

Librarians beyond mediation

Los bibliotecarios más allá de la mediación

Irene Wormell*

Abstract

Since modern information professionals are mediators between information providers, information users and information technologies, they have to bridge intellectual, social-cultural and communication gaps in the mediation of information and the related processes.

Their multiple roles take on a hybrid quality that demands flexibility, adaptability and special skills. The long-accepted ways of acquiring new content are hard to shake, as is the dated perception of librarians as “curators.” With the inner priority of the “role” vs., “task” LIS professionals have to see themselves not just service-oriented, but mostly value-oriented.

For the proper understanding of the explosive development in the information landscape and its effects on the roles and functions of the modern information professionals, the model developed by Iraset Páez-Urdaneta at the Universidad Simón Bolívar, Caracas, Venezuela in 1990s is used.

The progressive LIS professionals - eager to learn and adopt the available new technologies and mentally abandoning the library’s hierarchy, structure and tradition – are challenged in occupying the attractive jobs in today’s information market.

The paper is exposing some of those professional niches where librarians can enter into the arena of advanced information services, such as, content management, packaging, analyzing and filtering information.

It is emphasized that technology and the management of information and knowledge are not mutually exclusive notions, they are interwoven in modern information services and considered as key professional assets within today’s professional life. IT is only an enabler of these processes.

KEYWORDS: Mediation, information professionals, knowledge management, metrics, new librarian roles.

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RESUMEN

Desde que los profesionales de la información son mediadores entre los proveedores, usuarios y las tecnologías de la información, deben superar las brechas intelectuales, sociales, culturales y de comunicación en la mediación de la información y los procesos relacionados.

Sus múltiples roles adquieren una cualidad híbrida que exige flexibilidad, adaptabilidad y habilidades especiales. Las formas aceptadas, desde hace mucho tiempo, sobre la adquisición de nuevos contenidos, son difíciles de erradicar, como es la percepción anticuada de los bibliotecarios como “curadores”. Con la prioridad de la “función” vs la “tarea”, los bibliotecarios y profesionales de la información tienen que verse a sí mismos no sólo como orientados al servicio, sino también como orientados al valor.

Para la correcta comprensión del desarrollo explosivo del panorama de la información y sus efectos sobre los roles y funciones de los profesionales de la información modernos, se utilizó el modelo desarrollado por Iraset Páez Urdaneta de la Universidad Simón Bolívar, de Caracas, Venezuela, en la década de 1990.

Los bibliotecarios y profesionales de la información progresistas – ávidos en aprender y adoptar las nuevas tecnologías disponibles, abandonando mentalmente la jerarquía, estructura y tradición de la biblioteca - enfrentan desafíos al ocupar los puestos de trabajo en el mercado de la información de hoy en día.

Este artículo presenta algunos de esos nichos profesionales donde los bibliotecarios pueden entrar en el ámbito de los servicios de información avanzados, tales como la gestión de contenidos, el empaquetamiento, análisis y filtrado de información.

Se hace hincapié en que la tecnología y la gestión de la información y el conocimiento no son nociones que se excluyan mutuamente; se entrelazan con servicios de información, modernos y profesionales, y son considerados como activos clave dentro de la vida profesional de hoy en día. Las tecnologías de la información son solamente facilitadoras de estos procesos.

PALABRAS CLAVE: Mediación, profesionales de la información, gestión del conocimiento, estudios métricos, rol del nuevo bibliotecario.

Introduction

Reviewing the developments of the LIS field in the last 50 years it is generally obvious that the profession often has been in “conceptual disarrays”. This leaves one with the impression that librarianship, at least in some area of practice, often has lost its bearings. In every decade new models and ideas have been offered to define what this profession is about. Since the information world is constantly changing, LIS professionals have been confronted all the way with new/alternative visions for their professional mission.

To put information work and professional practice in a wider context it is necessary to converge the theoretical and practical basis of the LIS profession with other related disciplines. Considering the driving force of new technologies, LIS professionals are required or challenged to become hospitable to other disciplines and to search for the intellectual intersections as platform among the information fields. This would increase the level of abstraction and hereby elevate also the level of practice.

It has been argued that the traditional “*task orientation*” in the LIS profession has to be changed to a “*role orientation*” in order to function effectively in the new informa-

tion landscape. With a traditional task orientation, the task often becomes the end itself, and LIS professionals can lose sight of the larger goal that their service is trying to accomplish. This shift in the conception of work emphasizes the relationship between the information services and the users, and it complies with the general trend in many other service areas where there is a clear shift from product- to customer orientation in their strategy formulations.

In the past the changes in the customary role of librarians (normally) have taken place in a slow mode in the academy. However in the information area with its vast digital resources the traditional physical assets of libraries are undermined. Therefore, in the information transfer and mediation processes LIS services have to go for the involvement in the creation, production and packaging of information: focus should be directed on active participation in the information processes not only the preservation and storage of it.

Academic libraries will be expected to show university administrators that their services are aligned to their parent institution's strategic priorities, and their libraries are providing added value to the students and staff. As a consequence, many libraries have recognized the need to measure the success of their programs. While some goals have always been applied to library and information service output, measurement of efficiency and effectiveness is more common today than in the past. Private and public sector information departments must manage activities in terms of quantifiable business objectives and they are increasingly measured in terms of productivity and quality.

Considering the ongoing radical changes in the information landscape, with its monopolistic search engine and scattered repositories following different standards, this article is aimed to identify some new, emerging roles and functions for modern information professionals.

Chapt.1. Modelling the new information professional

For an integrated characterization of the new/modern information professional we will use a model developed by Iraset Páez-Urdaneta at the Universidad Simón Bolívar, Caracas, Venezuela in 1990s, within the frame of an UNESCO project.¹

Through the last decades many attempts have been made to profiling the knowledge, skills and attitudes needed by a given type of librarian in a specific service environment. Although most of these criteria are still valid at the theoretical level, this model is a useful approach to define one's potential in terms of professional skills based on a role perception –directly modeled after four practical frames of action. Fig.1. provides a representation of this approach.

The conceptions of *niche*, *role*, *offer* and *frames of action* are useful concepts for a comprehensive understanding of the notions like professional action, information service work, information management and professional training and practice.

The starting point in the model is the concept of the **Professional mission** which is a broad statement of the objectives guiding a group of people willing to transform and optimize their productive work for the benefit of the human society and individual interest. This concept is translated here into "areas of strategic professional competence" or **Professional niches**. The niche, as a work space, is identified as a system in which competencies, experiences and learning capabilities are integrated and transformed in order to perform a set of closely interrelated activities. A niche is fundamentally also the object for educational action. Training takes place at different levels and ideally it adapts to those changes which affect the activities

¹ PÁEZ URDANETA, Iraset. La formación de los profesionales de la información en América Latina, la situación laboral y el mercado potencial de trabajo. En: *Gestión de la inteligencia, aprendizaje tecnológico y modernización del trabajo informacional: retos y oportunidades*.

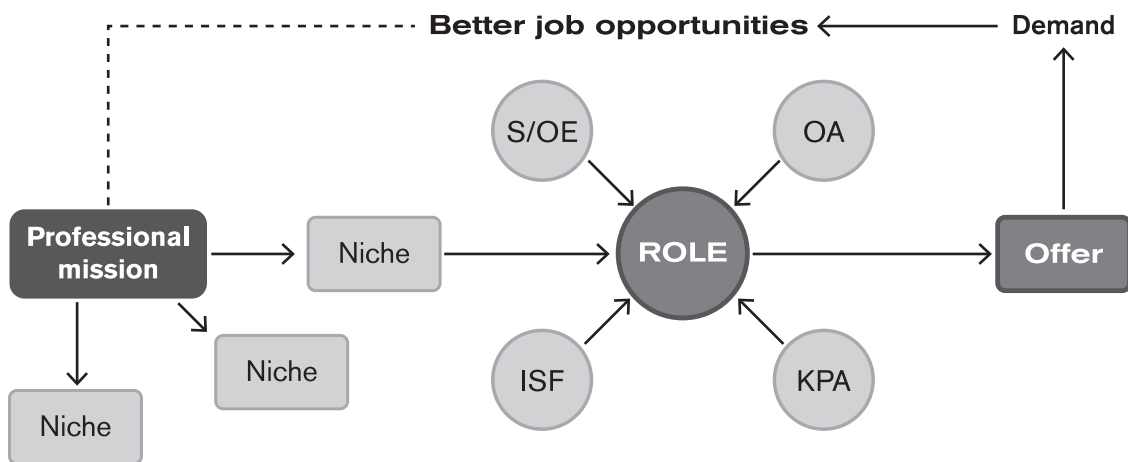


Figure 1. A model for defining a professional role offer

assigned to the niche. Fig. 2. shows twelve possible niches, structured in three columns and four levels of current education for information professionals.

At the *bottom* of Fig.2. Are placed the conventional niches (Library work, Documentary work, Archival work), related to the undergraduate level of training and they are regarded as the “low flying” scenario of the information profession today. At the *next level* are placed three more modern niches (Information service management, specialized information work, Informa-

tion system design and development) which can be treated at a post-graduate level of training. At the *third level* are identified those niches which are related to the Master training level (Information management, Information technology management, Communication management). They presuppose a strong element of computing and management skills and competences. *On the top* are placed the “highest-flying” scenario for the profession today and they are related to the Doctoral training level (Knowledge management, Knowledge engineering, Communication engineering).

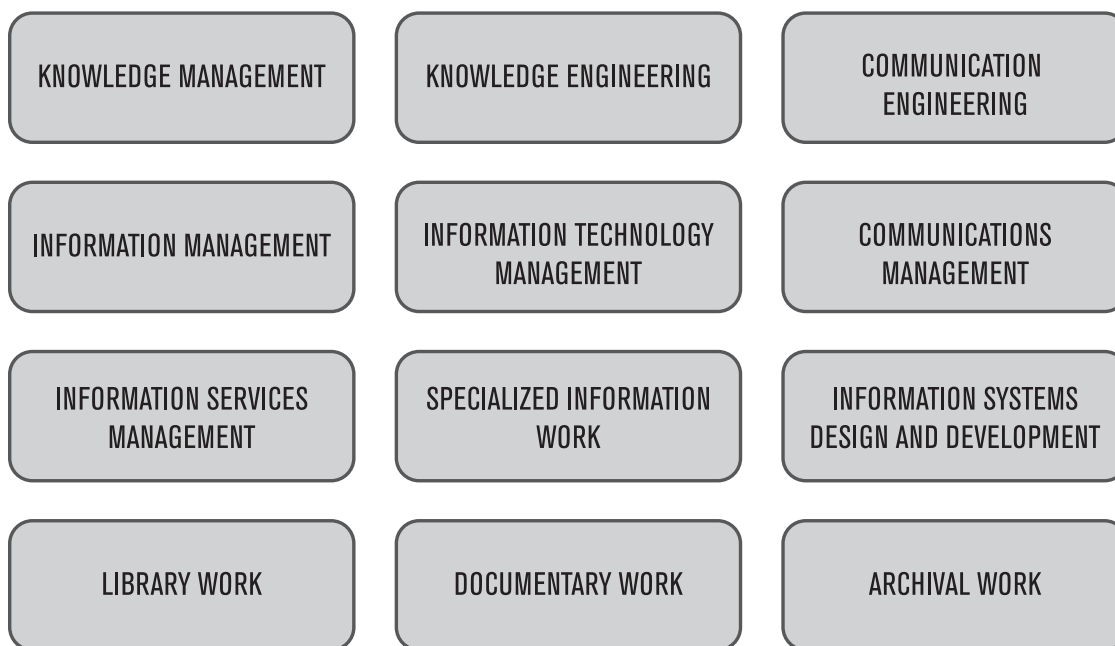


Figure 2. Niches for the information professional

One should remember that the given names for the niches are working labels here! It is up to the information professionals to identify and consolidate them for educational treatment and to develop an interrelated vision of their respective niche structure. E.g. “library work” is the niche; “librarianship” the body of knowledge mainly associated with that niche. Successful professional practice will contribute to establish the most convenient and up to date labels in the long run. But it should be noticed that future information professionals should be better equipped with functional skills, e.g., improve their competence in working effectively with IT in content management. LIS education, generally, has to do much more for the success of today’s librarians than they have accomplished hitherto.

A niche opens for a spectrum of possibilities and challenges which have to be channeled in a given direction in order to design a potential professional role – according to actual working context. In Fig.1. the **Role** means a “system” of working behavior that a person is entitled to show (on the basis of competencies and experiences he or she has acquired). This “system” is changing during the professional life cycle of the individual; it adds and loses power depending on its competitiveness, its social and organizational pertinence and its capacity for taking up new work interfaces.²

A professional role is constructed by integrating a number of features derived from each of the four Frames of actions proposed in the model.

Sectoral/organizational environment (s/OE) is aimed to imply that a given professional role is not perceived (or does not function) in the same way in all environments. One should be aware of the nature of each sector and subsector, its strategic, tactical and operational needs, the extent of its information dynamics, its comparable working advantages.

The *Opportunity area (OA)* is referring to a number of broad thematic niches related to the links of the infor-

mation nature to various public and private sectors and organizational environments, its potential impact for the modernization of social life, obstacles that hamper collective and individual access to its literature. The concept of “opportunity” indicates that each area can be a source of interesting and rewarding work if a willing professional perceives it in the terms of an advantage to be capitalized for his or her own benefit.

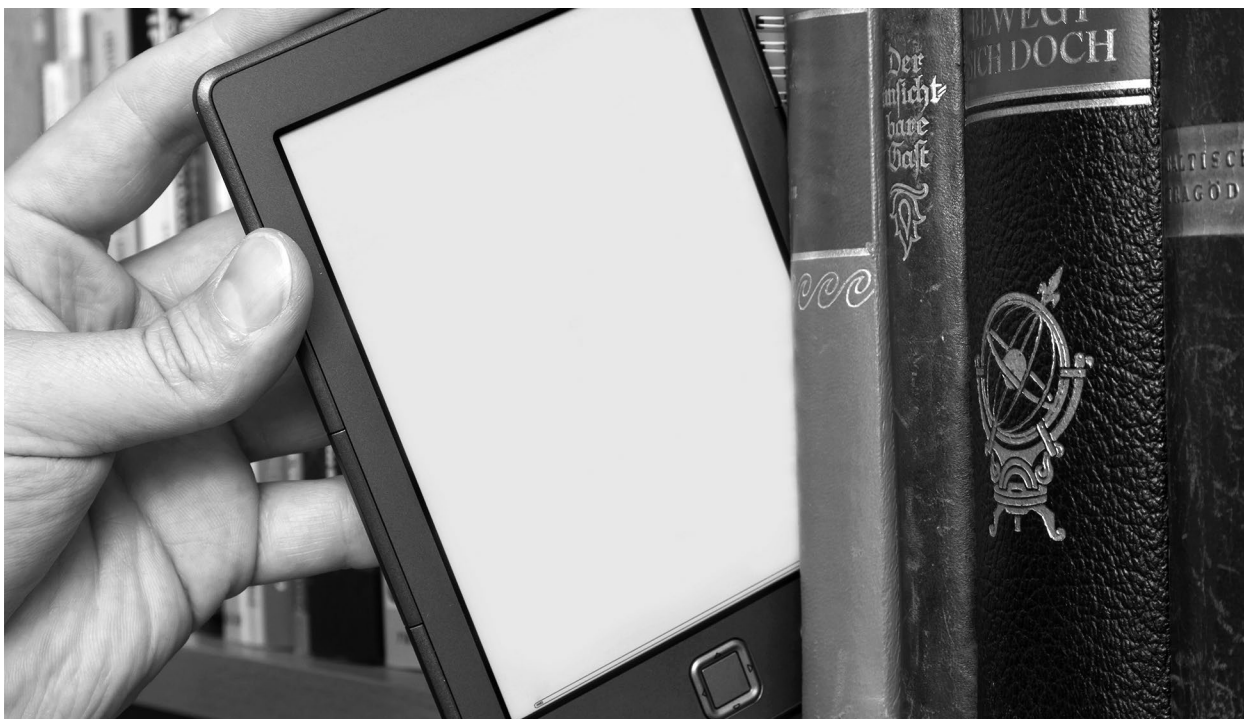
The third frame of action is related to a kind of *Intelligence service function (ISF)*, an emerging area based on the concept of “social intelligence”, where information professionals could be engaged in the design and implementation of intelligence gathering systems for the government, public and private sector organizations.

The *Key professional assets (KPA)* are the professional’s resources such as personality values and functional skills relevant for his or her power for job enrichment and work impact. They provide the elements needed to the structure of the role.

As it is shown in Fig.1. the definition of professional mission results in the identification of a number of niches. After the interpretation of a niche is made by a given professional, a professional role is constructed by integrating a number of features derived from each of the four frames of actions proposed. When this process is completed, an offer is directed in the job market (to an existing or probable demand). It is indicated as **Offer** in the model: which is a conversion of the traditional roles into a new or more highly qualified job opportunity.

Professions, like ecological niches, are dynamic. In the information market there is an ongoing competitive evolution and the new information professional has to compete with other information professionals if he or she wants to have opportunities and advantages in the market. One of the corner stones of future employment within the LIS field is to train professionals who will create new jobs, not just fill old ones. Schools of information studies and information management will have to tailor their programmes and output to the particular needs of the market.

² WORMELL, Irene. Multifunctional information work - new demands for training?



The report of Iraset Páez-Urdaneta provides very detailed information (lists) about those Personality values and Functional skills which are correlated, e.g., in the context of information management. This is a useful guideline to both the personal and organizational developments and provide support for information professionals searching for new competences and strategic alliances in the ever changing information landscape.

This article is providing only a short presentation of this model, but hopefully it can serve as a useful background for those facts and ideas which form the new vision and the professional mission within the field.

Considering the ongoing radical changes in the information landscape, it is aimed to identify some new, emerging roles and functions for modern information professionals.

Chapt. 2. New roles and functions

The ability to retrieve, organize and store information from printed or electronic sources will no longer be regarded as the only basic concept of library and information service. The nature of information delivery

and consumption is changing. The user now requires information which is filtered and analyzed in detail and packaged in a form that is easy to read, easy to understand and finally, easy to adopt and use.

Since modern information professionals are *mediators* between information providers, information users and information technologies, their multiple roles take on a hybrid quality that demands flexibility, adaptability and special skills. To bridge intellectual, socio-cultural and communication gaps in the mediation of information and the related processes it is necessary to have proper knowledge and education which is matched by the steady developments in the roles and functions of the librarian as an information professional. One should have to draw more attention to the usefulness and the appreciation of the *intermediary role* which LIS professionals play in today's society.³

³ WORMELL, Irene. Skills and competencies required to work with Knowledge Management [en línea]. En: *Knowledge Management: libraries and librarians taking up the challenge*. Edited by Hans Christoph Hobohm. Munich: Saur, 2004, p. 107-114. IFLA Publications, 108. <<http://kmeducationhub.de/skills-and-competencies-required-to-work-with-knowledge-management/>>

The settings and situations in which they work are many. Beside the traditional ones, there is nevertheless a core of new and emerging roles and functions. These can be described in several ways, but here they will be briefly presented by a *list of functions* which information professionals today expressly identify as their working area, i.e. to:

- facilitate information use
- navigate knowledge systems and information sources
- consult and advise on information problems
- audit the optimal management of information resources
- integrate technical and cultural systems
- translate between languages and terminologies
- facilitate and transform data and information flows between systems
- connect social and cultural contexts
- educate users
- provide resources for information literacy
- offer information policy support for organizational and societal goals

These emerging professional roles and functions are all linked to the users or to the work of IT professionals. The concept of *multifunctional information work* is thus based on bridging two worlds: a world of developing IT systems and a world that must exploit information produced by those systems. The relationship between the different kinds of roles that modern information professionals fill in, emphasizes also the hybrid nature of information management work.

Given the increase in publications and communication through a variety of channels, one of the most important problems in the mission of today's LIS professionals is to function as a device for filtering information, to protect the user from irrelevant and distracting information and to prevent information overload. Ranganathan in his "Five Laws of Library Science" from 1931 has formulated this function as the fourth law saying, "Save the time of the reader".

LIS professionals do not have to fear in meeting the challenges of new technologies, because their roles have in some extent been taken over by the new tools and techniques, at the same time new functions and service areas are also emerging as a consequence of the adoption of the new techniques and the increasing request to access more relevant content.

Chapt.3. Generalist vs specialist

There is a remarkable diversity of roles with which LIS professionals have been identified. Words and phrases used to describe these roles in the literature can be very extensive, therefore only a short selection is given here: mediator, intermediary, advisor, information facilitator, knowledge engineer, guide, consultant, translator, transformer, connector, curator of culture, weaver (linking people with data, ideas and culture), data processor, product developer, agent, cyberdetective, navigator, teacher, filter, gatekeeper, scholar, technician etc. The terms do not describe a homogeneous profession but it is clear that the LIS professionals are said to be (mainly) a personal service profession helping people to satisfy their information need.

To exemplify this general view of "the mission of the Librarian" it is referred to the classical formulation of this mission given by Ortega y Gasset in 1934: "*a filter interposed between man and the torrent of books*".

It is obvious that the generalist concept of the librarian who is filling the general library service functions for a general public is becoming obsolete and will "wither away" in the light of the great demand of information professionals with special skills and knowledge, who can also add special value to information.

Most of the progressive LIS professionals are eager to learn and adopt the available new technologies, however, there are only few who use them in an *innovative way* in their daily work. Thus, there is a long way in one's cognitive development before the new technology, not only affects, but also changes our behaviour and the way of doing things in more complex tasks and problem solving situations.

Individuals, focusing on their professional roles and functions, rather than routines and simple tasks, might reach more quickly the higher levels in the evolution of technology use, because the new tools develop a natural link to their own personal development and creativity. See Fig.2.

LIS professionals possess *useful qualifications* and skills to satisfy information needs in both the public and private sectors, but they have difficulties in occupying the attractive jobs in today's information market and are facing a growing *competition* from other professionals. They have the competence to fill the new jobs and trades, but often, it is difficult for them to be recognized as the potential information managers, web-masters, knowledge engineers, technology watchers, environment scanners, navigators or advisors in accessing electronic information, developers of information literacy etc. If they have the courage and can leave mentally the library's hierarchy, structure and tradition - they will discover new areas of work space and professional niches affecting deeper aspects of the profession. LIS professionals now a days operate in an environment that calls for a radical shift in how we understand societal and professional roles. Therefore, there is a need for a *deinstitutionalised professional identity*.

Chapt. 4. New and additional functions: analyzing and filtering information

Knowledge Management

Already two decades ago it was strongly believed that *Knowledge Management (KM)* would be a new form of librarianship. In the literature there is a wide scope of discussions, overview of trends and exemplifications of how KM is practiced in various environments and how this transmission of the profession is going on. There are also presentations of those new competence areas which today's librarians have to adopt in their work in KM.⁴

Attention is given to the usefulness and the appreciation of the *intermediary role* which LIS professionals

play in accessing information. Mediation is content oriented and librarians have always managed content, but the transition from physical to virtual information services has required an evolution in technical skills.

Present developments in KM call attention to the special skills of LIS professionals to *extract knowledge from databases*. Their knowledge and insight into the nature and properties of real-world data is a valuable contribution to discovering data relations not explicit in the database structure.⁵

The two major problems in knowledge management are the efforts required to *capture* knowledge, and to *analyze* and *categorize* it (as to its nature, relevance and how to deal with it).

The technique used for this kind of analysis is today labeled as Knowledge Discovery in Databases (KDD) and is defined as the "extraction of implicit, previously unknown, and potentially useful information from data". All the various other phrases, such as, data and text mining, database mining, information harvesting etc., indicate the emergence of a discipline which aims to generate new tools and techniques to analyze *previously unknown relationships* among data and points to extract potentially useful information.

We have seen an explosive growth in our capabilities to both collect and store data, and generate even more data by further computer processing. But our inability to *interpret and digest data*, has created a need for a new generation of tools and techniques for intelligent database analysis. The new mining techniques, combined with analytical skills, will hopefully create new knowledge and promote "informed" decision making and policy formulation in all areas of the scientific, business and public sector organizations. These techniques and methodologies are useful in knowledge management in tracing those trends and developments in society, science and business which are not directly visible.⁶

⁴ WORMELL, Irene. Infometrics and the use of bibliographic data in a strategic combination.

⁵ WORMELL, Irene. Infometrics and Webometrics for Measuring Impact, Visibility, and Connectivity in Science, Politics, and Business.

⁶ WORMELL, Irene. Infometrics: an emerging subdiscipline in information science.



The sophisticated value of online information provision lies not in using the databases only for finding facts and accessing documents, but to tap some unique items of relevant material, a few “*nuggets*” of *valuable information*, and (by synthesis and/or analysis) extract knowledge from the raw data –which is one of the core issues in KM.

This type of analytical information is, however, visible only to searchers who learn how *to read between the lines* of the electronic information, and can apply the analytical tools in combination with advanced search and display techniques.

The integration of various types of information in a strategic mix should be seen as a *value-adding process* in terms of the selection and refinement procedures carried out on the basis of skilful search tactics and the proper understanding of the information needs related to both the users’ problems and their strategies in solving these problems. The emerging new retrieval and presentation techniques are offering rich possibilities for the intelligent searcher for the summarization and visualization of search results.

KM is not about technology, but the role of IT serves as an enabler, a tool that allows for scalability and global scope. Technology itself does not make the KM system work: it can facilitate and enable connections and communications but it will not make them happen.

In a similar way, technical skills and competencies are an important part of the portfolio of a knowledge man-

ager, but it is effective only if it is used to work with people and their ideas. The importance of a common or shared perspective is a theme which recurs repeatedly in the KM field. Therefore, technical competence is needed to identify and establish a kind of appropriate technology which fit with each individual of the given (small or big) community, group or department.

Modern information professionals, by using quantitative and qualitative analytical methods in the exploration of databases, have great potential to develop *new niches and specialities* in their services. See Fig.1. This capability can rapidly move them towards the upper echelons of information work hierarchies in their environments. See Fig.2.

Metric analysis

Digital library and information services through the Internet has greatly increased the amount of data available for statistical and other types of quantitative analyses. This opened up for the exploration of databases not only as a registry but also as tool to carry out analytical work. This has resulted in an extension of traditional bibliometric analysis to other quantitative studies and research evaluations within science and technology –where not only the flow of information is studied but also their mutual, societal, industrial and other special relations can be explored.⁷

⁷ TAGUE-SUTCLIFFE, J. An introduction to informetrics.

Bibliometrics has evolved into a distinct scientific discipline “*Informetrics*” with several subfields and the corresponding scientific communication structures. Bibliometrics is traditionally associated with the quantitative measure of documentary materials using various statistical methods to study, for example, patterns of authorship, publication and literature use, and relationships within scientific domains and research communities, as well as to analyze the structure of specific fields. The name “*Informetrics*” has a broader meaning and it is indicating that nowadays the metrics studies cover also non-academic communities in which information is produced, communicated, and used.⁸

The subfield of “*Scientometrics*” is used by a big and diverse group of researchers with strong interest in quantitative studies of the development of academic disciplines. In cooperation with domain specialists, research and special librarians are often involved in the study of research frontiers at institutional, national and international levels.

The use of metrics studies are expanding also in the area of science policy and business and ties with the social sciences, sociology, economics and policy analysis are growing closer. Research evaluation and mapping publication patterns and research areas are becoming obligatory procedures to measure the quality of academic work.

With the expansion of the Web, naturally, the bibliometric methods are used to measure distances and other link-based properties of web sites: “*Webometrics*” has developed to one of the most expansive area of metric analysis.

In the last decade this field has been extended also to include the social media (Blog, Twitter, Facebook etc.) under the name “*Altmetrics*” owing to their special methods to map and analyze the information flow in loosely structured information environments.⁹

⁸ KURTZ, Michael J.; BOLLEN, Johan. Usage bibliometrics.

⁹ THELWALL, Mike, HAUSTEIN, Stefanie, LARIVIÈRE, Vincent, Sugimoto, CASSIDY R. Do Altmetrics work? Twitter and ten other Social Web Services [en línea]. PLoS one, 2013, vol. 8, no. 5, <e64841. <http://dx.doi.org/10.1371/journal.pone.0064841>>

Bibliomining is a new, emerging area in intelligent database analyses, where Data Warehousing and Data Mining techniques are used to identify valid, potentially useful and ultimately understandable patterns in data. Because of the potential payoffs of mined data, this is a hot topic both in the academic and business world.

In library decision making it is mainly used to study the pattern of use exhibited by groups, but in some cases also for the study of individual behaviours.

This application of mining techniques, in combination with bibliometric analysis of large bibliographic databases, is another emerging discipline within information science. *Informetrics* to a large extent facilitates knowledge discovery and the exploration and use of the digital bibliographic information in a new way.¹⁰

Although data mining seems to be quite far from the information professionals, their specific techniques and tools are used both in cross-file searching and in navigating between various systems and they are considered to be essential parts of the new text and data-mining techniques.

“Library” can indicate more than a physical place

Although LIS professionals enter more and more the arena of advanced information services, it is important to defend the *culture of learning in the libraries*. In the utilization of the physical place of the library we often have to make changes and give more space for learning. Librarians are becoming the principal players in the learning centre and as tutors and educators –in close collaboration with the faculty members– and are linked to the strategic goals of their institution.


It is a drawbacks that LIS institutions are not used to the proactive *identification of information needs* but to responding to demands. Therefore, one of the most significant changes in the basic concept of library and information services is the *users’ requirements* to receive

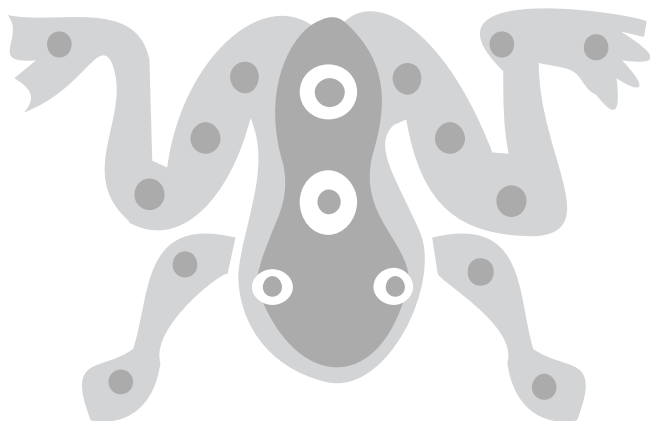
¹⁰ Wormell, Irene. Informetrics - a new area of quantitative studies.

information which is filtered, quality secured and analyzed in detail. Information must be packaged in a form that is easy to read, easy to understand and, finally, easy to adopt and use.

Information overload is equally as non-productive as having little or no information upon which to make decisions. The focus needs to be on creating and managing its value. Therefore it is critical to prioritize and filter information, and present it in a form with regard to the individual and their needs.

Conclusion

It is a great challenge for the LIS profession today to get rid of the dominance of the custodian roles and functions and occupy again the old, classical role of the “Librarian”, as the scholarly man to whom people turn to get advice. It was used as a metaphor which means a platform to satisfy information needs. Since creativity, talent and realized ideas are the intellectual capital of the future, and technology must serve that capital, information professionals must realize that they are the natural vehicles and facilitators in these value-generating processes. 



Consulted resources

Association of Independent Information Professionals [en línea]. <<http://www.aiip.org/>>

In 2015 has carried out an extensive survey and collected detailed information on age, salary, working hours, education, experiences, employment, etc., of their members. The results have been analyzed and published by:

BATES, Mary Ellen. 2016 Info-Entrepreneur Market Report: insights on information businesses [en línea]. <<https://mebs.files.wordpress.com/2015/06/2016-info-entrepreneur-market-report1.pdf>>

IFLA Trend Report [en línea]. <<http://ifla.org>>

This is more than a single document – it is a selection of resources to help you understand where libraries fit into a changing society

The IFLA Trend Report identifies five top level trends which will play a key role in shaping our future information ecosystem:

- TREND 1: New Technologies will both expand and limit who has access to information.
- TREND 2: Online Education will democratize and disrupt global learning.
- TREND 3: The boundaries of privacy and data protection will be redefined.
- TREND 4: Hyper-connected societies will listen to and empower new voices and groups.
- TREND 5: The global information environment will be transformed by new technologies it is underlined that technology and the management of information and knowledge are not mutually exclusive notions, but IT is only an enabler of these processes.

KURTZ, Michael J.; BOLLEN, Johan. Usage bibliometrics. *Annual Review of Information Science and Technology*, 2010, vol. 44, p. 1-64.

Libraries transform campaign: a Website of the American Library Association [en línea]. <<http://www.ala.org/transforminglibraries>>

Designed to increase public awareness of the value, impact and services provided by libraries and library professionals, the Libraries Transform campaign will ensure there is one clear, energetic voice for our profession. Showcasing the transformative nature of today's libraries and elevating the critical role libraries play in the digital age.

The ways in which libraries transform are as nuanced and varied as the people they serve. Physical transformations are easy to spot. Transformations in service and scope can be less apparent, but are ever changing.

PÁEZ URDANETA, Iraset. La formación de los profesionales de la información en América Latina, la situación laboral y el mercado potencial de trabajo. En: *Gestión de la inteligencia, aprendizaje tecnológico y modernización del trabajo informacional: retos y oportunidades*. Caracas: Universidad Simón Bolívar: Consejo Nacional de Investigaciones Científicas y Tecnológicas, 1992. 253 p.

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