INTRODUCTION TO LIBRARY AND INFORMATION PROFESSIONS

COURSE CODE: 9202   **UNITS: 1-9**

SUDY GUIDE

BS-LIBRARY AND INFORMATION SCIENCES

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Department of Library and Information Sciences
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Table of Contents

Course Organization

This course has been organized in a way to help you in completing your required course work. There are nine units in this course. Each unit starts with an introduction, which provides an overall overview of that particular unit. The introduction part is followed by objectives in each unit that shows the basic learning purposes. Similarly, the rationale behind these objectives is that after reading unit a student should be able to explain, discuss, compare, and analyze the concepts studied in that particular unit. Hence, this study guide is intended to be a concise appetizer and learning tool in which the course contents are briefly introduced.

This study guide is based on prescribed reading materials. For each unit, these prescribed reading materials have been classified as compulsory readings and suggested readings. Students are bound for studying these materials so as to have successful completion of the course. After the section of 'suggested readings' few self-assessment questions and activities have been put forth for the students. These questions are meant to facilitate students/you in understanding that how much student/you have learned.

For this course, a workshop and tutorial support will be provided as per AIOU policy. So, before going to attend a class, prepare yourself to discuss course contents with your tutor. There will be 70% compulsory attendance in every workshop. After completing the study of first 5 units the 'Assignment No. 1' is due. The second assignment that is 'Assignment No. 2' is due after the completion of next 4 units. These two assignments are to be assessed by the relevant tutor/resource person. Students should be very careful while preparing the assignments because these may also be checked with Turnitin for plagiarism.

Course Study Plan

As you know the course is offered through distance education so it is organized in a manner to evolve a self-learning process in absence of formal classroom teaching. Although the students can choose their own way of studying the required reading material, but advised to follow the following steps:

Step 1: Thoroughly read description of the course for clear identification of reading material.

Step 2: Read carefully the way the reading material is to be used.

Step 3: Complete the first quick reading of your required study materials.

Step 4: Carefully make the second reading and note down some of the points in notebook, which are not clear and needs fully understanding.

Step 5: Carry out the self-assessment questions with the help of study material and tutor guidance.

Step 6: Revise notes. It is quite possible that many of those points, which are not clear and understandable, previously become clearer during the process of carrying out self-assessment questions.

Step 7: Make a third and final reading of study material. At this stage, it is advised to keep in view the homework (assignments). These are compulsory for the successful completion of course.

Assessment/Evaluation of Students' Coursework
Multiple criteria have been adopted to assess students' work for each course, except Research Project/Project, as under.
(a). Written examination to be assessed by the Examination Department, AIOU at the end of each semester = 70% marks (pass marks 50%). AIOU examination rules apply in this regard.
(b). Two assignments and/or equivalent to be assessed by the relevant tutor/resource person = 30% marks (pass marks 50% collectively).

All the matters relating to Research Project/Project will be dealt with as per AIOU rules. However, the pass marks for Research Thesis is 50% both in evaluation of research report and viva voce examination separately.

Course Introduction
This course is of three credit hours and contains nine units. The introduction provided at the start of each unit, which summarizes contents within that unit. Students should study this carefully so as to have idea of the syllabi and prepare themselves for the solution of assignments, assessment questions, activities, and final examination. A brief introduction of the whole course is provided in the following paragraphs.
Library and Information Science is a profession that is full of people passionate about making a positive change in the society, and they tend to be wildly happy about what they do. Library and information science professionals (librarians, information specialists, catalogers, classifiers and library technicians) require knowledge gained through education to deliver quality library and information services. By meeting the information needs of their clients and encouraging them to acquire information literacy skills to seek, locate and use information they also facilitate knowledge creation. To understand the functions and objectives of the Library and Information Professions in society, it is necessary to place them in the context of the social structure of society. The overall goal of the information professions is to enhance the flow of information in and around the elements of society. An understanding of information flow begins with an awareness of the fundamental actions that encompass information in its service to society. Information in a society can be compared with the function of blood in a human body. In order to sustain life, blood must be created and renewed constantly; similarly, information must be created continuously to maintain dynamic momentum in a society.
The library and information science field has a distinctive area of knowledge and skills, which is required for effective professional practice. Library and information specialists need to acquire the relevant disciplinary expertise, demonstrate employment related skills and be prepared for a challenging and dynamic future in many diverse environments. Librarians bridge the gaps that exist between people, information and technology. In their professional lives, librarians and information professionals work to: Design and develop knowledge-organization systems, create reader's advisory resources to encourage young students to develop lifelong love of reading and learning, help scholars locate archival and other resources crucial to their work, identify sources of assistance in family and personal crises, help doctors, lawyers, engineers, pharmacists, scientists etc. more quickly to locate information in critical situations and for general purposes.
Technological advancements are driving an increasingly interconnected global landscape, which contributes to rapid political, economic, social, and environmental change. Faster communication systems and enhanced access to information bind countries, economies, and businesses in far more complex ways than we have ever conceived. Education and knowledge are essential to successful communities, organizations, and economies, and they represent the future for the information profession if, of course, library professionals keep pace with the

changing dynamics of the various communities they serve. In order to be effective in this evolving global landscape, library organizations must be quick, creative, and customer-focused, and above all must embrace learning. Gone are the days when libraries cornered the market on information, delivering value almost exclusively as content providers. Library work creates value today in ways that are far more personal and collaborative. Library professionals need to be viewed as trusted advisors, but trust grows only when we build relationships with our customers. The library professional who builds relationships one who can coach, teach, or direct the customer to resources that support digital readiness is the one who provides value today. Library and information science professionals support the unique information needs of library customers by facilitating learning experiences. Now is the time for those of us within the library profession to recast the image of the library and information science professionals. Today's library is less about what we have for people and more about what we do for (and with) people. This distinction is important because communicating the value of the library professional is the only way to ensure our future viability. We must tell the story in a way that resonates with the customer, attracts talent to the profession, and secures funding from key stakeholders.

Today's library professionals are the "genius bar" for everyday users. From school libraries to public libraries, academic library spaces, and more, customers expect library professionals to support their information needs regardless of the format of that information. At a time when content is not reserved to a particular conduit, library professionals must become format-agnostic information experts, providing equitable access to physical material, internet-connected devices, and online content all while helping customers develop the skills needed to take advantage of the educational, economic, and social opportunities associated with technology. While the addition of technology into the content provider space is not a dramatic transformation of the library professional's work, we can see the meaning of "access" evolving as we increasingly help customers be they students, entrepreneurs, or curious creatives develop their own content and make it available to others. For example, libraries of all kinds now offer makerspaces with equipment, software, and services to stimulate content creation.

As expectations and demand for experiential learning opportunities grow, library professionals are at the forefront of providing training in digital media, including animation, video recording and editing, and app development; helping indie authors self-publish content on library platforms; and supporting researchers using Big Data stores and stimulating innovation by managing Big Data repositories. The movement from consuming content to creating content is opening opportunities for the new library professional. Professionals in the academic library, school library, and public library environment are not simply making other people's great ideas and stories available to their customers; they are delivering learning experiences that inspire great ideas and stories from their customers. To put it another way, library professionals are not just providing the menu; they are cooking the meal with customers.

Objectives of the Course
After completion of this course the students will be able to:
1. Describe the role of library and information profession.
2. Understand the problems of information profession.
3. Discuss the theory of profession and it uses in profession.
4. Articulate the science of information profession.
5. Define important terms of information profession.
6. Explain similarities and difference among the information professions.
7. Identify the important characteristics of a profession.

8. Illustrate the future trends and issues of profession.

Recommended Reading:
Greer, R. C., Grover, R. J., & Fowler, S. G. (2007). Introduction to the Library and Information Professions. Westport: Libraries Unlimited.
https://paramed.bpums.ac.ir/UploadedFiles/CourseFiles/Introduction_to_the_Library_and_Information_Professions__78f95ccb.pdf

Suggested Readings:

1. Bolman, Lee. G, and Terrence E. Deal. (2003). *Reframing organizations: Artistry, choice, and leadership*. 3rd ed. San Francisco, CA: Jossey-Bass.

2. Cleveland, Harlan. (1985). *The knowledge executive; leadership in an information society*. New York: Truman Talley Books/E.P. Dutton.

3. Debons, Anthony, Esther Horne, and Scott Croneweth. (1985). *Information science: An integrated view*. Boston: G.H. Hall. Cited in Rubin, *Foundations of library and information science*, 479–480.

4. Dewey, Melvil. (1976). "The profession." In *Landmarks of library literature 1876–1975*, ed. Dianne J. Ellsworth and Norman D. Stevens, 21–23. Metuchen, NJ: The Scarecrow Press.

5. Flexner, Abraham. (1915). Is social work a profession? Paper presented at the National Conference on Charities and Correction.

6. Glazier, Jack and Robert Grover. 2002. A multidisciplinary framework for theory building. *Library Trends* 50: 317–332.

7. Green, Samuel S. (1976). "Personal relations between librarians and readers." In *Landmarks of library literature 1876–1976*, ed. Dianne J. Ellsworth and Norman D. Stevens, 319–330. Metuchen, NJ: The Scarecrow Press.

8. Greer, Roger C. (1987). "A model for the discipline of information science." In *Intellectual foundations for information professionals*, ed. Herbert K. Achleitner, 3–25.

9. Boulder, CO: Social Science Monographs; New York: Distributed by Columbia University Press.

10. Greer, Roger C. and Martha L. Hale. (1982). "The community analysis process." In *Public librarianship, a reader*, ed. Jane Robbins-Carter, 358–366. Littleton, CO: Libraries Unlimited.

11. Grover, Robert and Jack D.Glazier.(1986). A conceptual framework for theory building in library and information science. *Library and Information Science Research* 8: 227–242.

12. Gulick, Luther. (1937). "Notes on the theory of organization." In *Papers on the science of administration*, ed. Luther Gulick and Lyndall Urwick, 191–195. New York: Institute of Public Administration, Columbia University.

13. Kuhlthau, Carol Collier. (1993). *Seeking meaning: A process approach to library and information services*. Norwood, NJ: Ablex.

14. Levitan, Karen B.(1982). Information resource(s) management—IRM. *Annual Review of Information Science and Technology (ARIST)* 17 (1982):227–266.

15. Mason, Richard O., Florence M. Mason, and Mary J. Culnan. (1995). *Ethics of information management*. Thousand Oaks, CA: Sage Publications (Sage Series in Business Ethics).
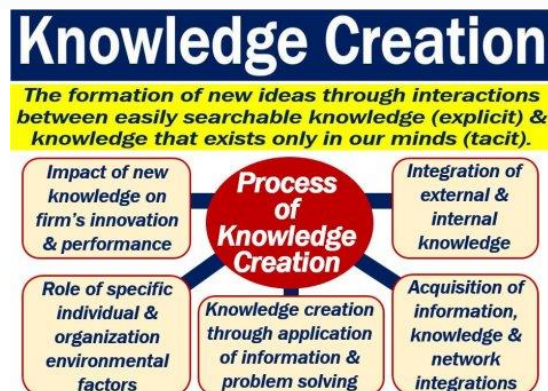
UNIT NO. 1
INTRODUCTION AND CREATION, DIFFUSION, AND UTILIZATION OF KNOWLEDGE

Knowledge creation refers to the continuous combination, transfer, and conversion of different kinds of knowledge. This occurs as users interact, practice and learn. Put simply; it is the creation of ideas, which is at the heart of an organization's competitive advantage. Competitive advantage is what a company has when it has the edge over its rivals, specifically when it has the edge regarding the provision of a certain product or service. Knowledge creation is the formation of new notions and concepts. This occurs through interactions between explicit and tacit knowledge in people's minds.

Explicit knowledge is information that is searchable and easy to find. Users can collaborate regarding the value and use of this type of explicit knowledge.

Tacit knowledge, on the other hand, exists in people's minds. It is not searchable like explicit knowledge is. It is also not easy to share with another person orally or in writing.

Professor Nonaka is famous globally for his study of knowledge management. In an article titled *'A Dynamic Theory of Organizational Knowledge Creation,'* he wrote the following regarding knowledge creation: "Although ideas are formed in the minds of individuals, interaction between individuals typically plays a critical role in developing these ideas." That is to say, 'communities of interaction' contribute to the amplification and development of new knowledge." The advanced economies today are becoming knowledge economies, where the creation and marketing of knowledge are king.

Knowledge Creation
The formation of new ideas through interactions between easily searchable knowledge (explicit) & knowledge that exists only in our minds (tacit).

Impact of new knowledge on firm's innovation & performance

Integration of external & internal knowledge

Process of Knowledge Creation

Role of specific individual & organization environmental factors

Knowledge creation through application of information & problem solving

Acquisition of information, knowledge & network integrations

Knowledge creation

Knowledge creation management is the process of sharing, creating, using, and managing an organization's knowledge and information. It is a multidisciplinary approach to making the best use of knowledge or information. It is a large and popular field. In fact, many large corporations, non-profit organizations, and public institutions dedicate resources to knowledge management. The management of knowledge is often a part of companies' business strategies, human resource management, or IT departments. IT stands for Information Technology (computer science).

Many consulting firms provide advice regarding the creation of knowledge and its management. Knowledge creation management efforts usually focus on company objectives such as innovation, R&D, and greater productivity. It also focuses on competitive advantage, integration, the sharing of lessons learned, and the ongoing improvement of the business. Knowledge creation according to the Nonaka's SECI model is about continuous transfer, combination, and conversion of the different types of knowledge, as users practice, interacts, and learns. Knowledge sharing and knowledge creation thus go hand in hand. Knowledge is

created through practice, collaboration, interaction, and education, as the different knowledge types are shared and converted. Beyond this, knowledge creation is also supported by relevant information and data, which can improve decisions and serve as building blocks in the creation of new knowledge.

Managing Knowledge Creation
The role of management in the knowledge creation process is thus as follows:
- **To enable and encourage knowledge sharing:** On the tactical side, as described earlier, management must understand where and in what forms knowledge exists. They must then provide the right forums for knowledge to be shared. For tacit knowledge this implies a particular emphasis on informal communication, while for explicit knowledge this implies a focus on a variety of IT systems.
- **To create a suitable work environment:** This includes the notion of creating interplay between knowledge and knowing. It implies offering relevant courses and education, but most importantly allowing new knowledge to be created through interaction, practice, and experimentation.
- **To provide systems that support the work process:** These can be groupware systems that facilitate communication or brainstorming. However, they must not interfere with creative processes or communities of practice, or enforce rigid organizational practices.
- **To provide knowledge workers with timely, relevant information and data:** In today's fast paced environment this is virtually synonymous with the implementation of IT systems which can store, retrieve, organize, and present information and data in a helpful way.
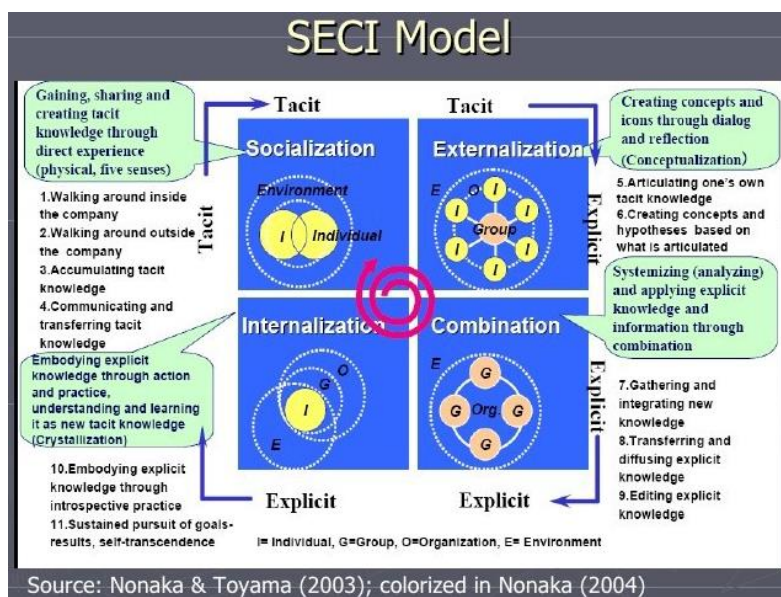
Diffusion and utilization of knowledge
Usually, we denote that the scientific process of disseminating knowledge is the diffusion of knowledge. This diffusion of knowledge takes place between individuals or groups and organizations for communication of research and innovations in society. This spreading of knowledge can be seen as an indicator of the progress of the society because without effective diffusion of knowledge society may not progress. Thus, in simple words, it is the process of knowledge transfer. However, according to Chen, Chaomei and Hicks, Diana (2004) "Knowledge diffusion can be defined as the adaptations and applications of knowledge documented in scientific publications and patents." Thus knowledge diffusion is a

phenomenon which studies how knowledge diffused, why knowledge diffused, and at what rate knowledge diffused through academic community.

The knowledge utilization literature traditionally has focused on scientific knowledge and not intuitive, meditative, or experiential knowledge. Its emphasis has been on getting research results into practice and only more recently expanded to include getting exemplary practices more widely known and used. Because the literature on knowledge utilization is often intermixed with research on the scientific knowledge cycle, it is important to understand what is meant by the scientific knowledge cycle. Using accumulated knowledge to tackle problems, develop new products and deal with unfamiliar situations. Knowledge is of no use unless it is applied to solve business problems.

The Knowledge Cycle

The knowledge cycle consists of at least three components, also known as inter-related subfields of study: knowledge creation, knowledge diffusion, and knowledge utilization. When studies in the area of knowledge utilization began, those subfields had not been defined, nor is there consensus today on the boundaries of each study area. Without clear demarcations subfields initially overlapped in some areas and remained fairly discrete in other areas. Researchers focusing on knowledge diffusion study communication channels used to disseminate innovations, rates of adoption, earliness of knowing about an innovation, innovativeness of members of a social system, opinion leadership, who interacts with whom in diffusion networks, and consequences of an innovation (Rogers, 1983). A meta-analysis of several hundred diffusion studies has resulted in a set of propositions for each significant study area.

Disciplines studying knowledge diffusion include communications research, information science, library science, and sociology of science (Nelson, in Rich, 1981). Rogers (1983) described nine major disciplines as making significant contributions: anthropology, education, early sociology, rural sociology, public health and medical sociology, general sociology, communications, marketing, and geography. Many diffusion studies have been associated with the profit-making sector of society and with technological advances or innovations (Ganz, in Rich, 1981). Researchers in knowledge utilization, according to Rich (1981), seek to measure information pickup, processing, and application. Information pickup means the process of retrieving or receiving information whether from a data bank, a library shelf, a consultation session, or other means. Researchers in this area of study consider the results from diffusion research and technology transfer findings along with their studies of planned change, determining factors of use, and decision-making or problem solving uses by policymakers, administrators, and practitioners. Products of knowledge utilization may include, but are not limited to, models, factors, strategies, and processes found most predictive of generating use. Researchers studying utilization may focus on bringing about planned change in individuals, organizations, or societies. They may also focus on practical use, perceptual use, adaptive use, selective use, premature use, rejected use (i.e., deliberate nonuse), discontinued use, and misuse. Researchers focusing on utilization include those affiliated with disciplines or areas of study such as industrial psychology, motivational psychology, psychology of thought processes, organizational theory, management theory, social and political theory, as well as communications theory.

Today researchers recognize knowledge utilization as a complex process involving individuals, organizations, and societies as well as political, socioeconomic, psychological, and other situational factors (Larsen, 1980). Knowledge utilization studies cross many disciplines and specialty areas (Rich, 1981). Huberman (1987) describes the trends in knowledge utilization as moving from a "naive, linear view of research utilization" to a "more dynamic, transactional approach to knowledge utilization. "At the Fourth Annual Meeting of

the Society for Knowledge Utilization and Planned Change (April, 1990), President Backer defined the field as encompassing the following: Knowledge transfer and utilization, technology transfer, sociology of knowledge, organizational change, policy development, and interpersonal and mass communications.

Self-assessment Questions
1. Define information, data, knowledge and wisdom.
2. What is difference between dissemination, diffusion, and utilization of knowledge?
3. Briefly describe the role of profession in utilization of knowledge.
4. Describe the SECI Model.
5. Discuss Knowledge Cycle.

Activity
Prepare a chart of SECI Model along with Knowledge Cycle process.

Recommended readings:

1. Chen, C. & Hicks, D. (2004). Scientometrics. 59: 199. https://doi.org/10.1023/B:SCIE.0000018528.59913.48

2. Cleveland, Harlan. (1985). *The knowledge executive; leadership in an information society*.New York: Truman Talley Books/E.P. Dutton.

3. de Solla Price, Derek. (1975). *Science since Babylon.* Enlarged Edition. New Haven, CT: Yale University Press.

4. Glazier, Jack D. and Robert Grover. (2002). A multidisciplinary framework for theory building. *Library Trends* 50: 317–332.

5. Grover, Robert and Jack Glazier. (1986). A conceptual framework for theory building in library and information science. *Library and Information Science Research*8: 227–242.

6. Lyman, Peter and Hal R. Varian. (2003). How much information. http://www.sims.berkeley.edu/how-much-info-2003 (accessed on January 18, 2007).

7. U.S. Department of Labor, Bureau of Labor Statistics. (2006). *Occupational outlook handbook2006–2007*. http://www.bls.gov/oco/ (accessed March 21, 2006).

8. *Webster's Collegiate Dictionary*. (2007). http://www.merriam-webster.com/dictionary/disseminate (accessed January 17, 2007).

9. Wilson, Patrick. (1977). *Public knowledge and private ignorance*. Westport, CT: Greenwood Press.

UNIT NO. 2
THE ROLE OF PROFESSIONALS AS CHANGE AGENTS

As the library profession transforms to respond to an increasingly high-tech/high-touch environment, the talents and skills embodied by all library professionals are necessarily changing. It was difficult even a decade ago to imagine having a world of information always available in your pocket, but now it is almost as difficult to imagine not being connected to people, places, and things 24/7. One implication of this rapid adoption of mobile technology is that it is entirely possible that some individuals will never set foot into a library for the first two decades of their life. Given this context, we need to develop a plan for bringing the best and brightest to the library workplace to be part of the transformation within our profession. We need to clearly demonstrate how traditional library values can leverage dynamic disruptions in technology to deliver meaningful learning experiences for customers. For instance, library professionals are rallying around our professional value of open access to develop training programs that help customers' access robust innovations in health care, education, and government service delivery through the growing "internet of things."

Repositioning the library professional as an educational resource for a more interconnected global community more accurately describes contemporary library work. Appealing to the interests of those who enjoy working with people, solving problems, and designing innovative approaches to tackling challenging questions will be crucial to future talent attraction. It stands to reason that information professionals deliver significant value in a knowledge-based economy. However, library professionals have the opportunity to better engage national decision makers and influencers through strategic communication and outreach that illustrates the value of libraries in economic and social terms.

Ultimately, we will be most successful as a profession when we advocate collectively and collaboratively, regardless of library type. Articulating the value of the library professional in ways that resonate with national decision makers and influencers will be most successful when we demonstrate how the library professional supports learning in the context of inclusive growth. Today our experienced professionals and new library workers must find their passion around people to build an educated and involved citizenry and ensure digital and economic opportunity for all. Library professionals are the essential element of strong schools, colleges, universities, and public communities.

A change agent is a person from inside or outside the organization who helps an organization transform itself by focusing on such matters as organizational effectiveness, improvement, and development. There are four items every change agent must possess:
1. Broad Knowledge
2. Operational and Relational Knowledge
3. Sensitivity and Maturity
4. Authenticity

These are good characteristics and make sense. Change agents are those people who act as catalysts for change and as a change agents have Clear vision; Patient yet persistent; Asks tough questions; Knowledgeable and leads by example; Strong relationships built on trust.

Seven Roles of a Change Agent
A person who implements organizational change must wear many different hats. Effective change agents demonstrate extraordinary versatility within a broad skill set. The following are some of the roles a professional may play to influence change in organization:
1. **Investigate:** Implementing change is rarely as straightforward as executing obvious activities. Dealing with people's behaviors and attitudes usually requires digging below the surface to understand the dynamics of the organization. Change agents look for clues that

give away what is really preventing change from happening, so they can determine the steps most likely to remove obstacles and bring about success. Change agents are observant and analytical.

2. **Advocate:** Every organizational change needs someone who speaks up in favor of it and keeps attention on it. Change agents gain support for the initiative and engage people to participate. They also keep beating the drum of change when everyone else is busy with other activities. Change agents are vocal and persistent.

3. **Encourage:** Change happens when individuals alter their own activities, behaviors and attitudes. People experience varied emotions as their sense of stability is removed. In most cases, they are required to take risks and step outside their comfort zones. As a change agent, understand the personal implications of people involved, so you can help people feel better about making the changes. Change agents listen and encourage.

4. **Facilitate:** One of the key activities of a change agent is finding ways to help people change. Change agents clarify the change and make it easier to perform. As a facilitator, he designs systems, tools, forms, and processes to enable people to succeed as they go through change. Change agents are helpful and creative.

5. **Mediate:** Different groups and individuals undergoing change in an organization frequently have opposing priorities. Change agents manage conflict by helping different parties see the situation from the other's point of view, and by finding common goals. They work to improve understanding and reduce friction between multiple parties so they can collaborate to implement change. Change agents are peacemakers.

6. **Advise:** Change agents rely on their expertise to build their authority within the organization. By sharing knowledge, they demonstrate that they can be relied upon to point people in the right direction. Sometimes knowledge transfer occurs directly through training, but it also happens every day in meetings and conversations. Change agents are confident and knowledgeable.

7. **Manage:** A change agent ensures that there are goals, targets, and due dates for the project. Then they keep people on track to achieve them. Change agents find ways to hold people accountable, and make sure that appropriate rewards – or punishments – are handed out as necessary. Change agents are determined and conscientious.

As a change agent when we implement change in our organization, pay attention to the roles we play most often, and which we feel most comfortable filling. We should select the hat, which will make us most effective in different situations. As we increase our versatility, we will improve our effectiveness as a change agent. The library in today's world must transform itself into an agent of change. As a library professional our emphasis must be placed on disseminating information outside its walls. The library should be going to its patrons, rather than waiting for them to appear. After all, the inherent strength of the library profession is found in its comprehension of the value of information. The ability to select the best and most useful information and organize it into categories for easy access indicates that libraries possess a detailed understanding of what their clients need.

As a change agent, library professionals may implement these six underutilized actions intelligently if they want to remain useful and the institutions they serve wish to prosper.

1. **Informing** the client about the material being collected presumably on their behalf;

2. **Discussing** the issues for which the material was to provide background and enlightenment;

3. **Soliciting** users through extensive demonstration programs of how to use best the information collected and for what purposes;

4. **Targeting** key individuals in the organization for special services so that they could convey the value of the information to others;

5. **Teaming** with management of the institution on addressing problems, projects, research initiatives, and instruction as a player (policy and decision-maker) who brings the significant perspective of the knowledge and information provider (librarian) to the table; or

6. **Stretching** the job description of the librarian or the organizational role of the library to fit better the needs of the organization it serves.

These are the roles of: **Facilitator, Consultant, Trainer, and Journalist/reporter,** for example:

(1) **Informing** may include playing the roles of journalist/reporter, trainer, and consultant. As journalist/reporter, a librarian may be sending e-mails of information to a targeted audience based on newly published or acquired material, newly received press releases, or simply awareness of another individual in the organization researching a similar topic from a different but useful perspective. Be sure to remind the clients receiving these notices that as journalist/reporter, you are, in fact, outperforming the typical journalist because you are revealing your sources. As trainer, a librarian may be giving individual or group instruction to those who benefit from e-mail awareness services. The nature of this instruction may include explaining how to store the e-mail messages in a mailbox for future searching. In other words, how to maintain a ready reference file of received messages in order to increase the productivity of the recipient through creative use of technology. As consultant, a librarian may bring freshly acquired information to a client and attach instructions about how and why it is useful to their research. The librarian may include an example of how to apply the information to the project or research being undertaken. Simply providing the latest data or working paper on an issue is something for which consultants get paid big bucks. You are already on the payroll. This kind of action is a demonstration of your cost-effectiveness.

(2) **Discussing** may include playing the roles of journalist/reporter and facilitator. As journalist/reporter, a librarian may get better informed about the needs of individual clients and a better understanding of the research they are doing through discussion. Make appointments and meetings. Ask to be included in departmental meetings for broad awareness purposes. As a journalist, you are able to bring "fast breaking" information to the table if you know it is needed. If you are unaware of your client's needs, you cannot help. Do not promise you will come up with information. However, inform the client that in the process of your work you may come across useful information that you will gladly bring to their attention if you know it is needed. As facilitator, a librarian, by means of discussion, may realize another individual in the organization is working on the same topic. You can offer to introduce this client to the other if appropriate. Librarians are uniquely positioned to know what is going on in disparate parts of the organization - sometimes with greater awareness than management.

(3) **Soliciting** may include playing the roles of journalist/reporter and trainer. As journalist/reporter, a librarian may be wearing the "public relations" hat when promoting training sessions that will increase awareness of new information tools. This awareness, when coupled with multitasking on the computer, can "increase the ability to do more with less." This is the message that management wants to hear. How that investment in technology is can increase productivity and reduce the need for additional staff? This is an opportunity to write a story for management while extolling the virtues of the library. The library reaps the benefit of its aligned mission. As trainer, a librarian provides specific examples that will be immediately useful to one of the participants. Solicit from the client to be trained what it is that would be helpful in the demonstration. Do not use canned examples that are not of immediate benefit to someone. This is an opportunity to make a lasting relationship with a client.

(4) **Targeting** may include playing the roles of trainer and consultant. As a trainer, a librarian, having identified a key individual in the organization, can become a personal

trainer. Make an appointment to give an individualized lesson in their office. This is not a poor use of time or overly labor-intensive. This is an investment. If the person is a leader or decision maker, they will encourage others to get the training. For those others, you may choose to train them as a group. Without the support of key individuals, your services may go unnoticed. As a consultant, a librarian may make extra efforts to please these key individuals by doing value-added research. By demonstrating the kinds of information that a good librarian can bring to an organization, you are selling your potential. Of course, you cannot devote this kind of effort to everyone. Let these key individuals know that what you are doing takes extra effort. While not egalitarian, it exposes the true value that a library can offer if and when it is supported adequately.

(5) **Teaming** may include playing the roles of consultant and facilitator. As a consultant, a librarian needs to be self-confident that their knowledge is valuable to management. Any initiative or project undertaken needs information. The library needs to be a partner with any and all significant departments of the organization. Of course, the library should not be considered the staff of another department. It should be, however, a collaborating entity. The library can assist a department by training its staff to use appropriate information, for example. Management needs to know the librarians can help their staff members be more efficient. As a facilitator, a librarian can bring awareness of other initiatives, programs, and researchers both in and out of the organization. This is a common service provided by librarians. Unfortunately, management is generally uninformed about its existence and utility.

(6) **Stretching** includes all four roles. By extending the job descriptions of librarians and the organizational role of the library, the library has an opportunity to define the role it wishes to play in the organization. It is essential to demonstrate a willingness to be a key player in the future of the organization for which the library operates. Without this effort, decisions are likely to be made by others. The library will be caught in a passive role without an opportunity to make its case. It can only hope for the enlightenment of others if this happens. It is better to educate management than to rely on their education. Too often heard is the refrain, "Who needs libraries now that we have the Internet?" Unless libraries stretch, management may come to believe that. In reality, a world confronted by technical change and an information explosion needs guidance. Library professionals are well positioned to explain how information can be used best in this new technical environment. If library professionals do not take an active role in pushing their libraries/institutions forward, other information providers will fill the gap. These may be facilitators, consultants, trainers, and journalist/reporters. In most instances, their services will be less useful to the organization than that of libraries. Almost all organizations know that they need to change the way they operate. Information is a key element in making wise decisions. If library professionals do not simultaneously collect and disseminate information, their libraries will all become archives in the eyes of their institutions and users. The perception will be that the Internet keeps them informed, while the libraries give them background and history. Unfortunately, most decision-makers do not ask for background and history. Only the libraries can provide current information with a historical and background context. Since everyone would be better served if library professionals make these kinds of efforts, one wonders why more institutes/libraries are not doing it.

Self-assessment Questions
1. Who is the change agent? Define.
2. Discuss the categories of change.
3. How change can affect the library functions?
4. Discuss the role of librarian as change agent.
5. Explain about the paradigm shift in the information profession.

Activity

Visit any nearby library and interview the librarian and judge his/her activities as a change agent in the library.

Recommended readings:

1. Burke, James. (1985). *The day the universe changed*. Boston: Little, Brown.

2. Dewey, Melvil. (1976). The profession, in *Landmarks of library literature 1876–1976*, ed. Dianne J. Ellsworth and Norman D. Stevens, 21–23. Metuchen, NJ: The Scarecrow Press.

3. Greer, Roger C. and Martha L. Hale. (1982). "The community analysis process." In *Public librarianship, a reader*, ed. Jane Robbins-Carter, 358–366. Littleton, CO: Libraries Unlimited.

4. Kuhlthau, Carol Collier. (2004). *Seeking meaning: A process approach to library and information services*. Westport, CT: Libraries Unlimited.

5. Kuhn, Thomas S. (1962). *The structure of scientific revolutions*. Chicago: University of Chicago Press.

6. Schwartz, Peter and James Ogilvy. (1979). *The emergent paradigm: Changing patterns of thought and belief*. Report issued by the Values and Lifestyles Program, April 1979. In Yvonne S. Lincoln and Egon G. Guba. 1985. *Naturalistic inquiry*. Newbury Park, CA: Sage Publications.

7. Toffler, Alvin. (1980). *The third wave*. New York: Morrow.

UNIT NO. 3
THE SCIENCE SUPPORTING THE INFORMATION PROFESSIONS

Professionalization and professionalism has been dominated by sociological traditions such as social interactionism, Marxism and social conceptualism. Since the 1970s, researchers in the field have concerned themselves with professions as institutions involved either in power struggles or with professions as practices no different from other occupations. Theory of professions is a huge and extremely complicated research field with long historical roots. Still, it could, and perhaps should, be much larger. The theoretical development has been firmly dominated by Sociology. As this idealized image of professions caught on, it also became of vital importance to clearly identify which occupations really were professions. Ernest Greenwood (1957; 1966) introduced some slightly different and very influential criteria for professions according to him a profession should have:

a. A systematic body of knowledge
b. Professional authority and credibility
c. Regulation and control of members
d. A professional code of ethics
e. A culture of values, norms, and symbols

These criteria clearly outlined normative standards for professions and representatives of occupations that strived for the status of profession. This has restricted the number of perspectives involved in defining professions and articulating their role in society. In addition, while Sociology offers a wide range of perspectives, only some of them have been involved in the field. Professions are seen as instruments of enlightenment and a key function in the modernization of society. They are given a lofty status and the attributes describing them are categorized. Information is an explanatory concept useful, simultaneously, for both the natural and social sciences requires investigation. Our understanding of the social function of knowledge may well be affected by the definitions of information that we adopt; and, the needs and competencies of a well-informed citizenry and how those needs and competencies may best be met (social equity and the generalization of competencies). Intellectual property law is an example of protection of the public interest in knowledge. It is important to understand the public policy consequences of discourses about information. Professions are thus respected for the knowledge that they are thought to have, not for the knowledge that they really have.

Library and Information Science is a profession that is full of people passionate about making a positive change in the world, and they tend to be wildly happy about what they do. Librarians bridge the gaps that exist between people, information and technology. In their professional lives, librarians and information professionals work to:

1. Design and develop knowledge-organization systems;
2. Create reader's advisory resources to encourage young students to develop a lifelong love of reading and learning;
3. Help scholars locate archival and other resources crucial to their work;
4. Identify sources of assistance in family and personal crises;
5. Help doctors more quickly locate health information in critical situations.

Whereas according to Saracevic (2009) Information science is the science and practice dealing with the effective collection, storage, retrieval, and use of information. It is concerned with recordable information and knowledge, and the technologies and related services that facilitate their management and use. More specifically, information science is a field of professional practice and scientific inquiry addressing the effective communication of information and information objects, particularly knowledge records, among humans in the context of social, organizational, and individual need for and use of information. The domain

of information science is the transmission of the universe of human knowledge in recorded form, centering on manipulation (representation, organization, and retrieval) of information, rather than knowing information.

Characteristics Common to the Information Professions

The library and other information professions are far-reaching in the range of service provided. In some positions, information professionals have wide ranging responsibilities, i.e., school library media specialists, public librarians in smaller libraries, and one-person libraries. Other information professionals are specialized, e.g., map librarians, some archivists, law librarians, corporate librarians, acquisition librarians, reference librarians, research specialists, catalogers, and music librarians. Because of their responsibilities, information professionals may be called librarians, information specialists, researchers, archivists, information brokers, information entrepreneurs, or other terms. All these information professionals share the following characteristics, which were first described by Greer (1987) and are adapted and as follows:

1. Responsibility for the commodity "information" and the objective of enhancing the processes of information transfer.
2. Responsibility for accommodating the information needs and behavioral characteristics of a specific client population.
3. Responsibility for the design and management of an organization consisting of staff, equipment, space, and financial resources to provide the interface between the information system and the potential user.
4. Responsibility for the design and management of an information system encompassing a database—a collection of information in any format.

The knowledge required to practice these shared characteristics is the knowledge base for the library and information professions the science of the information professions. This theory base is amplified in the discussion that follows.

Library and Information Science as a Profession

In modern usage, professions tend to have certain qualities in common. A profession is always held by a person, and it is generally that person's way of generating income. Dalton E. Mc Farland (1974) in "Management Functions and Practices" mentions some characteristics of a profession. Along with the characteristics, necessary arguments are given below to justify whether librarianship is a profession or not.

a) Entrance is Competitive: All professions maintain rigid rules and high standard of qualification for the new entrants into the profession. As entrance into professions is highly competitive an entrant typically has to have above-average mental skills. When we consider the employment aspect in libraries, at junior professional level, the entry is direct, but even before that proper orientation into the system, service and professional ethics is provided in many organizations. At the senior professional level, the entry is by selection among the experienced professionals.

b) Body of Specialized Knowledge and Technical Skill: A specialized knowledge of the concerned field is needed by the professional. Those persons who are engaged in a library should have the required academic background although; some of them may not possess a LIS degree. To practice librarianship also requires extensive knowledge and technical skill such as an extensive knowledge of classification or cataloguing without which one may find it difficult to run a library.

c) Formal Training and Experience: Professions also require rigorous training and schooling beyond a basic college degree for acquiring the needed skill and methods to put the

knowledge into work. Nowadays there is a large body of growing literature on library and information science for training and educating the professionals to acquire specialized knowledge and skill in the field of library science. Specialized journals have also started coming out in recent years. It has also its own indexing and abstracting services.

d) An Ethical Code or Standard of Conduct: A set of principles, a social code or ethics is needed for the professional. Many organizations have codified their conduct, often designated "code of ethics", and what they require for entry into their organization and how to remain in good standing. Some of these codes are quite detailed and make strong emphasis on their particular area or expertise; for example, journalists emphasize the use of credible sources and protecting their identities, psychologists emphasize privacy of the patient and communications with other psychologists, anthropologists emphasize rules on intrusions into a culture being studied. Most of the codes do show an overlap in such concepts as, "do no harm", "be honest", "do not use your position for private gain", etc. In different parts of the world different professional bodies of Library and Information Science codified such rules.

e) A Commitment to Public Service: A professional needs to work with the prime purpose of rendering a public service rather than for monetary gain. It has also been suggested that some professionals feel an obligation to society, beyond their client relationship. Doctors may not merely sell their service if a procedure is medically inappropriate, however much the client may want it undertaken; architects may refuse to work on a project that would be detrimental to its surroundings, and lawyers may refuse to take cases, which are merely exploitative. The obligation to educate the client is often seen as a key part of the definition. Librarianship is a service oriented job and the user of a library is regarded a king.

f) Guarantees of the Service Rendered: The concepts of professionalism may be inferred from guarantees. But these are inferences only. The idea behind a guarantee is that the person offering the guarantee is accountable to the extent of damages that will be compensated. One thing these sources hold in common, implicit or explicit, is the idea of accountability. Those who are members of these organizations or professions are held accountable for what they do. Libraries are service-oriented organizations and as professional librarians guarantee the provision of appropriate and correct information to users.

g) Formal Organization: An organization generally binds all the members of a group, calling or vocation together for concerted opinion, to achieve high standard in performance, and to act as a force to achieve common goal. The formal organization of librarianship started with the establishment of the American Library Association in 1876. At modern times library association are there at different levels i.e. international, regional, national, state and local. Many associations covering specialized interest have also come into being.

h) Licensing of Practitioners: Membership in the profession is usually restricted and regulated by a professional association. For example, lawyers regulate themselves through a bar association and restrict membership through licensing and accreditation of law schools. Hence, professions also typically have a great deal of autonomy, setting rules and enforcing discipline themselves. Professions are also generally exclusive, which means that laymen are legally prohibited from practicing the profession. For example, people are generally prohibited by law from practicing medicine without a license and would be likely be to practice well without acquiring the skills of a physician.

Generally, professional library jobs require an academic LIS degree as certification. In the United States, the certification usually comes from a Master's degree granted by an ALA-accredited institution. In the United Kingdom, however, there have been moves to broaden the entry requirements to professional library posts, so that qualifications in, or experience of, a number of other disciplines have become more acceptable. Library Association (LA), UK maintains the professional register of chartered librarians (professionally qualified members are known as chartered librarians.

Librarianship is as old as the book itself. However, librarianship started assuming some of the characteristics of a profession from 1876 onwards. This was the year when American Library Association was established, the American Library Journals was launched, and the first edition of the DDC and the C. A. Cutter's Rules for making a dictionary catalogue were published.

All professions have three distinct elements that distinguish them from technician level occupations. These are: (1) a science; (2) a technology; and (3) an art or infrastructure. Building on such an understanding, we will use these theories/concepts in order to describe processes to improve the quality of work within professions. And these concepts and theories focus on the science which provides an intellectual foundation for the practice of the library and information professions, providing the theoretical underpinning for the design of customized services and products for a clientele. The four fields, which comprise in the study of information science: (1) Sociology of information, (2) information psychology, (3) information organization management, and (4) information engineering are theories that will be applied as to explore further the role of library and information professionals.

Self-assessment Questions
1. Why the theory is importance for professionals?
2. Discuss the common characteristics of information profession.
3. Explain the science of profession.

Activity
Write an essay on the important characteristics of LIS profession in Pakistan and justified with examples.

Recommended readings:
1. Bertalanffy, Ludwig von. (1969). *General system theory; foundations, development, applications*. New York: G. Braziller.

2. Glazier, Jack D. and Robert Grover. (2002). A multidisciplinary framework for theory building. *Library Trends* 50: 317–332.

3. Greer, Roger C. (1987). "A model for the discipline of information science." In *Intellectual foundations for information professionals*, ed. Herbert K. Achleitner, 3–25.

4. Boulder, CO: Social Science Monographs; New York: Distributed by Columbia University Press.

5. Grover, Robert and Jack Glazier. (1986). A conceptual framework for theory building in library and information science. *Library and Information Science Research* 8 (July-September 1986): 227–242.

6. Maslow, Abraham H. (1954). *Motivation and personality*. New York: Harper & Row.

7. Saracevic, T. (2009). Information science. In M. J. Bates (Ed.), *Encyclopedia of library and information sciences* (3rd ed.) (pp. 2570-2585). New York: Taylor and Francis.

UNIT NO. 4
INFORMATION TRANSFER IN THE INFORMATION PROFESSIONS

Information transfer is a type of communication. It can be defined as the communication of a recorded message from one human or human mind to another. Unlike communication, which assumes that the sender and receiver of a message are contemporaries, information transfer requires a recorded message transmitted on a medium that enables senders to transmit ideas to people who are not their contemporaries. In other words, information transfer is asynchronous. In broader sense information transfers is a process of exchanging information, ideas, thoughts, feelings and emotions through speech, signals, writing, or behavior. In this process, a sender(encoder) encodes a message and then using a medium/channel sends it to the receiver (decoder) who decodes the message and after processing information, sends back appropriate feedback/reply using a medium/channel. Transfer of information is how skills or knowledge that students have learned about one topic affect their learning of skills or knowledge in another topic or area. Sometimes transfer of information can help students learn more quickly or more easily. However, in other circumstances, transfer of information can hurt learning. Let us talk about several different kinds of transfer of information. Transfer of information has been broken down into three major types, which includes positive, negative and zero transfer. The first type is positive transfer. **Positive transfer** is when knowledge or skills about a previous topic help a student learn a new skill or learn about a new topic. **Negative transfer** is when knowledge or skills about a previous topic hurt a student or interfere with learning about a new skill or topic. The third and final type of information transfer is called zero transfer. **Zero transfer** means that previous skills or information have zero effect on learning new skills or information. In other words, in this case the old information neither helps nor hurts the new information or skill. We can present the information model through graphical presentation as follows:
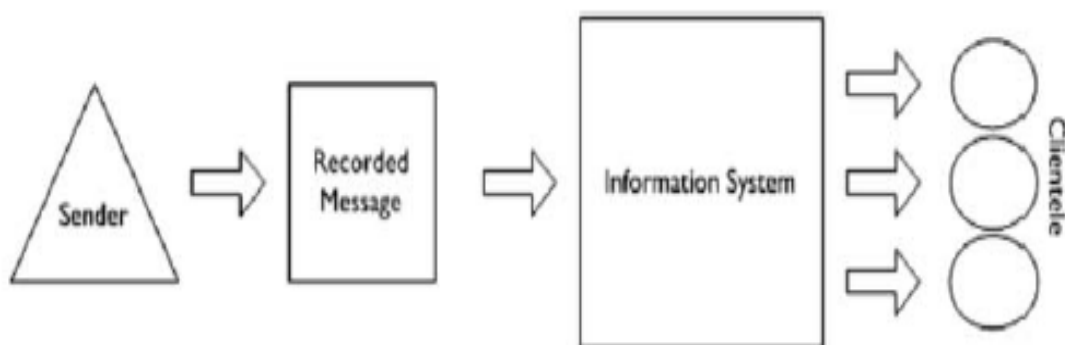
This model is the variation of communication model given by Shannon and Waver in 1963. According the model given above triangle represents the sender of a message: a person with an idea who expresses that idea in a recorded message, such as a journal article, a book, a video production, or a software package. Than the recorded message which can be stored in an information system, represented by a second larger square. This information system can be a library, a computer storage device, or any kind of system, which collects, organizes, stores, and makes available for information user through an appropriate channel.

Libraries are place where librarians transfer information in various ways. In a traditional for of information transfer might be the librarian in library who is careful to maintain a well-organized collection but offers few services to address the needs of its users or potential users. Information transferred in libraries a process or cycle: means a series of event that are

regularly repeated in the same order in a circle. In information transfer cycle the library act as itself information system or part of information system and there is a need to design a library that fits the needs of people and looks like a supermarket, or should it be designed as a monument, a library whose staff is continuously mindful of their clientele and their needs. The meaning of information cycle relates to that unit of knowledge from where the information is generated and then transmitted to the users with the state of various processes. The whole process of information from its creation to its use is called the information cycle.

Information Transfer Cycle

Information Transfer Cycle means a series of events that are regularly repeated in the same order. Transfer of information from its generation to its end user becomes possible through many processes. These processes are also regularly repeated in the same order. These processes complete a cycle, which is called Information Transfer Cycle (ITC). The ITC comprises generation, collection, storage, communication and retrieval. As information transfer cycle refers to the process of creation, collection, storage, dissemination and retrieval of information. It means how information is transferred to the users from its sources. Its structure is like that: creation of information, collection of information, storage of information, dissemination of information, and retrieval of information. The information transfer cycle consists of the following phases: creation, dissemination, organization, diffusion, utilization, and preservation. This is an active system where many stages overlap and shape each other.

1. **Information Creation / Generation:** Information is created with the happening of incidents and activities of humans. If an activity or an incident does not happen, no information is created. Information is mostly created by research and development programs, government activities, survey and census of population, business and industrial organizations etc. and presented in format by author, scientist, researcher, editor, writer, poets, novelists, dramatists, etc. Over the web, information is produced by the general people irrespective of their background and is not restricted only to academics such as scholars, scientists, etc.

2. **Information Recording/Production and Dissemination:** It is the mass production of knowledge through publishing companies or others that will help the mass distribution of knowledge in some physical or electronic form. Of course information after creation must be recorded or produced in some format so that it can be disseminated and used by others. Reproduction means the copying of information so that it can be distributed. Previously the information had been disseminated in the form of book. Many conventional and non-conventional, printed and non-printed sources of information are nowadays available which are different in shape, size, type and format. Over the web, the production is accelerated by posting the information electronically over some kind of websites. It speeds up the transfer of information globally at a rapid rate instead of taking months or years to get published on paper. Libraries and other information agencies are the depositories of mass produced information of both a scholarly and popular nature. Indeed, libraries have been a major point of dissemination for new information and knowledge and continue to be so.

3. **Information Storage, Retrieval and Communication:** The storage is the process by which the information described and presented in the documents are stored. Information is collected and stored by libraries, documentation centers, information analysis centers, data banks, data centers, etc. Computer has been accepted as a boon for storing of information. It can store a huge amount of information in the form of database. Besides, the computer, disks and CDROMs are the newly developed and very significant tools of storing information.

4. **Organization/Bibliographic Control:** Organization is how that representation of knowledge is found among others of its kind. In the library environment, the classification and catalogue, shelf list, various kinds of guides, facilitate the retrieval function. All these tools are equipped with controlled vocabulary. In the computer environment, organization is facilitated by databases, search engines, etc. Knowledge is individual and the users determine its usefulness; so keyword and natural language searching in computer environment is more attractive. Organization of information for accessing is referred to as "bibliographic control". Bibliography is the central of library profession and essential to the efficient retrieval and use of information.

5. **Information Diffusion and Utilization:** Diffusion is viewed as a more targeted flow of information to a particular segment of society. The diffusion of information should find its way to people who actually need it instead of targeting the people who will use it for their own benefit. It is the mission of librarians and other information professionals to diffuse the information, i.e. to help information users to understand this information and to make sense of it. Utilization is the adoption and implementation of the knowledge by the user. Information is needed by each and every person of modern society for some purpose or the other. When information is consumed by one person it gives new dimension to his knowledge. This knowledge when he applied to some other purposes it gives birth to new information. Thus, the information cycle is continuum in nature. The role of professions in society is to facilitate the use of information. Professionals apply knowledge to use for the betterment of humankind.

6. **Information Preservation and Destruction/Deletion:** The different kinds of libraries, archives are trying to preserve information in different format. Over web, the Internet archive and the cached page of search engines are serving some purpose in this regard. The information that is less frequently accessed or has met its assigned retention periods may be considered for relocation to an archive. Then from the archive, it needs to be weeded at some time or other by means of appropriate procedure for the content. As preservation is concerned with the retention of recorded information for future audiences. Three aspects of preservation must be considered: (1) preservation of the artifact or physical information package, e.g., book, journal, etc.; (2) preservation of the content the ideas; (3) the context of the work it's meaning at the time of its writing or production. Records and information may be removed from collections and destroyed if the content is irrelevant or obsolete, or if the physical object is damaged beyond repair. Another way of thinking about this process is that resource must be evaluated regularly, just as information professionals evaluate services; and found whenever that the resources are no longer contributing to the mission of the agency, they should be weeded out.

The information transfer cycle begins with the creation and spread of knowledge, its organization, its modification, and ends with its preservation. It is a dynamic process that is constantly changing and renewing. This process provides a useful framework for thinking about the work of professionals. Information professionals are engaged in this process from start to end. They are involved in generation/creation, recording/producing and dissemination, utilization, preservation and deletion.

The public need for information is unquestioned. Any library or information agency needs to have only one goal: to provide customized information services to satisfy the needs of its actual and potential users. If this goal is attained, libraries and other information agencies will remain viable and vital to society. A transition from the role of warehouse to community

information utility can enable the library or information agency to become an integral part of their community's long-term mission. In this role libraries and information agencies will not only survive, they will thrive.

Self-assessment Questions
1. How we do community analysis?
2. Discuss about the information transfer cycle.
3. Explain various types of communication.

Activity
Visit any public library and through observation and conducting an interview of circulation staff, prepare the list of community preferences in using its (library) services.

Recommended readings:

1. D'Elia, George and Eleanor Jo Rodger. 1994. Public opinion about the roles of the public library in the community; the results of a recent Gallup Poll. *Public Libraries* 33: 24.

2. D'Elia, George and Eleanor Jo Rodger. 1995. The roles of the public library in the community; the results of a Gallup Poll of community leaders. *Public Libraries* 34: 98.

3. Downs, Robert B. 1975. "Problems of bibliographical control." In *Essays on bibliographi*es. and comp. Vito J. Brenni, 124–144. Metuchen, NJ: The Scarecrow Press.

4. Kuhlthau, Carol. 2004. *Seeking meaning: A process approach to library and information services*. Westport, CT: Libraries Unlimited.

5. Peters, Tom. 1987. *Thriving on chaos*. New York: Harper & Row.

6. Kuhlthau, Carol. 1992. *Liberation management*. New York: Alfred A. Knopf.

7. Shannon, Claude E. and Warren Weaver. 1963. *The Mathematical theory of communication*. Urbana-Champaign: University of Illinois Press.

UNIT NO. 5
THE CYCLE OF PROFESSIONAL SERVICE

Information technologies, such as intranets, web portals, and groupware, are often used to facilitate the sharing of knowledge and information among a group of workers (commonly referred to as a community of practice) in an organization because of their capabilities in extending the reach as well as enhancing the speed of knowledge and information transfer. The implementation of an appropriate knowledge management program and information transfer cycle in an organization has the potential of improving customer services, continually improving organization repute, quickly bringing new products and services to markets, and bringing innovative new ideas for community. In most organizations, the key professionals involved in knowledge management and information transfer activities are human resource managers, process & product developers, and information technologists.

A professional of any kind possesses knowledge, which enables that individual to apply professional knowledge with a service as the product. The role of any professional, e.g., physician, librarian, teacher, or financial planner, is that of diagnosing needs, prescribing a service which meets those needs, implementing that service, and evaluating the outcome of this interaction. In most professions, this process is accomplished at two levels: with individuals and with groups. This process, which we call "the service cycle," will be described below as it applies to information professional and is based on the medical model for diagnosis.

The Diagnostic Process
Diagnosis of an individual's information need typically occurs through a communication process with the individual information user usually called "the reference interview." This is a communication process to diagnose the special interest of the user. This may also be called information psychology.

This study of human behavior draws heavily upon behavioral science; similar to the way that educational psychology applies behavioral theory to the learning environment. Following is a discussion of the elements of information psychology which might contribute to a better understanding of the diagnostic process. The professional must be able to assess the information needs of clientele at two levels: (1) analyzing the characteristics of the community served and (2) analyzing the needs of specific individuals at the point when and where they seek information from the library media center. The purpose of the first level of analysis, i.e., community analysis, is to provide the professional, as manager, with specific data about the community and its residents.

Community Analysis
The discussion to this point has focused on diagnosing the information needs of individuals; however, the information professional works with groups as well. Consequently, we must take some time to consider the challenge of customizing services to groups of people served by a library or information agency. As we saw with individual clients, customizing of information services requires knowledge of the clientele, in this case communities. To customize services to communities we must systematically collect data about the community in order to infer the information needs; however, a community is a very complex organization. How do we grapple with this complexity? The community analysis model described here divides data collection into four parts:
1. Individuals
2. Groups
3. Agencies

4. Life styles

Information professionals possess specialized knowledge about knowledge itself that they use to improve the intellectual state of people. That is, information professionals empower their clients to understand and to know - as distinguished from the power to will or to feel. This empowering information, consists of the signs and symbols that one mind uses to influence another mind. Thus, information professionals are the people who carry out this process of influence on the mind. To be more precise, information professionals are mediators between one mind let us call it the "source" mind and another mind the "client" mind. The role of any professional, e.g., physician, librarian, teacher, or financial planner, is that of diagnosing needs, prescribing a service, which meets those needs, implementing that service, and evaluating the outcome of this interaction.

Since this is an introduction to the information service field, we will not go further into design of service. However, it is important to note that both community analysis and service planning and implementation is a complex process which requires more thought and work than thinking "We should provide service X to our users because Library Y started it, and it's a cool idea." What works for Library Y may not address needs of Information Center. That is why customizing services is so important. Our discussion at this point has focused on diagnosing the information needs of individuals; however, the information professional works with groups as well. For customization services to communities, we must systematically collect data about the community in order to infer the information needs; a community is a very complex organization. To meeting this purpose lot of studies on information behavior, information needs and information seeking behaviors are conducted in the field of library and information sciences. This process of diagnosis and analysis of communities information needs can determine the types of services and levels of services that can be offered. The diagnostic interview and community analysis are essential tools, which enable information professionals to customize services as needed by information users. Techniques presented in this chapter are key ingredients to the success of information professionals in our knowledge society.

Self-assessment Questions
1. Describe the role of professionals in diagnosis client needs.
2. Elaborate the community analysis process.
3. Why community needs diagnosis important? Discuss.

Activity

How librarians diagnose client needs? Discuss with any university librarian and take notes.

Recommended readings:

1. Biddle, Bruce J. (1979). *Role theory: Expectations, identities, and behaviors*. New York: Academic Press.

2. Bopp, Richard E. and Linda C. Smith. (2001). *Reference and information services: An introduction.* Englewood, CO: Libraries Unlimited.

3. Bunge, Charles A. (1984). Interpersonal dimensions of the reference interview: A historical review of the literature. *Drexel Library Quarterly* 20: 4–22.

4. Dervin, Brenda, and Patricia Dewdney. (1986). Neutral questioning: A new approach to the reference interview. *Reference Quarterly* 25: 507–513.

5. Edwards, Betty. (2002). *Drawing on the right side of the brain*. New York: Jeremy P. Tarcher.

6. Greer, Roger C. (1987). "A model for the discipline of information science." In *Intellectual foundations for information professionals*, ed. H. A chleitner, 3–25. New York: Columbia University Press.

7. Greer, Roger C., and Martha L. Hale. (1982). "The community analysis process." In *Public librarianship: A reader*, ed. J. Robbins-Carter, 358–366. Littleton, CO: Libraries Unlimited.

8. Grindler, Martha C. and Beverly D. Stratton. (1990). Type indicator and its relationship to teaching and learning styles. *Action in Teacher Education* 12: 3134.

9. Grover, Robert. (1993). Diagnosing information needs: a proposed model. *School Library Media Quarterly* 21: 95–100.

10. Hirsch, Sandra K., and Jean Kummerow. (1989). *Life types*. New York: Warner Books.

11. Jean, Piaget, and Barbel In helder. (1969). *The psychology of the child*. New York: Basic Books.

12. Katz, William A. (1992). *Introduction to reference work*. Vol. 2. New York: McGraw-Hill.

13. Kuhlthau, Carol C. (1989). Information search process: A summary of research and implications for school library media programs. *School Library Media Quarterly*18: 19–25.

14. Levinson, Daniel J. (1978). *The seasons of a man's life*. New York: Alfred A. Knopf.

15. Posner, Michael I. (1994). *Images of mind*. New York: Scientific American Library.

16. Sheehy, Gail. (1995). *New passages: Mapping your life across time*. New York: Random House.

17. Vitale, Barbara M. (1982). *Unicorns are real; A right-brained approach to learning*. New York: Warner Books.

UNIT NO.6
THE INFORMATION INFRASTRUCTURE

An infrastructure that supports the information society: the equipment, systems, applications, support systems, and so forth that are needed for operating in the information society. The term was introduced with the National Information Infrastructure initiative launched by the Clinton Administration in 1994. In the Clinton-Gore initiative the Internet is described as an information infrastructure shared by the users. In simple connotation an information infrastructure is defined as "a shared, evolving, open, standardized, and heterogeneous installed base." In addition, as all of the people, processes, procedures, tools, facilities, and technology, which supports the creation, use, transport, storage, and destruction of information.

This is the system of public and private communications networks, interactive capabilities, hardware, software, computers, and consumer electronics that provide information to users. The Internet is one element of the information infrastructure. For understanding further, the information infrastructure is a **global** network of **people, organizations, agencies, policies, processes, and technologies** organized in a loosely coordinated system to enhance the creation, production, dissemination, organization, storage, retrieval, and preservation of information and knowledge for people. The primary objective of this network is the diffusion of knowledge for a society.

Important elements/characteristic of information infrastructure

As we discussed earlier the information infrastructure consists of the personnel, technology, policies, organizations, agencies, and processes, which underlie the information transfer process in society. It is a critical aspect of our information society, both as an intellectual are for research and study and as an operational are. Following are important elements of information infrastructure:

1. **Definition and system:** defining is the initial element of information infrastructure where we clearly give the picture of our system. As defining information infrastructure, we mean; transfers ideas from one individual or group to another. Moreover, the system is publishing of material in any format using appropriate media, broadcasting systems, cable systems, satellite communication, the internet, libraries, and government agencies.
2. **Conveyances and Channels:** books, magazines, television, radio, audio recordings, video recordings, e-mail, software carry information and knowledge are channels or products of information infrastructure through which information and ideas are transferred to individuals or group to another.
3. **Support Industries:** printing industry, software producers, hardware manufacturers are the supporter of information infrastructure. Their role significant in the efficient management of information infrastructure they propagate information and ideas as a support industry.
4. **Government Influence:** government plays vital role to strengthen the information infrastructure in a way to formulate information policy, laws, and regulations.
5. **Personnel:** human involvement and interaction is an important component of any system. A variety of trained professionals are required to operate the system of information infrastructure. They are the custodian of infrastructure and service provider. Engineers, technicians, information professionals, office workers, and support personnel are responsible to develop the information infrastructure and manage it in an efficient way.

A Model for Analyzing the Information Infrastructure

The information infrastructure has exploded with the infusion of digital technologies into an existing infrastructure long dominated by the book publishing industry. With the invention of

the printing press in the fifteenth century, the publishing industry was begun. The printing press enabled the duplication of the printed words in a volume impossible before that time. The work of Gutenberg caused a revolution in the production and distribution of knowledge. A similar revolution has occurred in the last five decades with advances in broadcasting and the last two decades with advances in computer technology.

First, let us examine the information infrastructure which developed to support the publishing industry; second, let's review the changes wrought by the broadcasting industry; finally, let's impose the newer technologies which are influencing a transformation of the publishing industry.

A model for examining the information infrastructure is the information transfer model as discussed earlier, which can be used to define elements of the information infrastructure by addressing the following questions:

1. What are the patterns of information and knowledge creation?
2. What are the systems for recording new information?
3. What are the mechanisms for the mass production of information?
4. What varieties of systems are employed in the dissemination of information?
5. What systems for bibliographic control of the records are being produced in society?
6. What is the paradigmatic structure for the organization of information by subject fields?
7. What are the patterns of diffusion of knowledge?
8. How is information used in society?
9. What systems exist for the preservation of information?
10. How does public policy impact the information transfer process?

The information infrastructure is a critical aspect of society, both as an intellectual area for research and study and as an operational area. The information infrastructure is like the body's vascular network—the information infrastructure is like the system of veins and arteries, and information is the blood. An aneurysm can disrupt the whole body the way a failure of a component of the information infrastructure can disrupt the whole information network in society. Understanding the information infrastructure is a crucial, fundamental foundation for study in the information professions, yet it is doubtful that information professionals have seen the responsibility to develop the infrastructure. As late as the 1950s, the goal of librarians was to be "bookmen" and women—a preoccupation with the acquisition, storage, organization, and dissemination of books. In the 1960s the information profession sought to include other media—films, audio recordings, and other forms of instructional materials. Some schools which prepare librarians changed the name of the school to "Library Services" but did not focus on the receiver of information. Development of the Internet has furthered the advancement of the information infrastructure and the role of library and information professionals. It is no longer reasonable for anyone to assume that librarianship is concerned solely with information packages and with technology. Information management implies working with people to promote and enhance the vast information infrastructure.

Self-assessment Questions
1. Describe important elements of information infrastructure.
2. What is the model for analyzing the information infrastructure?

Activity

Prepare a chart of information infrastructure of an academic library.

Recommended readings:

1. Besterman, Theodore. (1940). *The beginnings of systematic bibliography*. 2nd edition, revised. New York: Burt Franklin.

2. Clapp, Verner W. (1951). "The role of bibliographic organization in contemporary civilization. "In *Bibliographic organization; papers presented before the fifteenth annual conference of the Graduate Library School July 24–29, 1950*, ed. JesseH. Shera and Margaret E. Egan, 3–23. Chicago: The University of Chicago Press.

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7. Library of Congress. Digital Preservation. (2007). Available athttp://www.digitalpreservation.gov.

8. McLoughlin, Glen J. (2001). "The national information infrastructure: The federal role." In *internet policies and issues*, Vol. 3, ed. B. G. Kutais. Huntington, New York: Nova Science Publishers.

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10. Naisbitt, John. (1982). *Megatrends: Ten new directions transforming our lives*. New York: Warner Books.

11. OCLC (Online Computer Library Center). (2007). http://www.oclc.org.

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UNIT NO. 7
THE PROCESSES AND FUNCTIONS OF INFORMATION PROFESSIONALS

An information professional strategically uses information in his/her job to advance the mission of the organization. Information professional accomplishes this through the development, deployment, and management of information resources and services. As a professional(s) they harness technology as a critical tool to accomplish goals. Information professional(s) include, but are not limited to librarians, knowledge managers, chief information officers, web developers, information brokers, and consultants. Information professionals play a unique role in gathering, organizing and coordinating access to the best available information sources for the organization as a whole. They are also leaders in devising and implementing standards for the ethical and appropriate use of information.

Information professionals manage information organizations ranging in size from one employee to several hundred employees. These organizations may be in any environment from corporate, education, public, government, to non-profit. Information professionals excel at managing these organizations whose offerings are intangible, whose markets are constantly changing and in which both high-tech and high-touch are vitally important in achieving organizational success. In the information and knowledge age, specialists in information management are essential; they provide the competitive edge for the knowledge-based organization by responding with a sense of urgency to critical information needs. Information, both internally and externally produced, is the lifeblood of the knowledge-based organization and essential for innovation and continuing learning. Information sharing is also essential for any organization that is attempting to understand and manage its intellectual capital, often in a global context. If information professionals did not exist, they would be reinvented as organizations struggle to gain control over ever-increasing amounts of information in multiple storage formats. The astounding growth of the Internet and the rise of electronic communications and storage media generally have transformed our work and personal lives. Information overload is a growing problem and information professional(s) are needed more than ever to quality filter and provide needed information in an actionable form. There are following four features common to practice in the information profession:

1. The information professional works with individuals, who have unique information requirements and a unique style for finding and using information. We refer to this study as "information psychology.

2. The information professional works with groups of individuals and these groups have definable and unique information needs and patterns for use. We have given this study the designation "sociology of information.

3. The information professional manages an organization comprised of staff, budget, and facilities. We call this "information organization management.

4. The information professional organizes and maintains an information storage and retrieval system to meet the needs of the organization's clientele. For this function, we use the term "information engineering."

In order to fulfill their purpose, information professional(s) require two types of competencies: Professional Competencies relate to the practitioner's knowledge of information resources, access, technology and management, and the ability to use this knowledge as a basis for providing the highest quality information services. There are four major competencies, each augmented with specific skills:

A. Managing Information Organizations

B. Managing Information Resources

C. Managing Information Services

D. Applying Information Tools and Technologies

Every librarian/information professional, certainly every senior librarian and informational professional has always been ipso facto a manager, even if he has not descended, as he might well say, to thinking of his duties in such mundane terms. In recent years, however, attention has increasingly been given to the need to analyze the ways in which a librarian can more effectively carry out his role of making his resources available to his readers. They all spend a portion of their time working with individual as well as group clients and design, manage the organization of services and resources for the delivery of information to clients/patrons. They also identify the need of the client and attempt to address that need by identifying and providing appropriate information sources. In a nutshell they are charged with the responsibility of following processes:

1. Building a collection of resources
2. Identification and evaluation
3. Selection
4. Acquisition
5. Organization
6. Storage and Retrieval
7. Discarding

Library and information professionals need to understand how any changes in the way the library provides services will affect all stakeholders. Sometimes he focuses on the needs of one group and ignores the fact that the changes that will benefit one group will not benefit another. With any change, professionals should create a list of all of the different stakeholders and actually discuss how it will affect each of them. When we say "stakeholders" we must mean not only our patrons but staff, IT, and administrators. If you implement a project that library staffs do not support, the likelihood of success is poor. For that continually analyzes, investigates and assesses the information service needs of the users & according to your stakeholders needs we can design and deliver specialized value added information products and services. Time to time we can evaluate the outcomes of the use of library and information resources and services for which we can conducts research to find solutions to the identified information management problems.

For decades, LIS Professionals have been creatively managing the information and research resources of their firms on behalf of attorneys and clients. The evaluation, acquisition, organization, sharing and distribution of information in all formats, including books, periodicals, online services, internal work product documents and database resources, is an integral part of their expertise.

Self-assessment Questions
1. What competences are required for information professionals?
2. Discuss the common features of information profession.
3. Explain the responsibilities of information professionals.

Activity
Write an essay on the IT competences and skills required for a Pakistani library professional.

Recommended readings:
1. American Library Association Reference and User Services Association. *RUSA service guidelines: guidelines for information services*.http://www.ala.org/ala/rusa/rusaprotools/referenceguide/guidelinesinformation.htm.

2. ALA. (2006). "Standards for libraries in higher education.http://www.ala.org/ala/acrl/acrlstandards/standardslibraries.htm.

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7. Eisenberg, Michael B. and Robert E. Berkowitz. (1990). *Information problem solving: The big six skills approach to library and information skills instruction*. Norwood, NJ: Greenwood Publishing Group.

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9. Greer, Roger C. and Hale, Martha L. (1982). "The community analysis process." In *Public librarianship, a reader*, ed. Jane Robbins-Carter, 358–366. Littleton, CO: Libraries Unlimited.

10. *Library Journal*. New York: Cahners, (1876). 20 issues per year. Wade, Heather. Interviewed June 29, 2006. She is Archivist, Emporia State University, Emporia, Kansas.

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UNIT NO. 8
THE INFRASTRUCTURE OF THE INFORMATION PROFESSIONS

A profession is something a little more than a job, it is a career for someone that wants to be part of society, who becomes competent in their chosen sector through training; maintains their skills through continuing professional development; and commits to behaving ethically, to protect the interests of the public. A Profession is a disciplined group of individuals who adhere to ethical standards and who hold themselves out as, and are accepted by the public as possessing special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level, and who are prepared to apply this knowledge and exercise these skills in the interest of others. It is inherent in the definition of a Profession that a code of ethics governs the activities of each Profession. Such codes require behaviour and practice beyond the personal moral obligations of an individual. They define and demand high standards of behaviour in respect to the services provided to the public and in dealing with professional colleagues. Further, these codes are enforced by the Profession and are acknowledged and accepted by the community.

We all rely on professionals at many points of our lives – from dentists to teachers, from pension managers to careers advisers, from town planners to paramedics. We rely on professionals to be experts and to know what to do when we need them to. Back in the nineteenth century, the professions were defined as law, religion, and medicine. Nowadays, the number of professions is much wider and ever-increasing, as occupations become more specialised in nature and more 'professionalized' in terms of requiring certain standards of initial and ongoing education–so that anything from automotive technicians to web designers can be defined as professionals. Being a member of a Profession, e.g. a 'Professional', is generally seen as an indicator of integrity, ethics, trust and expertise.

What is a Professional?
Traditionally, a "Professional" is someone who derives their income from their specific expertise or talent, as opposed to an untrained hobbyist or amateur. This meaning still carries through today to areas such as sport. However, in the Professions a "Professional" has a broader meaning, typically around some moral or ethical foundation within the practice of a specific and usually established expertise. A Professional is a member of a Profession. Professionals are governed by codes of ethics, and profess commitment to competence, integrity and morality, altruism, and the promotion of the public good within their expert domain. Professionals are accountable to those they serve and to society[1][2].

What is Professionalism?
The personally held beliefs of a Professional about their own conduct as a member of a Profession and is often linked to the upholding of the principles, laws, ethics and conventions of a Profession in form of a code of practice.

Characteristics of a Profession
Every profession has some basic traits, which called its characteristics some of these essential traits are as follows:
1. Professions are occupationally related social institutions established and maintained as a means of **providing essential services** to the individual and the society.
2. Each profession is concerned with an **identified area of need or function** (for example, maintenance of physical and emotional health, preservation of rights and freedom, enhancing the opportunity to learn).

3. The profession collectively, and the professional individually, **possesses a body of knowledge and a repertoire of behaviors** and skills (professional culture) needed in the practice of the profession; such knowledge, behavior, and skills normally are not possessed by the nonprofessional.

4. Members of the profession are **involved in decision making** in the service of the client. These decisions are made in accordance with the most valid knowledge available, against a background of principles and theories, and within the context of possible impact on other related conditions or decisions.

5. The profession is based on one or more undergirding disciplines from which it **builds its own applied knowledge and skills**.

6. The profession is organized into one or more **professional associations**, which, within broad limits of social accountability, are granted autonomy in control of the actual work of the profession and the conditions that surround it (admissions, educational standards, examination and licensing, career line, ethical and performance standards, professional discipline).

7. The profession has **agreed-upon performance standards** for admission to the profession and for continuance within it.

8. Preparation for and **induction into the profession is provided through a protracted preparation program**, usually in a professional school on a college or university campus.

9. There is a **high level of public trust and confidence** in the profession and in individual practitioners, based upon the profession's demonstrated capacity to provide service markedly beyond that which would otherwise be available.

10. Individual practitioners are characterized by a **strong service motivation** and lifetime commitment to competence.

11. **Authority to practice** in any individual case derives from the client or the employing organization; accountability for the competence of professional practice within the particular case is to the profession itself.

12. There is relative freedom from direct on-the-job supervision and from direct public evaluation of the individual practitioner. The professional accepts responsibility in the name of his or her profession and is **accountable through his or her profession** to the society.

The Library Profession

If we trace the history of libraries back 5000 years and categorize ancient libraries into four groups: (1) government, (2) religious, (3) commercial, and (4) private or family libraries. A brief history of the information profession is followed by descriptions of information professional organizations, journals, lists, Web sites, educational programs, standards, codes of ethics, and systems of recognition by the public. The library profession can be characterized by the following:

A Body of Knowledge and Theory

A body of knowledge is central to a profession. The library and information professional has mastered a body of knowledge related to the creation, dissemination, diffusion, organization, preservation, and recording of knowledge. As in earlier units we discussed that the body of knowledge has the four fields which are: information psychology, sociology of information, information organization management, and information engineering.

An Educational System

Professional education in most fields evolved during the first half of the twentieth century. As societal needs demanded more education for the practice of professions, the education of

professionals moved from certification at the undergraduate level to undergraduate degrees to graduate
degrees. Many professional education fields began as internship programs before moving into universities. Professions have some form of authentication, i.e., some way of identifying individuals who have gained the professional knowledge of the field through an accepted system of licensure or certification. The library and information profession has a system of accreditation as a means of demonstrating a level of education appropriate for the field.

Professional Associations

Professional associations are the keepers of professional culture. Associations are engaged with both pre-professional education through their interactions with schools that prepare professionals, usually in an advisory role. Professional organizations provide forums for the exchange of knowledge
in the field and for dissemination of new knowledge related to practice. In the library and information profession, numerous professional organizations are providing professional support to practitioners. These organizations have national, sometimes regional, and sometimes state chapters, such as: ALA, CLA, CILIP, IFLA, and PLA etc.

A Code of Ethics

Professions have a system of ethics by which their members practice the profession. In the information professions, those ethics are concerned with the value system of the profession, under what conditions services are rendered and how clients are to be treated as they seek information. The ethics of the library and information profession, as presented by the various professional associations, articulate a common thread of high standards for the profession. Ethics are an essential part of a profession, and the other elements have been described. Common to the ethics of library and information professionals are the following:
- Confidentiality of conversations between the professional and the
- Client;

- Honesty and integrity in all transactions;
- Provision of the highest level of service to clientele, without prejudice;
- Respect of the property rights of information creators;
- Acknowledgment of the contribution of the information professions to society;
- Support for freedom of expression.

A Body of Literature

The knowledge which a professional must learn in order to practice in a profession is recorded and available through a body of literature, which is organized, stored, indexed, and retrievable using the terms specific to the field of specialization. The library and information profession has many journals which record the research and current thinking, new techniques, and issues related to the practice of the information professions.

Recognition by the Public

An important factor in recognition of a profession is acceptance by the public. The result of all of the factors, public recognition is evidenced by the allocation of tax money for library and information professional salaries, by support of facilities and collections, and for the staffing and education of staff members. Clearly, the library and information profession has a variety of ways of recognizing competence to practice in the field.

In conclusion, the culture of any profession consists of a body of knowledge, a value system, a body of literature, professional organizations which promote the culture and update professionals, standards for service, recognition of membership in the profession, and a code of ethics. As we discussed above in the unit the infrastructure of the library and information professions, including a brief history of the information profession with descriptions of information professional organizations, journals, lists, Web sites, educational programs, standards, codes of ethics, and systems of recognition by the public. In addition to all of the elements of a profession, there is an additional aspect, the attitude of the professional. The intent of the educational program, code of ethics, and other characteristics of a profession should lead to the building of a professional who is an effective practitioner in the field. However, the true professional is more than a sum of the characteristics of the profession; the professional must be:

- Motivated to be an exceptional professional not an ordinary one who is information professional to collect a pay check;
- Willing to go beyond the minimum effort to help clients find the information they need and want;
- Driven by the desire for excellence in all of their professional service.
- Willing to work beyond the office hours of the agency;
- Driven to move the profession forward by contributing articles to the professional journals and to mentor others;
- Wanting to be current in technology and new ideas emerging in the field.

Self-assessment Questions
1. Define profession and discuss characteristics of profession.
2. Discuss about the library profession.
3. Why code of ethics for profession is necessary?
4. Describe the infrastructure of information profession.

Activity
Write in your own words the importance of code of ethics for librarians of Pakistan.

Recommended readings:
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6. Eberhart, George M. (2006). *Whole library handbook 4*. Chicago, IL: American Library Association.

7. Gates, Jean Key. (1990). *Introduction to librarianship.* 3rd ed. New York and London: Neal-Schuman Publishers.

8. H.W. Wilson Co. http://www.hwwilson.com/abouthw/history.html.

9. Harris, Michael H. (1995). *History of libraries in the western world*. Metuchen, NJ: Scarecrow Press.

10. Johnson, Elmer D. (1965). *A history of libraries in the western world*. Lanham, MD: Scarecrow Press.

11. Journal of Academic Librarianship. (2006). http://www.elsevier.com/wps/find/ sitemap.cwshome/sitemap.

12. Shera, Jesse H. 1976. *Introduction to library science; basic elements of library service*. Littleton, CO: Libraries Unlimited.

13. Society of American Archivists. (2006). http://www.archivists.org/history.asp (accessed July10, 2006).

14. Vann, Sarah K., ed. (1978). *Melvil Dewey: His enduring presence in librarianship*. Littleton, CO: Libraries Unlimited.

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UNIT NO. 9
TRENDS AND ISSUES

As indicated in earlier units, the goal of the information professions is to enhance the flow of information within and among societies throughout the world, which we also refer to as promoting the process of information transfer. To accomplish this goal of enhancing the creation, reproduction, dissemination, and utilization of information requires the application of a strong academic discipline information science located within the broad framework of the social sciences. The current trends somehow or rather will have a bearing in shaping librarians and information services in the new era. The mega trends and issues, which are effecting the library and information profession, are summarized as follows:

A. Information infrastructure issues
B. Issues in library/information education
C. Knowledge management and information management issues
D. Customer/user oriented services
E. Leadership, specialized knowledge and technological skills and competencies issues.

A. Information infrastructure issues

The literature review revealed first and foremost is a concern for the impact of information technology and its changing infrastructure. Every facet of library work, in academic, school, public, and special libraries, is being transformed as a result of technological advances. Among the changes are: increased online database; a shift in the focus of library instruction toward skills for using computer-based information systems; and the provision of access to local collections for remote users, and to remote collections for local users.

The internet has changed the entire infrastructure of library and information profession sources and services. This shift has defined the information transfer model/framework and process too. The main elements of that information cycle/process are: (1) creation of information, (2) recording and reproduction, (3) dissemination, (4) organization and retrieval, (5) diffusion, (6) utilization, (7) storage and preservation, and (8) deletion. These elements provide a model for organizing today's trends and issues.

B. Issues in library and information/education

Library and information science education has a very long history of centuries behind it and has developed into a distinct discipline to meet the growing dimensions of library service and the changing needs of the society. Realizing the importance of professionally trained personnel to manage libraries effectively and efficiently, library training programs were started at various countries around the globe. The origin and growth of the libraries depend on the educational and cultural conditions of the society at any time. Library as a social organ has certain social obligations. These obligations vary with the educational and cultural needs. The personnel working in libraries must have proper library education then only they can use and implement the library techniques effectively to suit the requirements of the users. The LIS professionals should take responsibility to educate the users in accessing required information and must keep them update to cope up with the ever-changing information requirements.

The well-known KALIPER study conducted in 1988-200 identified six trends in LIS education:

1. Although LIS schools prepare students for careers in libraries, the curricula "…are addressing broad based information environments and information problems. "Among the

indicators of this trend are schools changing their names to drop "library" from the title in deference to "information," thus broadening the scope of the school and its programs.
2. Curricula continue the trend to multidisciplinary, but the core courses are user-centered.
3. Increasingly LIS schools are infusing information technology into the curriculum.
4. Many schools are experimenting with specialization by offering certificates and specialization in such areas as information resource management, archival studies, information systems, school library media, and law librarianship.
5. LIS schools are providing a variety of formats to provide students flexibility. Among the options is off-campus offerings, Internet based degrees, and mixed models of on- and off-campus courses.
6. Schools are expanding their programs to include related undergraduate, masters and doctoral degrees.

C. Knowledge management and information management/organization issues
Knowledge and information management/organization is an issue of great concern. Library and information professionals are defining new boundaries of information management and organization. Organization of knowledge, as redefined by Google, is the current phenomenon to quickly retrieve information from the Internet; however, most users are unaware of basic search techniques that could increase the relevance of their search results. Another concern is that the wisdom of the universe is not entirely online, at least, not until Google's Book Search project achieves its goal of digitizing libraries around the world. Launched in 2002under the name Google Print and renamed Google Book Search in 2005, the project involves librarians and publishers as partners in an effort to digitize the world's collection of information, making it searchable and accessible through the Internet. While the Google Book Search project is innovative, eventually it will be joined and possibly superseded by similar projects in the future. The lesson information professionals need to take away from thesis to teach information skills (how to think critically) rather than technology, since information users must be able to seek information through the most reliable sources, regardless of where they are located.

D. Customer/user oriented services
Conducting user needs surveys, selection and weeding library material, physical space planning, and general collection management are the process to response the library and information center services to users in more efficient and effective way. Numerous manuals have been published to help information professionals make their collections responsive to user needs. Lot of manuals and workshops have also been offered guidance in managing specialized research collections in different subject areas and for particular media. Demographic changes, as well as the specific needs of special groups (e.g., minorities, immigrants, young adults, latchkey children, the elderly, the disabled, and the disadvantaged), have caused libraries to expand existing services and create new services aimed at diverse audiences. Many urban public libraries are attempting to meet the needs of immigrants through expanded collections, rotating collections of foreign language books and periodicals, English-language instruction, career counseling, and multicultural programming. User is the core component of library services. Every user of library and information center has a preferred method (or methods) of learning. Some prefer to receive information in audio format; others cannot retain the message without seeing it in print. Some people process information quickly while others take much longer to absorb and understand what they hear or see. None of these styles is better than another, they are simply different. The key for the information professional is to recognize the diversity of learning styles and adapt services to maximize the client's ability to receive and retain the information package.

E. Leadership, specialized knowledge and technological skills and competencies issues.

Great leaders are the ones who care about the people around them. Leaders play a pivotal part in the success or failure of their team, group, or organization. As the field of library and information studies continues to rapidly change it is essential to understand what the requirements of library leaders are today. Is there a common set of traits and characteristics for library administrators? Are there differences depending on the type of library and the patrons that they serve? The current trends in the library and information profession are empathetic and visionary. He/she has soft skills, specialized knowledge and technological competencies. The primary tasks or challenges faced by library and information professionals are taking care of service and programming for patrons along with paying attention to the budget and managing the collection. Information professionals must be willing to assume a leadership role to promote the effective use of information. Knowledge of information transfer processes enables information professionals to discern trends and realize the changing role of information and information professionals in society. Leadership is needed to help others understand the role of information and information professionals and to lead the way into the twenty-first century as we immerse ourselves in a knowledge society. Library and information professionals are the agent of change in an organization where they serve or in a community to whom they provide the services.

In the end we conclude our discussion with the note that "Change" is perhaps the best word to serve as a catchphrase for information professionals and for students studying to be information professionals. Be alert to changes in technology with implications for their impact on information users. The information professional must be vigilant of the environment to detect new discoveries in social science research that can better serve individuals and groups. With change comes the requirement for continuing professional education will discover the new scenario of profession. We urge all would-be and practicing professionals to see their professional learning as a lifelong process. Read, attend conferences, take classes, and expand one's professional network to keep learning of new research, new technologies, and new trends that will affect your work.

Self-assessment Questions
1. Enlist the current trends of LIS Profession.
2. Discuss the role of ICT in LIS Profession.
3. Elaborate Issues in Library/Information Education.

Activity
Visit any nearby university library and discuss with the librarian about the recent challenges faced by him in an IT era.

Recommended readings:
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8. Glanzel, Wolfgang, and Urs Schoepflin. (1994). A stochastic model for the aging of scientific literature. *Scientometrics* 30:49–64.

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10. Lloyd, Annemaree. (2003). Information literacy: The meta competency of the knowledge economy? An exploratory paper. *Journal of Librarianship and Information Science* 35:87–91.

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12. MacIntosh-Murray, Anu and Chun Wei Choo. (2005). Information behavior in the context of improving patient safety (hospital information management). *Journal of the American Society for Information Science and Technology* 56:1332–14.

13. Nonaka, Ikujiro and Hirotaka Takeuchi. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York: Oxford University Press.

14. Pettigrew, Karen E. and Joan C. Durrance. (2001). KALIPER: introduction and overview of results. *Journal of Education for Library and Information Science* 42:170–180.

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16. Van Gelder, Tim. (2005). Teaching critical thinking: some lessons from cognitive science. *College Teaching* 53:41–46.

17. Wallis, Jake. (2005). Cyberspace, information literacy and the information society. *Library Review* 54:218–222.

18. Widen-Wulff, Gunilla and Reima Suomi. (2007). Utilization of information resources for business success: The knowledge-sharing model. *Information Resources Management Journal* 20:46–67.

19.