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**Biomedical Librarian in Veterinary  
Public Health Institutions:  
Competence Profile and Training**

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Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

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## **BIOMEDICAL LIBRARIAN IN VETERINARY PUBLIC HEALTH INSTITUTIONS: COMPETENCE PROFILE AND TRAINING**

### **Introduction**

The librarians who operate in the biomedical field at Scientific Public Boards within the Veterinary Public Health (VPH) have to develop peculiar skills and are urged to acquire specific knowledge in various fields, ranging from biomedical databank reference, law information retrieval, to the selection of publication tools, instruments and ways, including the up to date *Open Access Sites*, to foster an effective scientific dissemination and to provide a high-level continuous support to research and scientific updating. Such abilities are empowered by means of quality education courses, accredited on the basis of ISO certification patterns, as well as by a scheduled screening and evaluation of the development of the specific skills.

### **Aim**

This work aims at outlining the role profile of the current health librarian within the VPH as an information specialist referring to the expertise offered by the authors. This study is to show the upgrading steps accomplished by the libraries at the I.I.ZZ. SS. (*Istituti Zooprofilattici Sperimentali*) in Italy, in Brescia (IZSLER, *Istituto Zooprofilattico Sperimentale della Lombardia e dell’Emilia Romagna*) and in Rome (IZSLT, *Istituto Zooprofilattico Sperimentale delle Regioni Lazio e Toscana*), in identifying the competence profile and in planning education routes in conformity with the quality principles defined in the ISO 9001:2000 rule, relating to point 6 and 7 with regards to Resources, Planning and Development.

In this research work, the authors, acting as reflective practitioners, emphasize the methods adopted, the instruments and tools applied as performance and competence indicators, the screening and evaluation pursued, the audits and the critical and development point detection carried out in the last years. The data collection analysis targeting at the evaluation of the specific education needs of the librarian or information

manager will lead to launch continuous competence development plans in a Health Library or Documentation Centre.

### ***The veterinary public health (VPH) system in Italy***

In 1999, the VPH was defined by WHO (World Health Organization) as follows: “*the sum of all contributions to the physical, mental and social well-being of humans through an understanding and application of veterinary science*”. Indeed, it is that very sector of the preventive medicine concerning animal health and veterinary science which studies those aspects affecting the environment and human health. Zoonoses, food safety, the environmental impact of animal farming hygiene, the veterinary urban hygiene and animal welfare are but a short list of its various fields. In Italy, the Public Boards operating in the VPH are the following ones:

- at governmental level, *The Ministry of Health*, which carries out a directive and coordination activity and *Istituto Superiore di Sanità*, ISS, which is the technical-scientific board of the Ministry of Health;
- at regional level, *the Regions*, which develop coordination, managing and inspection functions; *II.ZZ.SS.* as technical-scientific Boards depending on the Regions;
- at local level, *Aziende Sanitarie Locali, ASL*, (Local Board Units), which provide health services within animal welfare, food safety and animal farming hygiene in their territorial jurisdiction.

### ***Istituti zooprofilattici sperimentali***

The ten *II.ZZ.SS.*, *Istituti Zooprofilattici Sperimentali*, whose headquarters and diagnostic sites are widespread all over Italy covering each Region, are Public Health Boards supplying advanced services within the VPH, Veterinary Public Health and act as an effective technical and operational tool of the National Public Service (SSN, *Sistema Sanitario Nazionale*). They perform the following functions and activities: research, laboratory diagnostics and education to support the Local Public Boards, the farmers and the animal origin food producers. These Bodies actually cope with topical issues affecting the whole world, due to the market globalisation, which dramatically impact on livestock resources as well as on human well-being and health. Their activities range from the food safety control on animal origin food and feedstuff, livestock farming hygiene to the correct relationship between environment, animals and human beings.

### ***The libraries at II.ZZ.SS***

The network of the ten *II.ZZ.SS.* libraries and Documentation Centres, *The Virtual Library*, serves a user population of thousands of people across the 10 sites throughout Italy and shares a noteworthy exhaustive document holding accounting for a number of specific electronic resources. Reference and user education activities targeted to an efficient use of the research tools at disposal are its main objectives. The *II.ZZ.*

SS. librarians act as information manager carrying out an intermediation function between the plethora of informative offer and the urgency and punctuality of its users' informative demand, the librarian offer their mutual expertise in mentoring the library users in the information retrieval activities. Indeed, the *information specialist* in II.ZZ.SS. is asked a multi-skill approach to manage a multi-faceted reality: empathy, observation and critical reflection allow to provide value-added, cost-effective and time-saving services in conjunction with high level culture, ICT skills and knowledge. The II.ZZ.SS. library staff performances have been characterized by a user-oriented approach with regards to information retrieval, handling and knowledge management adopting a service oriented management.

The present work shows a study carried by two Libraries in Brescia and in Rome. The Central Library in Brescia, at IZS-LER, *Istituto Zooprofilattico Sperimentale della Lombardia ed Emilia Romagna*, has a long tradition and story. It is a modern medium Library. The Central Library in Rome, at IZS-LT, *Istituto Zooprofilattico Sperimentale delle Regioni Lazio e Toscana*, has acquired the features of a modern and up-to-date small hybrid Documentation Centre, specialized in the field of Animal Health and Food Safety. The II.ZZ.SS. users' profile is quite complex and can be distinguished into internal and external users as follows:

*Institutional users:* the II.ZZ.SS. library supports the scientific research and vocational updating and training as well as the diagnostic activities of its personnel operating in the field of veterinary medicine, food safety, animal health, and immunology and biotechnologies. The library also offers its services to the reference centres at a national level as well as at regional level.

*External users:* operators working within the National Sanitary Service, SSN, and above all to the Regional Health Boards (AUSL), which are under its territorial jurisdiction, the Ministry of Health, free lance operators in the bio-medical field, *NAS Carabinieri* (the Italian Army and Police Force specialized against food frauds), the Army Veterinary Service, students, researchers, farmers and producers in the zootechnical food sector, animal origin food producers.

A crucial resource of our Libraries is our teamwork, indeed, both Libraries operate in direct contact with *The Training and Continuous Education Section* and in staff with the Top management: group awareness, motivation, climate and ethical principles are at the basis of our work. This approach has allowed us to emphasize the relationship and the communication strategies with our users, thus establishing empathy, confidence and authoritativeness. Acting as reflective practitioner, active listening and critical analysis underpin everyday work at our libraries, so that together with the objective performance indicators we strive to comply with, we are longing at defining our targets properly, outlining the critical points to process and to develop.

The processes involved in providing these services have urged the library staff to periodical surveys concerning the various aspects of the performances required: the

number of data banks queries, usage reports (the number of documents required and successfully delivered, the time span elapsed from the request to the full-text document delivery, the number of data banks accesses, etc.). The results collected have impacted on the acquisition policy as well as on the library management to enable the users' needs direct the operational strategies.

In order to meet the ever increasing demand for documents and full-text articles and to provide an effective support to the scientific research, the II.ZZ.SS. librarians have co-operated and studied the modern information retrieval techniques, they have acquired the necessary ICT skills to focus on the development of our library holdings as well as on the user education and empowerment.

### ***The librarian's activities at II.ZZ.SS.***

The activities carried out by a librarian operating in the II.ZZ.SS. are characterized by the peculiarity of the library users. As a matter of fact, the II.ZZ.SS. libraries are small and medium facilities which were founded, at first, to meet the informative needs mainly of its researchers as well as of its technical operators and which, later, have opened its doors to health operators, to farmers and animal origin food producers. At present, the Libraries provide quality information services targeted to a vast and heterogeneous audience. The II.ZZ.SS. Library's users is essentially different from the hospital or biomedical university's users. Our users are researchers, veterinarians, biologists, chemists, biomedical laboratory technicians as well as the administrative staff and ICT experts.

The main task our libraries have to accomplish is to support the scientific information dissemination also to public health operators, such as the veterinarians working for the Local Public Boards, to free lance veterinarians, to farmers and producers, to students, to undergraduates and post graduates. The researchers' informative demand is focused on advanced documentation systems, specialized databanks as well as on the main information resources on a national and international basis, with a special interest in the Open Access Movement, recently. In order to meet this peculiar users' needs, the librarian is urged to acquire a vast knowledge of the sector, to master the English language, which is the formal language of the international scientific community, to manage electronic resources. The modern librarian is asked to provide *on demand* services, such as the current awareness services and the users' information literacy and education mentoring them into the use of quality information instruments.

The external users, such as the public health operators, i.e. the veterinarians working for the Local Public Boards and the free lance veterinarians, the farmers and producers, have peculiar information needs which are often unstated and the librarian has first to detect the potential demand before studying the proper instruments and tools to meet them. Their needs focus on vocational updating with a mere technical and operative impact but it is hardly expressed because of a number of reasons: on one side, they can hardly access specialized publications or documentation material

in the Boards they operate, the obsolete or partially adequate technology they have at disposal and last but not least the difficulties with foreign languages in addition to the low economic resources. On the other side, the ever increasing price growth of the information instruments and tools on the market.

Therefore, it is the peculiarity of the users, which is so vast and heterogeneous, which has affected the development of the activities performed by the librarians operating in the II.ZZ.SS, influencing their competence profile. Some of the service provided are similar to any other Library: acquisition and cataloguing, document delivery, photocopying and duplicating, loan. Some services are targeted to specific users and focus on their peculiar information needs: reference, user education and knowledge management, the documentation holding management and improvement.

Considering certain activities such as “*The Library holdings development and management*” or “*reference and bibliographic assistance*”, it is clear that the librarian is not merely asked to perform cataloguing and classification but is expected also to select and access various documentation material, from scientific publication to grey literature, such as presentations or communications to international meetings, proceedings, laboratory reports and audits, retrieving these documents from well known publication instruments as well as in the web. This special scientific production is offered to the II.ZZ.SS. customers by means of an accurate retrieval and selection into the web, into specific databanks and open archives and provided by means of specific editorial products, such as the Bibliographic Bulletins issued by these Boards.

Another field the librarians are addressing their attention to is the information retrieval in the field of rules and law which is of special interest for this kind of users. Considering their control and inspection activity in farming areas or in food producing facilities, the Public Veterinarians need a continuous updating of the European and Italian laws.

The staff operating in the Libraries at the IZSLER and at the IZSLT in Rome is trained to provide an information retrieval and management service in the field of animal health law by means of a specialized updated legislative databank (*Lexvet*), mentoring the users along their queries and granting the access to full text documents as well as by means of a *Legislative Bulletin*, an electronic document containing the citations and links to the full text legislative provisions. The reference and bibliographic assistance are characterized by some peculiarities: the filed of interest which is VPH.

The Library staff is required to perform the usual activities of a library, such as electronic resources management or the loan service but in a veterinary health library there are urged to develop a certain expertise to be able to meet the widest information needs through the integration of various resources and knowledge management service to organize the information retrieved. Another vital activity is the user education which is momentous in the organization of the whole work. The researchers need

to be autonomous with the new ever sophisticated electronic resources whereas a noteworthy share of the users need a information literacy education to bibliographic research and law resources. Among the vocational competence the librarian is required to acquire skills and abilities as to the planning of education projects as well as to teaching techniques.

So far the authors have sketched the background of the librarian's activity who is asked to develop skills and knowledge in information science, languages, law, communication, education and training besides the conventional curriculum in librarianship. The librarian has to go outside the library not simply to reach remote users but to interweave a strict relationship with them who represent the real users. The intermediation role between the users and information society is much more complex and is particularly challenging: only developing a broader view the offer can meet the demand.

### *Methods*

#### *The IZS librarian's specific competence*

Considering the above-mentioned overview, the profile competence of an IZS librarian can be structured as follows:

##### **Competence in librarianship**

- Monographs and journal cataloguing/ Classification and subject heading cataloguing/ loan/ ILL (interlibrary loan) and document delivery
- Sorting out of specialized journals and electronic archiving
- Knowledge and selection of the law (copyright)
- Reference service and bibliographic assistance

##### **Specific competence as to VPH legislation**

- Analysis, sorting out and selection of the recent legislative provisions
- Specific legislative databank updating
- Full text access to legislative provision

##### **Specific ICT (information and communication technologies) knowledge and skill**

- Integrated system management as to the work flow in the library
- Acquisition of the up-to-date notions in the field of the electronic publishing market
- Acquisition of the information offer through the internet and *open archives* and *open access sites*

##### **Competence in the field of research**

- to project and carry out research works in the field of librarianship and advanced documentation
- to carry out scientific works in the field of librarianship and documentation
- to support the researchers in selecting the journals to publish their works

### **Competence in communication and resources management**

- effective communication with the user
- user-oriented approach
- financial resources management
- facility management: premises and equipments
- human resources management
- Development of an internal communication system and human resources management abilities
- Team work attitude, consortium activities with the ten II.ZZ.SS. and with the domestic and international cultural interchange network (NILDE, BIBLIOSAN, EAHIL, etc.)
- Advanced language knowledge to allow international relationships and especially scientific English reading comprehension ability
- User education skills and abilities

These abilities and expertise along with the customer satisfaction and needs are directly connected to a quality system subdivided into: analysis, control, development and screening. This system is vital to fill the gap detected between the skills available and the skills to be acquired and to accomplish a quality target in *the Education, Training and Documentation Departments* of IZSLER in Brescia and IZSLT in Rome.

The competence development and screening system of the personnel operating in the Documentation Structure in IZSLER in Brescia and IZSLT in Rome has been stimulated by the choice to set up a quality system in conformity with the ISO 9001: 2000 rule, with a special attention to point n. 6 (Resource Management) which specifies both *'the importance of the definition and control of staff's competence and the development of appropriate programs*. On the basis of this common starting point, the two Institutes have developed two system which are organized in different way but which share a similar method. The two models are explained as follows.

#### ***The competence development system of the staff operating in the library at IZSLER***

The competence screening and development of the internal staff of the Documentation System Department (*Struttura Sistema Documentale*) at IZSLER is applied along with the development of the Quality System certified in conformity with the ISO 9001:2000 set up in 2006. The starting point is the competence development analysis by reading the Personal Records: this provides a detailed description of the staff's knowledge, skills and abilities as well as of their usual tasks.

On this basis, the file "*activity/competence mould*" can be written and updated. The I table is an example and concerns the Bibliographic Reference and Assistance Service.



Microsoft Excel - M&2 rev. 1 Activity-Competence Mould

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Reference and bibliographic assistance

Specific competence

Specific competence description	Mussiro	Bigoni	Colombini	Dellabari	Franceschini	Girani	Graz
knowledge of the library holdings	3	4	3	3	4	4	2
scientific data bank reference	3	2	1	2	3	4	1
legislative data bank reference	3	3	1	2	3	3	1
specific database reference	N.A.	4	1	1	4	2	1

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I Table: Activity/Competence Mould

The left column relates to the specific skills required to perform the functions within the reference service: any staff unit is assigned an evaluation point (from 1 to 4 relating to the upgrading competence level) which indicates the expertise level as to the various systems and equipment. It is obvious that where the evaluation is low (from 1 to 2) it is necessary to project an education plan to allow the staff to acquire autonomy. A partial competence will be appraised when such activities can be carried out thanks to a senior colleague's tutorship.

On the basis of the analysis and appraisal of this *Activity/competence mould file*, where all the areas of the Documentation centre/Library are studied, the Education Plan for the Internal Human Resources for the present year can be conceived and drawn up.

Education and training	supervision	To accomplish a specific knowledge of the development methods of Education Plans and the ability to evaluate the impact on the organization	November 2007	05.01.0007 06.07.0007 Active didactic methodology application or instrument to need analysis and for the evaluation relating to the education needs – the development process – the evaluation, the efficacy of education in health
Education and training	Education and training and secretary's office	Specific updating relating to the legislative openings and the techniques relating to national and regional accreditation systems	Referring to the starting up of courses organized by labour and Regional Boards	
Documentation system	Library's holdings development and management	Upgrading knowledge about cataloguing and classification standards	September 2007	
Documentation system	Library's holdings development and management	Advancing of the special cataloguing concepts	June 2007	
Documentation system	Document delivery	Upgrading knowledge concerning the employment of internal and consortia document delivery	May 2007	Ref. to file " internal staff "
Documentation system	Reference and bibliographic assistance	Basic knowledge relating to user-oriented services and the employment of electronic publications and e-Refer assistance	September 07	Ref. to file " internal staff "
Documentation system	Supervision Library coordination	Knowledge of the applying legislative provisions concerning copyright, open access and licenses	November 2007	

II Table: Education Plan for the Internal Human Resources

The second table refers to the staff involved in the Education project relating to the specific objectives as well as to the real date which will be compared to the actual date when the training education event takes place. This table is than to be compared to the file *Internal Staff Updating*, recording every education course attended by the personnel.

Another step is, on one side, the connection between the analysis of the knowledge/skill, the drawing up and carrying out of the Internal education Plan and, on the other side, by the identification of the institutional development objectives. The last ones are referring to specific library activities which are screened and evaluated during the year by means of quantitative time indicators which specify the time elapse needed to carry out a specific task or job or the number of operations carried out in a time unit (III Table).

Performance indicator	DEFINITION					
	PROCESS	REPORT SYSTEM	measurement unit	Expected Improvement	reporting frequency	review date
number of article requests received through NILDE	photocopying and duplication	NILDE	number	100	monthly	31/01/00
number of article requests carried out through NILDE	photocopying and duplication	NILDE	number	2	yearly	31/01/00
Number of article requests received through SDDL	photocopying and duplication	SDDL	number	100	monthly	31/01/00
Number of duplication and/or binding works	photocopying and duplication	DB Statistic	number	20	monthly	31/01/00
Average time to complete duplication and/or binding works	photocopying and duplication	DB Statistic	number	4	monthly	31/01/00
Number of internal article requests	photocopying and duplication	TR Statistic	number	50	monthly	31/01/00
Average time to complete internal requests	photocopying and duplication	DB Statistic	number	4	monthly	31/01/00
Number of legislative provision requests	photocopying and duplication	DB Statistic	number	5	monthly	31/01/00
Average time to complete the legislative provision requests	photocopying and duplication	DB Statistic	number	4	monthly	31/01/00
Number of article requests carried out through NILDE and directly delivered	photocopying and duplication	NILDE	number	1.000	yearly	31/01/00
Average time to complete the article requests carried out through NILDE and directly	photocopying and duplication	NILDE	number	4	yearly	31/01/00

III Table: Performance indicators (IZSLER – Brescia)

In this way, the internal staff's growth is supported by a global development vision and, even if slightly, also provided production incentives. The whole activity related to the competence analysis and competence growth is thoroughly examined and evaluated and periodically offered to internal and external audits. Every six months internal audits take place to inspect the screening on a number of activities and services, measured by means of specific indicators as in table n. 3.

In the library staff „s activities the various critical or “nonconformity” aspects are considered as development starting points and are recorded in the file “*Development Management*” along with the correction or prevention actions. Furthermore, The Certification Authority carries out an audit into the Documentation System at IZSLER once a year, to evaluate the confirmation of the Quality Certification ISO 9001: 2000. Indeed, another competence development control, although indirect, can be deduced by the impact of the services offered by the IZSLER Library, by analysing the users' evaluation, suggestions and comments collected by means of a customer satisfaction survey, distributed every six months. This kind of surveys can pinpoint possible lacks to be filled in the personnel preparation as well as in the competence development so

as to provide the promptest and advanced service to meet the demand expressed by the specialized users at IZSLER.

***The staff competence development system at IZSLT – Rome***

The staff competence development and screening at IZSLT in Rome was started up in 2004 together with the development of the quality system certified according to the ISO 9001: 2000 rule by the *Education, Communication and Documentation Department (FOD)* involving the Library. The system’s operative instruments are as follows: *the job description, The Department Education Plan, the six-month check.*

*The job description* is a document reporting for each operator the activities and the tasks to be performed, the skills and abilities required and actually possessed in a detailed way. The skills and abilities are described referring to the knowledge, the operative capabilities involved as well as the behaviours. Any expected competence is given an evaluation in a growing scale from 1 to 4 and it is related to the competence level actually possessed by the operator. In the IV Table, an example of JD is shown, relating to the task: “*selection and acquisition of the scientific documentation necessary to the users’ updating*”.

ACTIVITY	TASKS	EXPECTED SKILLS AND ABILITIES	SCORE FROM 1 TO 4 EXPECTED COMPETENCE	SCORE FROM 1 TO 4 POSSESSED COMPETENCE
Library and Documentation sector, Central Library management support	Selection and acquisition of the scientific documentation materials necessary to the operators' updating	<p><b>Knowledge of:</b></p> <ul style="list-style-type: none"> <li>1) first principles of administrative law</li> <li>2) english language</li> <li>3) first principles of information science</li> <li>4) first principles of librarianship</li> <li>5) copyright law</li> </ul> <p><b>Ability to:</b></p> <ul style="list-style-type: none"> <li>1) organization planning</li> <li>2) goods and services supply management</li> <li>3) use PC, basic softwares and office automation, internet browsing and e-mailing</li> </ul> <p><b>Behaviour</b></p> <ul style="list-style-type: none"> <li>1) communication capability and ability to set up a relationship with the users and clients</li> <li>2) ability to coordinate the processes</li> </ul>	<p><b>knowledge</b></p> <ul style="list-style-type: none"> <li>1) 3</li> <li>2) 3</li> <li>3) 3</li> <li>4) 4</li> <li>5) 4</li> </ul> <p><b>Abilities</b></p> <ul style="list-style-type: none"> <li>1) 4</li> <li>2) 4</li> <li>3) 4</li> </ul> <p><b>Behaviour</b></p> <ul style="list-style-type: none"> <li>1) 4</li> <li>2) 4</li> </ul>	<p><b>knowledge</b></p> <ul style="list-style-type: none"> <li>1) 2</li> <li>2) 3</li> <li>3) 2</li> <li>4) 4</li> <li>5) 4</li> </ul> <p><b>Abilities</b></p> <ul style="list-style-type: none"> <li>1) 3</li> <li>2) 3</li> <li>3) 3</li> </ul> <p><b>Behaviour</b></p> <ul style="list-style-type: none"> <li>1) 3</li> <li>2) 3</li> </ul>

IV Table : Example of Job Description (IZSLT- Rome)

Such paper, referred to as *Job Description*, has been drawn up by the Manager of the Department and the single operator. By the analysis of the gap between the needed skills and abilities, the *Department Education Plan* is drawn up, specifying a specific education and training route for each person who operates at the Library.

The *Department Education Plan* is recorded by the Manager of any Department every year, by January, 30th and agreed by the Library staff. The document referring to the above-mentioned *Plan* is as follows:

V Table: Department Education Plan (IZSLT-Rome)

The staff activity is screened through a system of checks every six months, targeting at analysing and checking both that the tasks assigned have been carried out and that each operator has fulfilled the education objectives fixed.

During the check examination a specific form (VI Table) has to be filled: in this paper, the operator describes the activities carried out in the last six months, possible comments and express a self-evaluation for each task according to a growing number scale from (1 to 6). (The pass mark is  $\geq 4$ )

An interview between The Manager of the Department and the single operator takes place where the former expresses his/her evaluation and compares it to the operator's self-evaluation, to record a unique score.

An extract of the check document relating to the Library activities is reported as follows.

<i>SECTOR</i>	<i>ACTIVITIES/TASKS</i>	<i>NOTES</i>	<i>CHECK RESULT</i> (form 1 to 6; positive result: $\geq 4$ ).
<b>Library and Documentation sector</b>	1) carrying out the tasks indicated in the Job Description (JD).		1) score
	2) cooperation to the procedure relating to the acquisition of the documentation material by the new purchase management software		2) score
	3) effective cooperation in using the IZSLT web sites for the Library homepage: screening and updating	3) efficient cooperation with the technical operators	3) score
	4) cooperation in the Library re-organization project	4) to point at enjoying a better cooperation with the colleagues involved	4) score

VI Table: *Six-month checks* (IZSLT-Rome)

Such check represents a starting point to collect information relating to the “re-engineering” of certain activities and for the individual education and training programme and planning by evaluating in a very detailed way the strength and the development points relating to the performed tasks.

In addition, another competence development check, although indirect, is offered by the analysis of the users’ evaluation expressed through the *Customer Satisfaction* questionnaire which is distributed every year to the internal users.

### **Results and conclusions**

By means of a competence analysis and development system adopted in the II.ZZ. SS. libraries in Brescia and Rome, the internal staff has been fostered to acquire a growing awareness both of the services provided and the expertise and knowledge required in each activity sector and therefore to identify the education and training target to accomplish. This approach has allowed the II.ZZ.SS. to reach the standards required by the quality systems in accordance with the ISO 9001: 2000, by improving the quality of the services provided to the users.

The tools used by Brescia and Rome libraries to analyse and evaluate staff's competence and to plan the training programs are effective instruments which have supported the managers to foster an objective work project method to be agreed with the personnel and to optimize the education management targeting at the competence development.

The comparison of the two different systems has allowed to detect in both the strength and development points. The widest difference can be synthesized as follows: a process management of the activities of Library in Brescia, by using performance indicators to screen them and by a wider attention to the single operator's specific competence control and check carried out at the Library in Rome.

In the implementation of the Rome system, the complexity in the individual control and check process represents a critical aspect. As a matter of fact it takes a long time even if it allows to focus more on the single person than on the whole process. In addition, such an organization which is not yet completely structured into processes, makes a systematic and integrated outlook of the activities and an objective screening of the overall performance particularly difficult. The system applied in Brescia is focused on the process screening although it neglects the individual competence analysis which consider the relevance of the individual interviews with the Manager of the Department, a crucial support to the analysis of the data collected in the table.

The teamwork which has allowed the present research work shows, once more time, the importance of the interlibrary cooperation in continuously developing quality specialized user-oriented services.

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## **ICT AND TEACHING: A NEW PARADIGM FOR MEDICAL LIBRARIANS... AND MEDICAL STUDENTS**

### **Abstract**

Information and Communication Technologies (ICT) are spreading very fast in the health field. ICT have a major impact on medical librarians. They hold a very important and growing role for „info-mediation”. This info-mediation used to be face to face. Now, it occurs using ICT, and mainly Internet tools, such as Email, videoconferencing etc.

Medical librarians also play a very important role in training medical professionals and medical students. Here again, ICT may multiply their impact, e.g. using audio PowerPoint available on the Internet (URL: [http://www.univ-rouen.fr/82005912/0/fiche\\_DPM\\_\\_pagelibre/](http://www.univ-rouen.fr/82005912/0/fiche_DPM__pagelibre/)).

Paradoxically, medical librarians are ready to adopt this new paradigm... while medical students and medical professionals are far from it.