (14) expressed that the present practical component is inadequate and does not help to perform the job effectively. They have stated that internship should be a part of the curriculum for one semester. Another notable suggestion is that 'students in groups should take up system studies on nearby libraries and come out with innovative models of reengineering'.

***Soft skills:*** All the respondents strongly agreed that students should possess varied soft skills and 'should be given utmost priority' in the curriculum.

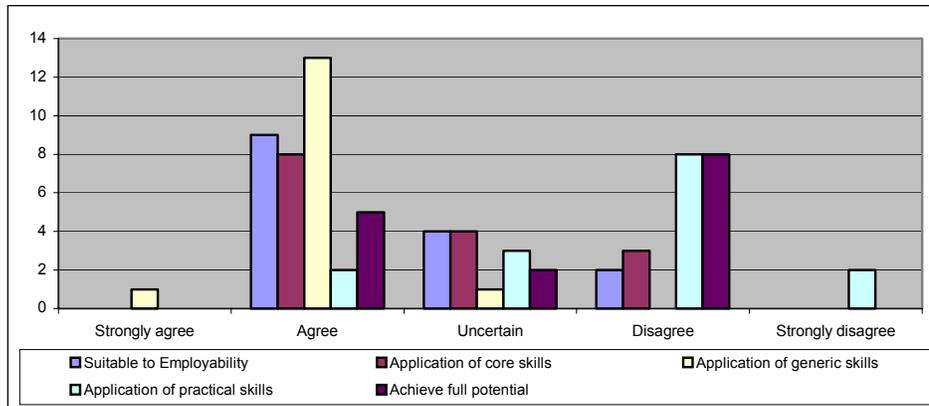
***Employability:*** The purposive sample of professionals involved in recruitment or training of products of LIS schools. Hence their expectations on employability are more significant. Their opinion reflects that fresher graduates from LIS schools have only generic subject skills; do not possess practical and technical skills and can't achieve full potential. This analysis is further supported as all the respondents mentioned that the curriculum is suitable to get medium and low level positions in national and local markets. Two of them stated they are suitable only as Trainee/Intern and preferred revision of curriculum with emphasis on I.T., practical and soft skills.

To a supplementary on their expectation out of fresh professional the respondents ranked in order of priority: LIC Manager, Information consultant, Knowledge Manager and Information technologist.

***Quality of LIS education:*** Quality assessment became a buzz word in higher education as it directly relates to the manpower requirements of society. The response of the professionals was sought for the measures required to maintain quality LIS education programmes. They have agreed or strongly agreed to all suggested variables like, Development of academic standards and action against its violation; Annual evaluation based on teacher and student feed back; Periodic evaluation taking the opinions of alumni, professionals; Development of focus groups for evaluation; More collaboration between teachers and working professionals; Application of educational technologies, Emphasis on integration of interdisciplinary topics; Offering the course at three levels (basic, intermediary & advanced);

Offering students choice of courses on credit basis; Making the learner responsible for planning, acting & growing.

**Chart 6. Employability of curriculum (N=15)**



**Suggestions:** The professionals have made suggestions out of their rich experience that will contribute to assessment and revision of LIS curricular programmes. Important suggestions include – ‘Philosophical aspects of LIS needs to be emphasized so that the graduates come out of universities with a ‘service’ orientation.’ ‘Greater institution-industry participation through MoUs as most of the organizations are information intensive, knowledge oriented entities.’ ‘More collaboration among universities within the country and abroad for having interdisciplinary course content that leads to global librarianship.’ ‘Teaching management and I.T. related courses may be entrusted to concerned experts on campus.’ etc.

### Analysis of Employment Advertisements

A cursory review of advertisements in Employment News from October 2004 to September 2005 reveals that of the 21 announcements, 8 in government departments, 8 in special libraries and five in academic libraries; 12 positions required a degree in library and information science while 9 required a post graduate degree; experience and computer knowledge are the preferred criteria for majority of positions. The advertisements often prescribe special training in NCSI, PGDLAN, DRTC etc. as eligibility criteria. The current advertisements include new job labels like system analyst, documentation officer, information officer, information scientist etc. This reveals the shift in the direction of the profession. Besides, there are advertisements in LIS Forums and new groups for trainees from IITs, Consulate libraries, special libraries on stipend basis. However majority of products from university departments are not able to secure the positions and are contended with positions in private academic libraries on consolidated pay structure. It can be deduced from the above analysis that:

1. The level of credentials LIS courses offer suits lower and middle strata positions but does not match with the rigorous requirements of the plum positions. It is a fact that the practicing profession is not happy with the products of LIS Departments in the country. This is a universal phenomenon as expressed by Stieg (1992) “employees endorse what schools of library and information science are doing, but often want a good deal more besides. Some want more subject knowledge and more specialization; others want greater people orientation and greater breadth. Can the individual school of library and information science continue to try to be all things to all types of libraries and information settings, as they do at present ...” Kajlberg (2003) observed that “LIS Education (in) Europe is not heading in a more collaborative manner for active involvement in the Bologna Process.”

2. There is varying degree of professionalism and skills required by various organizations and all aspects need to be taken care of while devising curriculum. For instance in the West, the course is being offered at different levels from certificate to post graduate with different specializations like school libraries, health science libraries etc besides general PG courses. The education programmes of other countries need to think along similar lines.

3. The existing course structure is inflexible to accommodate emerging needs of the information society. Hence it needs revision as suggested by budding as well as experienced professionals. The values of technology transfer have to be brought from the periphery to the core. The Western countries are certainly ahead with advanced course content and teaching methods. For instance, the LIS schools in U.K. and USA, include advanced course modules such as Innovation and Technology Management, Interorganisational Information systems, Interpretations of Information, Digital information technologies and architectures, Digital libraries, Internet Technologies and Applications, Conceptual Database Design, Database Content Evaluation, etc.

4. The course is teacher oriented rather than student oriented. Students have to apprentice and learn their skills through participation in application and problem solving. As Steinberg (1996) puts it “No curricular overhaul, no instructional innovation, no change in school organization, no toughening of standards or compensation will succeed if students do not come to school interested in. and committed to learning.”

### **New Pattern of LIS Education – A Proposal**

The LIS education programmes are bestowed with two responsibilities – maintenance of quality education through effectiveness, efficiency and responsiveness; link up more systematically the educational supply to the profession’s market value. To achieve these students, curriculum and infrastructure are important components. The departments are struggling with mediocrity of students and their language problems. A frequent revision at the rate of changing information and IT environment is difficult. The I.T. infrastructure in departments can’t be updated as it occurs in libraries. However they have to overcome the limitations and work towards excellence. For this, admission criteria should be changed to encourage students with basic I.T., language, communication skills and aptitude to service as entrants; the focus should be to offer programmes at different levels. Some viable alternates are:

- Offering bachelors level education through distance education and affiliated colleges to produce librarians for subject understanding and basic skills.
- University departments to offer masters’ programme with bachelors’ degree as eligibility criteria and develop knowledge workers with meta cognition, advanced skills, soft skills, personal abilities.
- To offer limited advanced programmes by selected universities for specific, system/task oriented practical skills such as Knowledge Managers; Digital Librarians and Archivists; Network managers and System administrators; Multi media designers; Internet resources organizers; Database managers.
- Initiate a national system of advanced training with online courses based on distance learning involving the industry, business and academic institutions for working professionals.
- The departments have to establish links with information society and work in collaboration.

### **Conclusion**

To make tomorrow's work force competitive in an increasingly high-tech world, imparting and learning ICT skills must be a priority. However the academician’s view is that it should not cloud the basic professional concepts and influence curriculum in negative ways. But, the library professionals do not seem to be happy with the out come of library schools and believe that preparing students for the future does involve teaching them technology skills, soft skills and management skills. It is high time for LIS schools to respond to the needs of information society, though it is strenuous to them to change the admission criteria and syllabi frequently. Indeed any professional education and practice calls for multiplicity, academic self sufficiency and adjustment to local needs and aspirations and its credibility lies in its openness and flexibility to change.

### **References**

1. Kajlberg, Leif (2003) A survey of Internationalization Activities in European Library and Information Science Schools *The New Review of Information and Library Research* 2003. DOI: 10.1080/13614550410001687918.
2. Stieg, Margaret F. (1992) *Change and Challenge in Library and Information Science Education*. Chicago, American Library Association. p.43

3. Steinberg, S.R. (1996) Beyond the class room: Why school reforms have failed and what parents need to do. *Quoted In* Patricia Broadfoot Comparative education to the 21<sup>st</sup> century: retrospective and prospective. *Comparative Education* 36 (3) 2000 pp357-371.