

# **SUSTAINABLE MANAGEMENT OF LIBRARY AND INFORMATION SYSTEMS IN AGRICULTURAL UNIVERSITIES**

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**Abstract** The author explains the importance of library and information systems in agricultural education, research and development. Points out the challenges offered to library executives by information explosion, developments in computer and communication technology, and information awareness. Opines that agricultural library systems as they exist now are not sustainable. They have to be totally recast and made more productive to the needs by application of modern management techniques. Discusses in detail the concept of sustainable library management, its functions, techniques, TQM, and Automated Library Management Information System. Further stresses that the success of the library system depends on how appropriately it could conceive the agricultural university's information requirements and develop appropriate strategies for providing effective information, support agricultural research, development and extension.

## **INTRODUCTION**

The production of food grains per capital in India has not shown any notable change during this century. It also found that growth rate in agricultural production is decreasing in nineties. The hope lies in application of new technologies, which depend on effective information services provided by efficient library systems. Information is a vital resource. Giving a stunning vision of future. Alvin Toffler discusses in powershift, about force, wealth and knowledge the three sources of power at the edge of the twenty first century and explains how knowledge is gaining importance over other sources of power with every fleeting second. The most important powershift of all therefore is according to Toffler not the shift from one person, party or one institution to another. It is the hidden shift of the relationship between force, wealth and

knowledge. This explains why the battle for control of knowledge and the means of communication is heating up all over the world. In future nations controlling information will rule the world. Now it has been universally realised that no educational or research organization in today's world can survive without an efficient library and information system.

## **IMPACT OF INFORMATION TECHNOLOGY**

Libraries are the institutions on which the impact of technology related to recording storing or disseminating data or information is first felt. Paper, printing press, camera, typewriter, computer, telephone, fax machine, modems, communication satellites etc., have immediately on their invention influenced librarianship and library services tremendously. The change of recording and storage mediums from cave walls to lacer disks can give a good grazing ground for any interested historian. Now library and information technologists predict a paperless society and an electronic future for libraries. At least in the libraries supporting research this is going to become true very fast and before we could realise it they will shed away their traditional form. Librarians are moving away from the idea of building up large collections to facilitating access to maximum information. Speedy access to information is more important than storing information or documents. Information superhighway and Internet enables access to maximum area of the whole universe of knowledge from any place at any time at the touch of a finger.

### ***1.1 PROBLEMS OF AGRICULTURAL EDUCATION***

Higher education provides trained manpower in different areas of societal needs. It is the repository of knowledge and instrument of change through people for the good of the society. It contributes to national development through dissemination of specialized knowledge and skills. It is, therefore, a crucial factor for survival. Higher education has made a substantial contribution to the development of modern technology leading to increased food production, industrial development, revolution in communication technology and advent of live-saving medical techniques. It is said that it has not paid the society the due dividend. Its successes are shrouded in silence and failures spotlighted in notoriety.

Pinpointing the seriousness of problems in higher education World Bank's study opines that the current situation is not sustainable in the medium and long term. According to World Bank, higher education is in crisis throughout the World in terms to low quality, inefficiency and inequity. Further, it adds that there can be doubt that without serious attention to the institutional

level, i.e. management, leadership, the use and accountability of public resources, etc little progress can be expected in higher education reform. UNESCO points out three important worldwide trends-enormous quantitative expansion which nonetheless not led to increased equality of access and has not resulted in a proportionately large product of engineers and scientists; inadequate diversification of institutions and academic programmes that do not comply with minimum standards and have not led to significant educational innovations; and expansion in an increasingly constrained financial environment.

Our higher education system has rapidly grown both in size and accessibility after independence. It has emerged as the second largest educational system in the world with 223 universities and more than 8,500 colleges with 55 lack students in 1996. Organised instruction in agriculture at the university level was also introduced in India from the beginning of the twentieth century. Immediately after independence it became clear that our agricultural underdevelopment was largely the consequence of institutional under development. It was realized that lack of both trained scientists and effective institutions was resulting in under-utilization of natural resources and in many cases wastage of investment capital. It was also clear that increased food production was imperative to India's survival, and so application of science and technology in agriculture was an inescapable necessity. Hence Government of India set up expert committees to review the then existing agricultural research and education systems. The earliest of this; popularly known as the Radhakrishnan Commission, recognised the inadequacy of existing system and strongly recommended the establishment of rural universities. The commission has clearly identified the role of library and information services in determining the quality of education and research and recommend the development library as heart of all academic work in a university. There are now 27 state agricultural universities (SAU), one central university and 195 colleges. Total admission capacity is about 40000 students. There are also about two hundred research and educational institutions under Indian Council of Agricultural Research. The total number of scientists working under all these comes to about 53,000. More than 90 per cent of education research and development activities in the fields of agriculture, animal sciences, biotechnology, nutrition, economics, rural sociology, natural resources and related areas are undertaken by these group of institutions. Hence for research in these major areas traditional universities and other organizations have to depend on the information generated by these institutions.

But our library and information systems in State Agricultural Universities (SAU) which is an important factor for ensuring quality of education, research and development are also beset with serious problems. They are afflicted by anxiety and perplexity, discontent and indiscipline, purposelessness and disobedience, violence and perversion which has become common in cam-

pus. In terms of efficiency, productivity and utilization of resources, they have completely broken down. A vicious cycle of declining academic standards has eclipsed library and information systems in SAUs also.

### **NEED SUSTAINABLE MANAGEMENT TECHNIQUES**

Library and information systems in SAUs can be made more productive and responsive to needs of agricultural education, research and development if they are managed on the principles which have led to achieving excellence in many industrial and non-profit organizations. Different commissions and committees constituted for improving library systems in universities have stressed the environment of organisational system and management practices based on contemporary societal environment and requirements.

In west the library and information systems managed through the application of modern management techniques have excelled in realizing their goals. Unfortunately in most of the SAUs library management has been considered any ones task. They hardly utilises the well trained management concepts in library systems. It is observed that the decision making personnel are hardly endowed with the requisite professional knowledge, managerial skills and appropriate temperament. Library managers tend to believe that knowledge or rules and regulations is sufficient to manage effectively.

The management principles relevant to library systems cannot remain static. They tend to change over different periods as a result of changes in the objectives, size, societal aspirations, scope of activities, and practices of management. In earlier days, teachers used to be the managers of the collections academic institutions where a few disciples used to come for higher level education. Library management derived its techniques from the obedience of the students and academic pursuits of the teacher librarian. Even the libraries of Takshasila and Nalanda Universities has the flavour of this principle. This period was dominated by the intellectual library managers designated as Sarasvati Bhandarikas who proved their worth in academics. They managed libraries by management principles which stressed intellectual excellence. Most of the techniques were paternalistic in nature.

### **ADJUSTING WITH CHANGES**

Present day library systems are the outcome of the constellation of worldwide changes and are encountered with the phenomena which were never anticipated in the past. The university environment is facing serious changes. Increasing thrust on education crowded the universities. Democratic secularism posed entirely different challenge. Students and their parents started ques-

tioning the relevance of education. Politicians entered universities to propagate their ideologies. (Worldwide explosion of knowledge expected universities to be sensitive adsorbates and it gives very important role for university libraries). Liberalization, globalisation and privatisation have virtually converted universities to business firms struggling to raise adequate finances and survive in competitive environment. Information technology and electronic revolution have created a dominant class of neoiliterate. Worldwide explosion of knowledge expected universities to be sensitive adsorbents and it gives very important role for university libraries.

### **EFFECTIVE LIBRARY MANAGER**

Merely understanding the meaning of management is not a sufficient condition of becoming effective library manager. Library executives must have certain orientation in management principles and possess managerial skills. As a university library is different from other divisions of the university or business organizations, the management practices developed elsewhere cannot be transplanted as such in libraries. What is required is adaptation of management principles in the library and information systems as per the emergent situations.

University library management is the process of planning organizing, leading and controlling the work of staff of the library and information systems and of using all available library resources to reach stated goals of the university. The Library managers direct the utilisation of all the resources of the library, its finances, equipment, information and people to attain stated goals. This means that managers of any library and information system let it be that of an university, a college, a church, a hospital etc. try to attain specific ends. These ends are of course unique to each library system. Whatever the stated goals of a particular system may be, management is the process by which these goals are achieved. And the managers are those persons who get these goals accomplished with and through people.

#### **4.1 CONCEPT OF LIBRARY MANAGEMENT**

Library management can be understood as the process of identifying the objectives and ensuring their achievement through the solution of problems and utilisation of resources with the application of appropriate management techniques. Library and information systems are designed to achieve specific goals. The task for the practitioners and thinkers is to continuously study the emerging situations, revise goal-structure, search appropriate strategies and evaluate the performance. The foremost task of a manager is to clearly identify

these goals. At a particular moment, say, a university library may be pursuing the goal of all round development of information support systems for students or research in some specified fields. After pinpointing the goals, one has to diagnose the situation both existing and anticipated. This necessitates proper understanding of the system and environment around it. Keeping in mind the emergent situation, library manager should apply suitable management techniques, in order to achieve stated objectives.

## **LIBRARY MANAGEMENT FUNCTIONS**

The performance of management functions requires certain level of subtlety which ensures excellence. Peters and Waterman attempted to identify the attributes of some excellently managed US institutions which were found to be 'brilliant on the basics'. Rather than having some secret strategy or unique market situation they simply did the most fundamental organizational tasks very well. The study brought out eight attributes that determine the management style of these institutions. These are listed below:

- \* a bias for action;
- \* staying close to the customer;
- \* autonomy and entrepreneurship;
- \* productivity through people;
- \* hands-on, value driven;
- \* stick to the knitting;
- \* simple form, lean staff and
- \* simultaneous loose-tight properties.

Library management, after sensing, identifying and structuring the problem engages itself in the process of information gathering development of alternative course of action and selecting the appropriate action for implementation. At the first instance, it structures the problems objectively. A well defined problem is half solved. Therefore, a library manager has to clearly define the problem. Problem solving process is primarily decision making process and requires systematic understanding, analysis and synthesis of environment on the one hand and the matching of organisational capabilities with it on the other.

### ***5.1 FEATURES OF LIBRARY SYSTEM***

University library organisation is different from any other business, services and nonprofit organisation. It is a 'knowledge-industry'. Of course, it

is structured like any other social institution but it is characterized by certain distinctive features. Due to these distinctive features, library managers face certain unique problems and new challenges. The main features which distinguish a university library from other institutions are autonomy, indeterminate and unstructured activities, inbuilt output evaluation, transformational and qualitative nature of objectives, human dominated system. Of this except the last feature all are almost the same for library and information systems also.

### ***5.1.1 Autonomy :***

Theoretically speaking, an SAU is a state within a state. It is built on the principle of autonomy which affects the style and structure of its governance. The main job of the government officials is to implement the constitutionally sanctioned mandates of politically accountable officials and legislators. But university professors, have the freedom to think. This feature is reflected to some extent to various divisions under SAU of which library is the most important which will be headed by a statutory officer whose powers will be clearly defined in the Acts and Statutes.

### ***5.1.2 Indeterminate and Unstructured Activities :***

The structure of a SAU library and information system is different from other organisations because of its indeterminate and unstructured activities. It traditionally carried on two avowed activities and two implied activities. The core activity was, and is collection storage and dissemination of information. Research has been integrally related to information systems. There are many less explicitly recognised activities also. The specific role SAU library has to play is to support learning, research and development activities in the adjoining community which will mutually inter-link with field programmes of all studies. Through extension, relevant knowledge, skills and values are transmitted to the adopted-opted community in an adopted area. The nature of activities pursued by the library and information system, ultimately determines the structure of its organization. There develop two types of structures- the academic structure, made up of divisions, branch libraries in constituent colleges and service outlets in research stations and the administrative structure, responsible for supporting services and business affairs.

### ***5.1.3 Input Output Evaluation :***

The product of business organisation is evaluated by the consumers. But a university library system evaluates its own output through the contributions of the university for agricultural development through its education activities. There

is hardly any other organisation which evaluates its own output. Agricultural Universities also evaluates their programmes though its own output and the reactions of press government and public.

#### ***5.4 Transformational and qualitative nature of objectives:***

The business firm strives for profit oriented objectives while SAU library is engaged in the discovery of knowledge, transmission of knowledge, and support to application of knowledge to solve the societal problems. In a well managed business organization, objectives are easily translated into operating plans. In case of library and information system, planning for its core activity of supporting the university in teaching and research is more difficult. The formulation of university wide plans relating to different activities is less feasible due to qualitative nature of these activities and non availability of objective data for decision making. In addition, and academic freedom of the SAU system produce different styles and approaches for solving similar problems. Likewise, though we can generalize the objectives of SAU library and information systems, yet it becomes cumbersome to identify certain quantitative objectives which can be precisely translated into its goals and operational plans. It does not base its organisational activity on the basic of existing limited knowledge but seeks more knowledge which is subject to change and is qualitative in nature.

#### ***5.1.5 Technology Dominated System:***

In an educational organisation, human resource forms basic input for further operations. In libraries, as in other organisations, physical resources or technology also forms input and unlike in other systems human resource also plays an equal role. Unique feature of an institution of higher learning is that its inputs also plays an equal role. Unique feature an institution of higher learning is that its inputs are human beings, machines are human beings and outputs are human beings and hence the same is reflected in information handling scenario of the SAU also. The presence of human element at all levels of system's functioning, complicates the management process.

### **LIBRARY MANAGEMENT TECHNIQUES**

In view of the above discussion, we find that management of an SAU library and information system which is also a higher education system is not a child's play. Even a military general, a successful industrial manager or a top level bureaucrat may miserably fail in a managing library affairs. The underly-



ing cause of such failures lies in the peculiar character of the organisation which requires different techniques of management. The effectiveness of SAU library management will depend upon the evolvment and application of suitable management techniques.

Based on peculiar characteristics of higher education institutions, emerging societal trends and available management concepts Verma has put forward the SOLVE model that includes the management techniques that aim at undertaking the task of solving educational management problems and achieving certain objectives. It can be applied to SAU library and information systems also. Each letter in SOLVE model stands for different set of management techniques: sharing, organization, leadership, values and easel.

### ***6.1 TOTAL QUALITY MANAGEMENT.***

While implementing these techniques, the concept of Total Quality Management (TQM) should be applied. TQM is a continuous process of improvement and it is about changing the way things are done within the organisation's life time. To improve the process, therefore, people must know what to do, how to do, have the right methods to do it, and be able to measure the improvement of the process and the current level of achievement. In an SAU library main characteristics of TQM will be:

- \* focus on the satisfaction of users of information;
- \* continuous improvement;
- \* building commitment to quality and relevance;
- \* open decision making;
- \* prevention of failures;
- \* empowering people and
- \* team building

### ***6.2 SHARING TECHNIQUES***

SAU library like the university in an open system and its objectives cannot be specifically determined in terms of quantitative targets. In order to move its parent educational organisation towards growth and effectiveness, it has to share its objectives, plans and operations with the academic and research community; share users aspirations and incorporate them in its operations; and share the thinking, feelings and actions of its personnel in order to set the direction of objective, plan execution and effectively control operations.

Libraries are not surrogate machines like the robots which do not rebel. They are abodes of culture where spirit of inquiry, questioning and disagree-

ment are deliberately fostered. Library managers have to be good communicators. They have to select and appropriate techniques of sharing at different levels units of analysis i.e. individuals, groups and organisations. Some of the sharing techniques are:

- \* team building to develop harmonious, cooperative and participatory work relationships;
- \* role analysis techniques to clarify the duties and responsibilities associated with a particular position;
- \* role negotiation technique to develop understanding for completing an assignment/task by means of negotiations and mutual adjustment;
- \* organisational mirroring to evaluate one's individual or departmental performance in terms of the perceptions held by the colleagues, students and administrators;
- \* developing inter personal competence to effectively interact with people for mutual satisfaction and performance;
- \* confrontation meeting to create consensual acceptance among the academic community about an organization-wide change;
- \* transaction analysis to create understanding how people relate with one another;
- \* management by objectives to set participatory goals for achieving organisational purpose;
- \* conflict management to manage conflicts with the objective of improving personal satisfaction and organisational efficiency;
- \* socialization to indoctrinate organisational work ethos and culture amount the students and employees entering into the institution and
- \* public relations to project the research accomplishments and other achievements of the institution in the society for establishing close linkage of college/university with the society.

### **6.3 ORGANISATIONAL STRUCTURE**

SAU library is expected to help the university to achieve the broad national goals through specific local goals of certain minimum standards. The job of library management is to organize different activities by establishing authority and responsibility relationships through division of labour. Inbuilt mechanisms of peculiar complex relationships in library systems and environmental upheavals necessitate the evolvement of eclectic, dynamic and adaptive organisation. Organisation structure should be able to meet the requirements of a particular situation. It should include all factors which earn it effectiveness. SAU library performs different activities for the achievement of its objectives. We can classify these activities into the following categories :

- \* development of the information resource in accordance educational and research needs;
- \* human Resource Management including selection, development maintenance, appraisal and control of human resources;
- \* raising and procurement of finances and its utilisation;
- \* procurement and utilisation of physical resources;
- \* management of information/document related activities;
- \* evaluation, and improvement of the system generating goodwill and enhancing users faith in the organization;
- \* Coordinating the activities of the library with other departments and horizontal and vertical levels;
- \* creation of knowledge through research and
- \* reaching the users with the technology and expertise for solving their problems in accessing required information.

#### **6.4 LEADERSHIP SKILLS**

Leadership is the main component of this model which significantly determine the effectiveness of other components in this model. The Librarian being the Chief Executive of the University's library and information system is the key person whose imagination and insight paves a way for whole leadership in the institution. His most important task is to anticipate crisis. Perhaps not to avert it, but to anticipate it. To wait until the crisis hits is already abdication. He has to make the library system capable of anticipating the storm, weathering it, and in fact, being ahead of it. That is called innovation, constant renewal. One cannot prevent a major catastrophe but he can build a system that is battle-ready, and that has high morale, and also has been through a crisis, knows how to behave, trust itself, and trust one another.

Library managers should understand the peculiarities of different leadership styles i.e, participatory and directive and then adopt an appropriate style suiting to the situations. In library and information systems a leader perhaps has to concentrate more on issues such as providing of vision and direction, development of creating a suitable environment, promoting productive, inspired and vibrating institutional culture, and enlightenment by setting personal examples. He should possess the ability of assessing his own self, knowing his job and dealing with people. A true leader must have the spirit of sacrifice and the nation's well being in view. In order to perform his work effectively, a library executive must acquire certain managerial skills through experience and training such as:

- \* Planning Skill which is proficiency to decide future course of action by way of making choices, committing resources within a time framework;

- \* Organising Skill including identification, grouping and classification of different technical and administrative activities;
- \* Leading Skill that is the ability to understand and influence the behaviour of people towards the organisational task;
- \* communication Skill which means the ability to effectively communicate ideas and instructions, and developing feedback mechanism;
- \* Motivating Skill consisting of the ability to inspire others and create willingness to work;
- \* Liaisoning Skill that can help to establish linkages with different academic disciplines within the organisation and outside the world;
- \* Information technology Skill which gives the ability to understand and apply the computer and communication technology and electronic media which is very important in the operations of library and information systems;
- \* Decision-making Skill that is the ability to identify and define the problem, develop alternatives, select the decision and implement that decision;
- \* Human Relation Skill to work effectively as a group member and to build cooperative effort within the team he lives;
- \* Monitoring and Evaluation Skill which focusses at developing, monitoring and controlling mechanism based on well designed management information system and

Innovations and conceptual skill essential to have understanding about the functions of organization and visualising relationships between the organizational development and the environmental changes.

## ***6.5 CREATING VALUES***

All library and information systems will be having certain values which develop an organisational culture and traditions. These traditions many times become stronger bindings than rules. The values like national service, fairness, harmony and cooperation, courtesy, gratitude, etc, evoke an enormous continuity. The management should develop certain beliefs and values which bind whole organisation together for effective performance.

## ***6.6. ENSURING EASEL***

Easel, a basic and supportive element in the model suggested by Verma, It tends to generate high job involvement, high morale and job satisfaction.

However dynamic a manager may be, he will not be able to create a suitable library environment in the institution until he ensures certain infrastructural facilities. In addition, it is the formal rules and regulations and policies and plans which structure the organisational activities and facilitate the functioning of leadership. The thinking of educational manager on different issues such as users' participation in management, human resource development, etc will be evident from its organisational activities and strategies. Main components in Easel can be identified as under:

- \* Physical and Technological Systems the location of institutions, designing of facilities, departmental facilities, equipments and furniture, computer facilities etc;
- \* Financial Systems like Sources of finance including grants-in-aid, fees, donations etc; and their optimum utilisation;
- \* Long term and Short term Planning that covers identification of organisational mission, scanning of environment, resource analysis, development of appropriate strategies and operationalisation of plans;
- \* Political and Legal Framework including Understanding of educational policy, decision making bodies and laws affecting university; and political participation educational process and

Human Resource Management which focusses on the policies systems and practices that affect human resource in the organisation.

## **INFORMATION TECHNOLOGY APPLICATION IN SAU LIBRARY MANAGEMENT**

Until recently, library executives have relied on only partial data to aid the decision making process, and that much of the management of library services has been based on professional values and opinion rather than hard evidence. This situation has been brought into sharp focus recently with moves to make services more accountable in their spending and, with the reduction in real resource availability, give rational justifications for the continuance of services. There may be a range of strategies for the protection and development of library systems, but all, in the end, demand more valid data on operations and effect to give managers and funding agencies a clearer picture of what is actually happening. Collecting and exploiting useful data is a time consuming business and this has meant that, in the past, library managers have either not bothered or have tried to do with minimal information. Where data have been collected for a number of different activities, they have often not been directly comparable, so that a broader dynamic model of library operations cannot be built up.

In this situation action research undertaken by the people who actually manage library services has become very important. If in the past this has been difficult to accomplish, we can now be more hopeful that solutions to problems can be found in our use of computers. We now have the technology totally to transform the management of libraries; the automated housekeeping system, which can be called the library management system, acting as the power house for information on all aspects of library dynamics.

## ***7.1 DATA FOR MANAGEMENT***

It is possible, to identify the major headings under which data should be gathered and see how a library automation system might be used to aid the collection and management of such data. The data types can be divided into categories; system, environment and use data.

### ***7.1.1 SYSTEM DATA:***

System data concise of all the information about the library itself and how it operates. They include financial data on budgets and their use. How is the money spent during the year and information on numbers of staff in service points, types of duties etc. It will also contain data on physical resources, such as numbers of service points, their size and the services offered. System data have always swirled around and have been used to research the pathology of library dynamics. We have had to be accountable for expenditure and manage staff in an orderly way. System data often lend themselves to simple comparisons and statistical analyses. They can measure efficiency of resource management, which is a component of the total library model.

### ***7.1.2 ENVIRONMENT DATA:***

Environment data have become more important to us in recent years. We have come to recognize that knowing the potential clientele for one's library service is an essential component in its effective development. Libraries have begun to use user profiles as a prime tool in the management process and have linked profiles to surveys of user satisfaction to provide a feedback loop between service delivery and effectiveness.

### ***7.1.3 Use Data:***

Use data represent the interaction between system and environment data. The most obvious manifestation of these data are the issue statistics which

libraries collect and count, all over the world. One may add to this, data on in-library use, CDROM searches, and reference enquiries to indicate the take up of services provided. It is an interesting reflection on librarians' lack of motivation to explore decision support information that despite the fact that many automated systems offer some flexibility in the analysis of use data, few appear to make regular and effective use of such facilities.

All these suggest that what is necessary is to change attitudes, not provide better research tools. Some librarians, of course, have done work and can show that data have an important role in the planning and management of service. However, there is little linkage made between the different types of data, and the role of the housekeeping system is usually no more than to produce issue statistics in raw summary form. And out there, there are many libraries which use very little hard data to manage their services, whether or not they possess a computerized system. We have to change to improve this situation.

## ALMIS

The solution is to put all the data possible into a computer and then extract all the analyses and interactions anyone has ever dreamed of. That is just what we should aim for a system that does all the monotonous work and gives us all the facts. But in reality we also would have to work hard to get close to such a position. Within the next few years we will start to see Automated Library Management Information System (ALMIS) developing because libraries have got their acts together and made that happen.

### ***8.1 REQUIREMENT FOR ALMIS***

To grasp what ALMIS will be like we must establish some basic principles. We must assume that a stand alone minicomputer system is available with adequate processing power and storage, connected to a real time network available at all service points for public and staff use. The system must also possess a database management system capable of dealing with a variety of data formats and able to make useful linkages between them. Within this system there must be the framework to include every data set relevant to the dynamic modelling of the library. First of all, a great deal of data is already available, some in machine readable form. Financial data on budgets and expenditure are normally managed with financial information models. Such data could be downloaded into the local system. Then data on the users -scientists, students, farmers etc., are all probably available within the library service. It is now frequently used in the production of user profiles. The ALMIS should, at least, provide the facility for libraries to collect data on types of user, e.g. age,

occupation, etc., since this information may be relevant to developing a dynamic model which is useful to decision making. On the other hand, more and more libraries, of all types, are taking an interest in actually establishing dialogue with users to assess, effectiveness of the services provided. The use or satisfaction survey is becoming a widely used tool and, if it is to aid decision making, will have to produce results which can be included within the library management system. If it to be a productive tool, it is essential that ALMIS contain data about service impact.

So, given the right data structure, a wide range of dynamic data could be included in ALMIS. In the library management system there will be data to establish sensible links and make comparisons between different libraries within the same organization. Further, one might expect ALMIS to include tools for analysis. Most easily provided would be statistical packages which would take much of the drudgery out of experimentation and, if possible in the future, expert systems which would allow the system and the users to learn together, to share each other's experiences. It is important to remember that decision support information must be available from the lowest level possible for effective decisions. Present systems do allow data manipulation and analysis but they require some knowledge system-dependent query language. In future systems it must be possible for library managers to address their questions and hypothesis in their own language and get a sensible reply.

It should be obvious that the management of libraries could be transformed if ALMIS is available. Its creation and maintenance would certainly affect operating procedures since more data would have to be collected and input. Library management has always required information for decisions based on valid justifiable principles. But we have just not been very good at it. The ALMIS should be at the very heart of the decision making process, a feedback loop between objectives and performance. Nothing like it exists now, but for the sustainable development of libraries elsewhere, it should come into existence. Some librarians and some software developers are beginning to show interest in developing ALMIS. The technology now makes it possible to do all the usual 'housekeeping' things and still have spare capacity. There must be a shift from the present perspective of modular systems, doing things that look like traditional library functions, to much more integration of everything. Much is up to us as library and information managers to establish some consensus about what should happen and hassle the system developers. Libraries do have input into the future of systems development. In the coming years we will see a radical shift in the nature of the automated library system from housekeeping alone to a unified management and research tool which influences every decision made not only in the library system but in its parent institution the university.



## SUSTAINABLE SAU LIBRARY DEVELOPMENT

The future of all major industries, agriculture as well as other fields of medicine banking and others are dependent on library and information systems, information explosion, growth of information awareness and information technologies demand a more dynamic and holistic approach to information. Information management has become a fast growing field. Paper is losing fast its importance as a medium for recording and organizing information. Information technology has brought in new mediums with infinite possibilities. Librarians' ability to organize conceptually, to evaluate, to select, to filter and to channelise information system managers. The library manager of the future will be quite different from a librarian of today. In most libraries of the developed countries the employment title of librarians already remains changed to 'Information Manager'.

The change in library management scenario is to be recognised. The librarian as manager of information system is faced with accelerating change in both external environment supra system and internal organizational sub systems which affect the managerial process. Accelerating changes lead to increasing complexity, involving the manager more vigorously in maintaining equilibrium between the need for organizational stability, continuity and the need for adoption and innovation. Library manager has to act as a benevolent leader to facilitate an easy organizational and environmental change. Library executive have to rush to the occasion to meet the revolutionary changes brought in by computer and communication technologies and develop the SAU library and information system sustainability.

To conclude, the success of SAU library and information systems depends upon how appropriately they conceive university's requirements and aspirations, and develop appropriate strategies for providing relevant, timely information support speedily and efficiently. The SAU librarians with certain managerial skills and knowledge of management techniques stands empowered to manage affairs of the library and information systems of agricultural universities effectively.

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