CHAPTER VIII

Conclusion and Suggestions.
It is now an established fact that MIS in library and information sciences through automation has become inevitable. The environments in which libraries operate are under the constant pressure of change. On the technology front, emphasis is increasingly centred on providing effective services to the readers. Internet is growing fast, and the wireless environment is exploding. The amount of digital information available is increasing even faster and the need to have better access to this information glut is of strategic importance to society. Readers expect more control on how they can access and use information. They want simplicity and easy access to services and information. One response to this need is that portals (Lakos, 2001), which are emerging as transformational applications, are becoming the environment of choice for delivery and access to information.

Libraries have to deal with external funding agencies, accreditation agencies and governments who want to make sure that outcomes are positive and measurable. Increasingly they are dictating the measures and want to see and they tie outcomes to funding.

Libraries have to create environments that enable successful assessment and the implementation of results based on these assessments. In other words, libraries need to create organizational cultures that are focused on effective outcomes for customers. The
culture change needed will be greatly enhanced by the adoption of a culture of assessment (Lakos, 1999).

How do we create a culture of assessment? What hinders and what helps us in this endeavour? Most management studies stress the importance of measurement activities for ensuring organizational success. If we focus on the higher education environment and the role of the library in fostering the educational role of the Universities, we have to examine effectiveness of the given library through measurable continuous improvement.

A Culture of Assessment in libraries enables decisions based on facts, research and analysis, and where services are planned and delivered in ways that maximize positive outcomes and impacts for stake-holders. Building such culture of Assessment requires staff to know the impact of their work, their performance measures and what results they produce and how those results relate to readers’ expectations. In this regard, (Lakos, Phipps & Wilson, 1998-2000) stated that Organizational Objectives support the behaviour that is performance and learning focused."

A Culture of Assessment exists when: The library is customer focused, that is, the focus has to be on delivering value to readers. In libraries, the
purpose is defined convenience and justice to the readers that is enabled by listening to the voice of the readers closing the decision-making loop in the library’s processes to create outcomes that are needed and measurable.

Considering the above requirements, the present study attempted to make the library operations measurable, improvable and thus effective. The survey of readers on Library Automation and Library Effectiveness provided feedback on their perceptions and expectations. Among the major findings of the present study the results for the first hypothesis revealed that maintaining Library Automation significantly influenced the overall Library Effectiveness state.

Library Automation enables the Management Information system (MIS) in university libraries thus makes the library operations more effective and convenient for the readers. It enables the real time access to the bibliographic search, circulation and effective procurement and access to a larger e-resource. The other benefit of Automated and MIS enabled Library is the integration with neighboring University Libraries for resource sharing, thus providing wider resource availability to the readers and economic advantage to all participating libraries resulting from synergic working. Similar results were attained by Heyel (1973) that organizational effectiveness is directly proportional to the interests of the stakeholders.
In the present study, Library Automation was defined as “the state of replacing the human performance of activities with mechanical or electronic processes”. It referred to a process of adding electronic resources to the bibliographic resources of libraries and replacing human performances of library operations with the electronic supported processes.

Library automation requires Identification of tasks, data and needs of the readers; collection and integration of data; and, making the data and information available for the ease of readers.


Once the Library Automation is done, the MIS Implementation can be therefore started in a series of following five stages, that covers, (1)
Preparation (Initial, Detailing, and Ongoing); (2) Identification of tasks, data and needs; (3) Data collection; (4) Information management and; (5) Reporting, dissemination & feedback.

The first phase of Initial Preparation comprises of (a) Identifying objectives, purpose and outcomes that can be of university level or of the Library itself, and (b) choosing leaders and providing training, (c) Identifying staff, imparting training and allocating responsibilities, and finally (d) Identifying and training the administrative support staff. The Detail preparation comprises of (a) determining budget, (b) determining I T hardware and software requirements, and (c) Creating plans and schedules that specify detailed tasking, and set long - term goals and short- term objectives and assigning responsibilities. The on-going preparations are continuous in nature and encompass (a) Building a culture of assessment, (b) Assuring leadership, planning & support, (c) Investing in staff development and training, (d) Developing external links - multi - agency reporting systems (e) Network planning - integration into university’s vision, and (f) Merging the new network related measures with other- measurement metrics

The second phase of Identification of tasks, data and needs requires (a) Identification of stake-holders (both Internal and External) (b) Identifying their data needs, (c) Identifying report owners /sponsors, (d)
Identifying sources of data, (e) Identifying inputs and creating a data dictionary, (f) Identifying output format and file locations, and, (g) Identifying support staff- for data input etc.

The third phase of Data Collection covers the Sources of data that is electronic or print form. While the fourth phase of information Management. Other than the role of information in routine library functions, implementation of this phase addresses issues like (a) Necessity of creation of a system / structure for long term assessment of performance, (b) Need a system / structure to enhance decision making and planning. The fifth and final phase of MIS implementation provides for Reporting, Dissemination & Feedback. This stage answers questions like (a) For whom to identify, (b) Who will receive the data, (c) in What formats, (d) Where to store (location) report, (e) Creating data sets for analysis, (f) Data retrieving for future references, (g) Review and adjustment of data.

The successful implementation of MIS in University libraries shall no doubt raise the level of their EFFECTIVENESS. In the present study, Library Effectiveness was defined as “a state of accomplishment of the predefined purpose for producing the intended or expected result”.

Library Effectiveness: Effectiveness of libraries is a continuous process of facilitating the readers with desired bibliographic and webographic
resources at lowest cost & time. In the present study, the objectives of an MIS based Library were to achieve effectiveness by ‘Providing convenience and justice to its readers’ and, ‘Attracting non-readers to become readers’. However, unless made measurable, the library performance can never be improved and made effective.

As discussed above, that in the present study, a survey of readers from all eight university libraries of Chhattisgarh was conducted for mapping their perceptions on Automation Level and Effectiveness state of their Library. Library Automation was measured through the four factors as “Commitment, Infrastructure, Services and, Staff Training”, while, Library Effectiveness being the dependent variable, was measured through the factors of Performance, Reader’s Satisfaction, and Staff’s Competence.

It was also found that higher will be the Library Automation level, more will be the Effectiveness of the given Library. In fact, it was found that 99.9% of Library Effectiveness was influenced by Library Automation. That the University Libraries investing on Automation were rated high by their readers on Effectiveness Levels.

Although it was known that the Library Effectiveness is maximum at the highest level of Library Automation, a further analysis provided an interesting finding that Library Effectiveness varies at different levels of
Automation. The percentage in Overall Library Effectiveness perception of Readers with the shift from Low to Moderate level of Library Automation is higher as compared to the change from Moderate to High level of Library Automation. Such results indicate that Readers welcome and prefer automation of libraries; however after a moderate level there is not so much of enthusiasm left in them. It can be thus inferred that either libraries do not make much efforts for continuous improvement or the readership in these libraries is poor that their readers do not fully utilize the automation benefits. In the light of such results, one may question the value; environment and osmosis of learning in such universities that do not encourage, motivate or compel their students and teachers to learn and study more by using the libraries more and more and to increase their library visiting frequency. One may also question the library administration about their plans to improve facilities and services and attract non-readers to become readers.

For the second main effect, on comparing the perceptions of Students and Teachers, as hypothesized, it was found that Teachers had better perceptions about Library Automation and Effectiveness as compared to their Students at all levels of Automation. These results allow accepting the hypothesis that Teachers on account of their better analytical ability arising of their experience and higher formal education have better understanding of the concept. Also, it may be inferred that
such responses from Teachers is a result of additional privileges available as compared to their Students. One may also infer that Teachers may use libraries more compared to Students. Possibly, Teachers do so to prepare for their lectures, however students fail to exhibit their commitment towards studies and preparation for such classes neither they visit libraries for post lecture self study. Such inferences raise serious concerns about importance of education in the Universities covered in the present study.

For the third main effect, the Libraries; it was revealed that the libraries of relatively new universities earned less scores compared to the libraries operating since longer. Probably the finances and budgetary allocations are relatively less for such newly constituted Universities and their Libraries. Quiet understandable too, as they are in budding stages and infrastructural priorities do differ in budding Universities from the established Universities. It is exactly issues like these that provide strength to the validity of our study and proposals therein for integration of all university libraries through MIS implementation to enable resource sharing and synergic effect that do not make students of newly constituted Universities to suffer for genuine administrative constraints of their University.

In addition to the Survey on Automation & Effectiveness, the present Study also lays stress on continuous improvement. The study therefore offers a ‘Library Audit Checklist’. Compliance to the eleven criteria as
CONCLUSION & SUGGESTIONS

mentioned therein for library operations shall add continuous value to the Library effectiveness.

The Checklist encompasses Budgetary Allocation, Cost Effectiveness, Income Substitution, Staffing, Training, Response Time, Overall Equipment Effectiveness, Readership & Circulation, Awareness, and Maintenance and, Continuous Improvement as major factors of concern.

Together these factors make the library operations effective and serve the objectives of convenience and justice to the readers and encourage non-readers to become readers of the library. These factors make libraries more accessible, economic and Costs effective, and raise its reader satisfaction.

Further, the study also offers software that enables MIS implementation through the use of an integrated database. The proposed software provides solution to all limitations of the conventional library management systems. Figure 8.1 below exhibits the decision flow used in the present software using integrated database comprising Membership Data, Bibliographic Data, Circulation Data and the Maintenance Data.
Table 8.1

Proposed Software for Management Information System

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The highlighted area in figure 8.1 reveals the benefits that the execution of proposed MIS enabling software offers against the Conventional library system. Starting from the availability checks, a purpose that was served by card catalogues in the conventional system can now be solved through electronic data with a value added output. While in the earlier system of card catalogues provides information only on the ownership of any bibliographic resource, the proposed system offers information on current availability, number of copies, in case of non-availability – issued to which reader, his contact details and when the resource due to return, all such information is can be made available to the reader. Taking another step further for reader service, the software not only just offers information of the in-house availability, but about the availability of required resource in neighboring libraries too. Such facility is offered through the feature of an integrated database with the neighboring libraries too enabling the resource sharing.

Among the other benefits of integrated database are vendor data management, classification, cataloguing, fine calculation, no-dues certificate, sending reminders to readers for delay in return, and timely system generated alarms for library maintenance.
In the lights of above discussion, the general conclusions drawn and key lessons to be learned through this study are:

- **MIS is possible – but only with dedicated staff resources.** Nothing is created without investment in people, and a MIS will only be created and be effective if it has staff positions allocated to it.

- **MIS Enables Executive Support** – lacking a supportive professional culture, the MIS needs executive support. This support has to be continuous and apparent, both to the MIS personnel and to the rest of the library staff. The MIS needs long-term commitment of senior management to advance the programs and structures of assessment and MIS. Without perceived and communicated commitment from the executive level, the development and management of the MIS will be difficult or may fail.

- **Education and Training are Vital** – library staff is not readily aware of the concepts of Management Information Systems. The concepts of MIS are not part of the professional culture of librarians. Although the importance of evaluation, accountability, assessments are acknowledged, most library staff does not see these as part of their work activities. When undertaking work on a MIS, it is important that staff get educated about these concepts. It is important to demonstrate that this activity will have eventual pay-off not only in terms of better decision-making, more
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consensus and better service quality, but also in terms of immediate benefits at the work place. This may be demonstrated in more equitable decision-making, common goal development, change implementation, staff incentives, etc.

• **Openness and Trust must be built for Feedback and Continuous Improvement** - An MIS environment is very difficult to develop and succeed in an environment of distrust. Trust can develop only in an environment where divergent positions can be articulated and differences discussed calmly. An open and risk-free institutional environment will foster better communication and enhance the success of common values for the achievement of quality outcomes. An environment which is free of distrust will work more efficiently and ultimately more effectively. Division heads and other middle managers have to work hard on collaboration, on listening skills and on creating a trusting work environment.

• **Collaboration between system staff and other stakeholders** – it is important for all to understand that stakeholders determine their MIS needs. This is especially important for systems department personnel who are the enablers. They are the developers of applications and they serve internal customers. Both sides have to communicate better and to develop good working relationships in order to get the best out of the new MIS tools.
• **Information Flow** – balance between centralizing vs. decentralizing information. For a MIS to be effective, data and information has to be gathered from all corners of an organization and outside it. And any MIS system needs to be centralized in order to adhere to quality and reliability standards. The challenge is to enable viable information links and to make sure that the appropriate information flows to those who need it in the form that they can use.

• **Skill sets - continuous training on new tools** – skills are in constant flux and change. We need to allow time and money for continuous training of staff in the use and application of new tools.

• **Flexibility - Innovation encouraged** – working on assessment and MIS, one needs a certain level of flexibility in order to test new ways of doing things. Innovation should be encouraged and celebrated.

• **Involve staff at each step** – it is clear to me that most staff is very interested in new and creative work. Making staff part of the discussions, showing appreciation for their input and ideas is a morale boost.

• **Planning and Service Standards** – strategic planning or other planning activities and documents help staff focus on needs and objectives. Service standards that focus on quality service have
also the effect of focusing staff on customer (Reader) needs. The need to sustain planning activities and service standards will necessitate some type of management system implementation.

- **When possible start with a mature integrated system for Synergic Effects** – it is common sense that it is easier to put a MIS together if you are operating in a stable systems environment that enables Integration with neighboring libraries. Developing a MIS environment while changing the basic system is much more problematic and time-consuming.

  Further, to enable MIS successfully in libraries, following eight principles are recommended for realisation of library objectives:

**Principle 1 - customer focus:** Organisations depend on their customers, and therefore need to identify and understand their present and future needs in order to be able to meet the customers’ requirements and, indeed, to strive to exceed them.

**Principle 2 – leadership:** Management is not an administration activity; leadership is needed to provide unity of purpose and direction, and to create an environment in which people in the organisation become fully involved in achieving the organisation’s objectives.
**Principle 3 - involvement of people:** Peoples’ co-operation and involvement allows for their abilities to be fully and effectively used for the organisation’s benefit.

**Principle 4 - process approach:** In order for the results to be achieved efficiently the resources and activities need to be managed as processes.

**Principle 5 - system approach to management:** Identifying, understanding and managing a system of interrelated processes for achieving objectives contributes to effectiveness and efficiency of the organisation.

**Principle 6 - continual improvement:** Continual improvement is a permanent objective of an organisation.

**Principle 7 - factual approach to decision making:** Effective decisions are based on the logical and intuitive analysis of data and factual information.

**Principle 8 - mutually beneficial relationship:** Such a relation between the organisation and its neighbours will enhance the ability of all neighbours to create value.

**LIMITATIONS OF THE STUDY**

Like any other theory, MIS in libraries too has certain limitations. According to Lakos (2006), although a MIS system relies on...
computer-generated data, the success of a MIS depends on wise human use of the gathered information. The vague fear that MIS is somehow fundamentally dehumanizing may be a red herring retarding the adoption and diffusion of basic MIS. It is difficult to imagine that any MIS ever could become sufficiently intelligent to replace the foresight, wisdom, and analytical abilities of a good human library manager.

One way to think about MIS is as a library "smart-box" that supports and validates library management decisions. For the foreseeable future, human intelligence will be needed both to assess the quality and validity of data input into any MIS, and to provide additional context to any recommendations that rely heavily on MIS output.

The need for MIS in libraries is greater now than ever. Information systems are more complex, user expectations are rising and fragmenting, and the types and sources of resources needed by libraries to effectively pursue their missions continue to expand. As more information seeking and use goes online, usage becomes "invisible" to traditional data-gathering techniques. Library management needs to turn to MIS not as a substitute or crutch for the delicate human art of management, but as one of many ways for improving the management and planning processes within libraries.
In the ideal library setting, MIS concepts would not primarily support all readers, but would be part of every librarian’s tool kit in the learning community because MIS is really on more than a feedback mechanism to improve performance, which always starts at the individual level. In fact, MIS in the future might be renamed library Organizational Information Systems in recognition that this concept has applicability at all levels in an organization.

Attitude of library staff remains crucial. If we analyze the various jobs such as book acquisition, technical processing, circulation and reference service one can conclude that human interference is necessary at each and every step. The fear of losing employment with the inception has to be tackled on prima-facie. One must realise MIS is to support, not challenge the role of a librarian.

The only area where substantial manpower can be saved is the cataloguing. The data entered at the time of ordering can be used for cataloguing with some updating would eliminate multiple card preparation and subsequent filing. The manpower thus saved can be utilized in retrospective conversion and later on for analytical cataloguing or introducing new services. Therefore, there will be no adverse impact on employment.

There is another apprehension that the technology, both hardware and software would be expensive and unaffordable. The cost
of hardware and software depends on the level of automation. From the user point of view cataloguing system is most important and also forms the base for other library activities. The training of library staff also depends on the level of automation. If one decides to go only for cataloguing a minimum training of one or two week’s duration will enable the librarians to develop a database and maintain it. With this basic training one can easily transfer the same data on a server/main machine in a network environment. The job becomes easy as most of the institutions have systems department with computer professionals maintaining the network.

The lack of support from the management may be owing to budget constraints, will be one of the barriers. Here the role of librarians becomes crucial in convincing the management that the users of libraries will also be the major beneficiaries of automation. Also, the skill and initiative play a major role in convincing the management.

The next reason could be retrospective conversion of data. As mentioned earlier the manpower saved could be utilized for retrospective conversion and later on for analytical cataloguing. However, most of the libraries have taken time bound project for this purpose. To summarize, we may find following commonly prevailing barriers to MIS in libraries:
CONCLUSION & SUGGESTIONS

(1) Fear of adverse impact on employment, (2) Apprehension that the technology could be too expensive, (3) The library staff has to undergo extensive training, (4) Lack of support from the management, may be owing to budget constraints, (5) The retrospective conversion of data.

Limitations to MIS implementation do not stop at obtaining the staff support. Management information system in its own rites carries certain limitation. Adams (2007) identified following major problem areas of management information systems as:

(1) Output is undiscriminating, (2) The information is not analysed for a purpose, (3) The data lacks integration, (4) The system at times is not user-friendly unless supported with adequate training & awareness, (5) The information as given by MIS may not be acceptable to all, (6) The crude form of data must be refined before use. (7) A general lack of agreement about what data are most useful, (8) General lack of expertise in interpreting data, (9) The perceived high cost of deploying MIS, (9) Underutilization of MIS.

SUGGESTED SCOPE FOR SUCCESS OF MIS IN FUTURE:

Automation of Libraries and use of MIS concept can not be kept distant for long now, it has become inevitable and the need of hour. The University Grants Commission (UGC) in its 2008 report has addressed the magnitude of issues in Indian Higher Education System. Table 8.2 and 8.3
respectively reveal the institutional capacity and categories of institutes operating in the country.

### Table 8.2: Institutional Capacity

<table>
<thead>
<tr>
<th>Institutional Capacity Indicator</th>
<th>1950</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of University level Institutions, including 11 private universities</td>
<td>25</td>
<td>431</td>
</tr>
<tr>
<td>Number of colleges</td>
<td>700</td>
<td>20,677</td>
</tr>
<tr>
<td>Number of Teachers</td>
<td>15000</td>
<td>5,05,000</td>
</tr>
<tr>
<td>Number of Students Enrolled</td>
<td>1,00,000</td>
<td>1,16,12,000</td>
</tr>
</tbody>
</table>
Table 8.3

<table>
<thead>
<tr>
<th>Type</th>
<th>September 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Universities</td>
<td>25</td>
</tr>
<tr>
<td>State Universities</td>
<td>230</td>
</tr>
<tr>
<td>Deemed Universities</td>
<td>113</td>
</tr>
<tr>
<td>National Importance (State)</td>
<td>5</td>
</tr>
<tr>
<td>National Importance (Center)</td>
<td>33</td>
</tr>
<tr>
<td>Private Universities</td>
<td>28</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>431</strong></td>
</tr>
</tbody>
</table>

As stated in the tables 8.2 and 8.3, we have 116.12 Lakh students, 431 universities and 5.05 Lakh Teachers. However these figures become even
more interesting when compared to the 2001 census report stating a Goss Enrollment Ratio of merely 13.6% (gross enrollment ratio (GER) is a ratio of total students enrolled out of the total population in 18 to 23 years of age group.

Following such figures, the situation looks alarming, now when we are already aware of the magnitude of problem that we have ahead of us where 86.4% of our youth population waiting outside the academic corridors. Only 13.6% of our population has access to higher education, while this figure easily touches the 40% mark in the developed countries. To what extent has we been successful to serve the 13.6% people who are already within our jurisdiction is again a matter of introspection.

According to UGC reports of March 2009, there is a huge quality gap from the benchmarks of higher education in terms of number of academic institutes, number of departments, number of teachers available in institutions, qualification gaps in the existing teachers, number of books available in libraries, number of computers available in institutes and libraries. Table 8.4 ahead presents a status of such quality gaps and indicates the scope of improvement in higher education of India.
### Table 8.4

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Average of All Universities</th>
<th>Benchmarks (as in A Grade Universities)</th>
<th>Quality Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Departments Per University</td>
<td>29</td>
<td>34</td>
<td>5</td>
</tr>
<tr>
<td>Number of Sanctioned Faculty Positions Per University</td>
<td>287</td>
<td>432</td>
<td>145</td>
</tr>
<tr>
<td>Number of filled up faculty Position per University</td>
<td>220</td>
<td>329</td>
<td>109</td>
</tr>
<tr>
<td>% of Faculty positions vacant</td>
<td>25%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of faculty members with Ph.D.</td>
<td>158</td>
<td>432</td>
<td>274</td>
</tr>
<tr>
<td>Number of Teachers per Department per University</td>
<td>8</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Number of Computers per Department</td>
<td>6</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Number of Books in Library</td>
<td>2,88,913</td>
<td>3,52,886</td>
<td>63,973</td>
</tr>
</tbody>
</table>

**CONCLUSION & SUGGESTIONS**
Under such circumstances, MIS comes as a hope. We are marching ahead fast, introduction of INFLIBNET, OPAC are success stories so far. With the launch of Edu-sat and Anusat (Micro Satellite) a new chapter in the area of information sciences in education has begun. A radical paradigm shift is happening in the role of Libraries too in the current information era. To stay relevant and remain useful, Libraries have to adapt to changing user requirements and expectations. Web 2.0 technologies can provide very useful tools in this evolution. But, it must be recognized that technology is only a tool and it should only be used once the higher level goals and functionalities are accepted as necessary by both the library and the users. Once this happens, the best evolutionary path should be carefully chosen instead of trying to achieve an entire technology revamp which could prove both costly and counter-productive.

A bottom-up approach integrating and implementing one useful functionality at a time (even if not fully automated using Web 2.0 technologies) may prove more beneficial especially in Indian context. The problems and risks involved in implementing user-driven services should also be analyzed a priori and system be designed taking these into account. Some major issues are security privacy (allowing users to retain control over how much of their personal information is revealed in the new services) and misuse.
The UGC itself has proclaimed of MIS intervention in its financial systems (FMIS), the decisions came on account of the scale of issues UGC requires to handle. Time has now come when LMIS or Library Management Information System comes to play before it becomes mandatory to do so. Based on the above discussion, following key learnings must be considered for all future studies on MIS in libraries:

1. MIS concepts need to be integrated into the library and information science curriculum.

2. MIS needs to be perceived as integral, not peripheral, to the overall management Program of the library.

3. The parent organizations of libraries need to embrace MIS.

4. E-metrics criteria and benchmarks need to be developed and disseminated.

5. In many library settings, starting small may be the best path to a sustainable MIS program by concentration on types of data and management processes where small wins can be achieved.
6. All managers in a library need to be encouraged to use MIS, not just those who already embrace MIS.

7. Merging MIS capability with library development profiles represents a potentially profitable Challenge.

8. The MIS system needs to be inexpensive and easy to use. User friendliness and inexpensiveness are priorities with any MIS.

9. Making feedback mechanism integral for continuous improvement.

10. Study on readership must be conducted to assess expectations of readers and encourage non-readers to become readers.

**Chhattisgarh e-network**

In order to support the Chhattisgarh Information grid, it is essential to establish a Chhattisgarh e-network. Chhattisgarh e-network comprises of satellites beaming to all the Chhattisgarh and linked using fiber optics Broadband network and Wireless (Wi-MAX) for last mile connectivity. These satellites can be launched and maintained in geo stationary orbit by Indian space scientists. Fiber broadband network across the sea connecting the Chhattisgarh region has their point of presence in almost all the nation. India's core competence in software, tele-education delivery system, satellite launching capabilities and above all capacity
building will provide a win-win partnership to this mission. This can be a collaborative venture to spread knowledge in this region and make the Chhattisgarhi community a knowledge power. This will become a role model for global networked education. This Chhattisgarh e-Network may be initially established between Chhattisgarh Universities, later it can be extended to other states. Chhattisgarh will certainly become a partner in this mission to build capacities of students and teachers and researchers, leading to the creation of an information Society in the Chhattisgarh region.

The three major areas of suggested collaboration among eight university libraries are (1) Information resources and services (2) Joint storage facility and (3) Integrated Library Management System.

The traditional emphasis on quality of libraries seems to derive from inputs (e.g., volumes held, volumes added, staff size, total expenditures) rather than outputs. In present holistic statistics, libraries need to improve their measurement of outputs (e.g., user satisfaction, the library’s impact on research, education and quality of life). IBM has moved beyond MIS and DSS into an Enterprise Wide Information Analysis. MIS is an inevitable future of libraries; one may not keep distance from it for too long. Better start early. Let me conclude with the quote of Thomas Jefferson, “Information is the currency of Democracy”, and for optimum use of information, we need MIS.
Like many other aspects of library and information science, the appealing elegance, simplicity, and effectiveness of MIS as an ideal has been difficult to design and implement in the real world. Fulweiler cautioned us not to let the ideal MIS cause us to despair over an adequate MIS. “A library’s MIS does not have to be a totally integrated, complex relational database set up on its own server with specialists to design and run it.” Lakos reminded us that, although a MIS system relies on computer-generated data, the success of a MIS depends on wise human use of the gathered information. The vague fear that MIS is somehow fundamentally dehumanizing may be a red herring retarding the adoption and diffusion of basic MIS. It is difficult to imagine that any MIS ever could become sufficiently intelligent to replace the foresight, wisdom, and analytical abilities of a good human library manager. One way to think about MIS is as a library “smart box” that supports and validates library management decisions. For the foreseeable future, human intelligence will be needed both to assess the quality and validity of data input into any MIS, and to provide additional context to any recommendations that rely heavily on MIS output.

In the ideal library setting, MIS concepts would not primarily support senior or even middle-level management, but would be part of every librarian’s tool kit in the learning community because MIS is really
no more than a feedback mechanism to improve performance, which always starts at the individual level. In fact, MIS in the future might be renamed **Library Organizational Information System** in recognition that this concept has applicability at all levels in an organization.

The need for MIS in libraries is greater now than ever. Information systems are more complex, user expectations are rising and fragmenting, and the types and sources of resources needed by libraries to effectively pursue their missions continue to expand. As more information seeking and use goes online, usage becomes "invisible" to traditional data-gathering techniques.

Library management needs to turn to MIS not as a substitute or crutch for the delicate (if misunderstood and generally underappreciated) human art of management, but as one of many ways for improving the management and planning processes within libraries.