Libraries Relevance in the Digital Age: A Study on Romanian Researchers' Expectations

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Abstract. In the last decades, a line of research on *library quality assessment, library relevance and library impact* has been developed in library and information science all over the world, with the aim of quality improvement and possible implications in organizational strategy and culture.

The purpose of this paper is to determine how Romanian researchers perceive the importance of library in their academic lives and how library usage relates to researchers' outcomes and visibility.

A case study involved a qualitative approach through content analysis of a series of answers obtained by means of twenty completed questionnaires and six registered semi-structured interviews with researchers in mathematics, chemical pharmaceutics, industrial ecology and organic chemistry.

As a result, in order to offer high quality services, Romanian research libraries have to be more prepared to address different requests from their users and to adopt adequate techniques and initiatives in supporting research and, also, formal, informal and professional education.

***Keywords**:* library relevance, library quality assessment, library impact, Romanian research libraries, researchers' visibility.

Introduction

In the last decades, a line of research on *library quality assessment, library relevance and library impact* has been developed in library and information science all over the world, with the scope of quality improvement and possible implications in organizational strategy and culture (for example: Harland, Stewart and Bruce**,** 2017; Sputore and Fitzgibbons, 2017, Lakos and Phipps, 2014; Balagué, Düren, Juntunen et al., 2014; Madge, 2013, Becker, 2011; Poll, 2009 a, b;

Mc Gregor, 2004, Ambrožič, 2003; Saracevic and Kantor, 1997; ALA, 2018 etc). In this context, Lakos & Phipps (2004) highlighted the fact that, nowadays, the growing need to have better access to relevant information is very prominent and libraries, as specialized info-documentary structures, have to demonstrate that their services have relevance, impact and value for their users, in particular, and for the society, in general. In order to deliver effective and high quality services, libraries have to assess their performance from the users' perspective. In general, library users are expecting more control and ease access to services and information (Lakos and Phipps, 2004, p. 345). From these two authors' point of view, a culture of assessment is beneficial to libraries and this may involve an organizational culture change by adopting learning organization and systems thinking approach.

The main objective of this paper is to determine how Romanian researchers perceive the importance of library in their academic lives and how library usage (e.g. traditional collections, digital resources, services, spaces, etc.) relates to researchers' outcomes and visibility, in order to find a series of solutions to meet the quality expectations of active and potential users.

A case study involved a qualitative approach through content analysis of a series of answers obtained by means of twenty completed questionnaires and six registered semi-structured interviews with researchers in mathematics, chemical pharmaceutics, industrial ecology, and organic chemistry.

As a result, Romanian research libraries have to be more prepared to address different requests from their users (senior and junior researchers, professors, research assistants and doctorate students etc) and to adopt adequate techniques and initiatives in supporting research and, also, formal, informal and professional education.

The adoption of quality management principles, along with quality assesment methods and quality communication will contribute to the further development of research libraries and their sustainability.

I. Conceptual framework

1. Conceptual definitions of quality and quality management

Quality and quality management were first approached on the basis of scientific methods by statistical engineers (Shewart, Deming, Juran etc), governments (for the beginning, especially in USA and Japan), directors of large companies in their

ways to find out efficient solutions to the problems they were confronting at the beginning of the 20th century (e.g., Ford – with T-Modell).

The general concept of *quality* has been used since ancient times (the Latin word *quails* – translated by Cicero from the Greek *poiotes* –, with the derivative quālitās, meant "*what kind of*". At the end of the fourteenth century it meant "the degree of goodness" (Partrige, 2016; https://www.etymonline.com/word/quality) and has evolved in time, today being applied in all fields: social, cultural, political, economic, educational, scientific research activities etc.

There are several definitions of quality, proposed by specialists in the field (e.g. Juran, 1948; Crosby, 1979; Deming, 1982; Grönros, 1984; Feigenbaum, 1991 etc.) as well as established by specialized national organizations (e.g. American Society for Quality – ASQ) and international organizations (e.g. International Organization for Standardization – ISO; Eurostat – *Quality Assurance Framework of the European Statistical System*/ ESS QAF).

Quality has been defined as "conformance to specifications" by Shewart (1931) and, according to Juran's opinion, quality means "fitness for use" (Juran, 1948). Also, Juran proposed the *quality trilogy*: quality planning, quality control, and quality improvement, in order to develop a universal thought process for *quality*. According Crosby's view, quality means "conformance with requirements" (Crosby, 1979).

Deming (1982) proposed the following definition: "*Good quality means a predictable degree of uniformity and dependability with a quality standard suited to the customer.*"

For Grönroos (1984, p. 38) quality means *full satisfaction of consumers expectations*. The author mainly refers to the quality of services.

Feigenbaum's vision and contribution (1991) to the definitions of quality derive from his proposal of ten conditions of success in quality management:

1. Quality control is a process that is carried out throughout the company;

2. Quality is the customers perception of what quality is, not what a company thinks it is.

3. Quality and cost are the same not different;

4. Managing quality is managing the business;

5. Quality is an individual and team commitment;

6. Quality and innovation are interrelated and mutually beneficial;

7. Quality is an ethical doctrine;

8. Quality demands continuous improvement;

9. Quality is the path to the most economical and most efficient productivity from the point of view of capital consumption;

10. Implement quality by encompassing suppliers and customers in the system.

On the same line of research, according to Scherkenbach (1991, pp. 105-306) – a Deming's disciple – in order to study quality, it must start from the fact that there are three components of quality: the emotional component (quality becomes a condition of satisfaction and pride of all employees), the logical component (quality is a chain made up of several activities of similar importance and it must be planned, assured, verified, optimized), the physical component (quality needs financial, material and human resources, technologies etc).

According to Jaccard (2013), quality is a form of management composed of a double approach, respectively guiding the organization towards excellence by respecting, at the same time, established standards and legislation. Also, the author emphasizes the fact that with quality matters are faced experts' communities, scientists, but also engineers and managers from the private sector, in their daily activities.

The well renown American Association for Quality/ASQ offers a series of conceptual definitions and generic models used in quality management (https://asq.org/quality-resources/quality-glossary), as follows:

Quality management: "Managing activities and resources of an organization to achieve objectives and prevent nonconformances". Generally acknowledged, quality management means leadership, control and optimization, in order to achieve predetermined goals and user satisfaction.

Quality management system: "A formal system that documents the structure, processes, roles, responsibilities and procedures required to achieve effective quality management".

Quality plan: "Documented information that provides the activities or methods to be taken to achieve objectives and meet specified requirements".

Quality tool: "An instrument or technique to support and improve the activities of quality management and improvement".

Quality trilogy of Juran: "A three-pronged approach to managing for quality. The three legs are quality planning (developing the products and processes required to meet customer needs), *quality* control (meeting product and process goals) and quality improvement (achieving unprecedented levels of performance)".

In the last decades, due to the increasing importance of service performance for customers, a series of researchers of quality in different fields (e.g., Einasto, 2014, pp. 561-566; Kang and James, 2004; Balog and Badulescu, 2008) framed in their studies the topic of *services' quality*, starting from the fact that there are two major research directions, namely: *Nordic European School* of quality (or Nordic school) and *North American School* of quality (or American school).

The *Nordic European School* defines the quality of services through a two-dimensional approach: *technical quality* and *functional quality*, to which is added a third dimension, namely *the image of the organization* (Grönroos, 1982; Grönroos, 1990; Gummesson, 1991; Lehtinen, U. and Lehtinen, J., 1991; Ojasalo, 2010, Einasto, 2014, pp. 561-562). They define as technical quality "what the consumer received in service provision". Functional quality refers to "how the customer received the service offered". The technical quality and the functional quality determine the image of the organization.

Parasuraman, Zeithaml and Berry (1985), from the so-called *North American School*, conducted a qualitative study, through some interviews with executive directors and a focus group, and formulated the following conceptual model, with five discrepancies or gaps, mentioned by the interviewees:

1. The discrepancy between customer expectations and the quality specifications of the services provided by the management of organization. This gap arises because the leadership does not always perceive correctly what the customers want;

2. The discrepancy between the perceived quality and the quality specifications of the service. This gap is because of the fact that the services are difficult to standardize, due to their immateriality;

3. The discrepancy between the quality specifications of the service and the quality offered in reality;

4. The discrepancy between the service provided and the external communication to the customers regarding the supply service;

5. The discrepancy between the expected service and the provided service.

Regarding the services quality management, Balog and Badulescu (2008) offer an explanation of the role of conceptual models. These conceptual models are used by theorists and practitioners for both understanding and optimizing quality of services, as well as for the development of methods and tools for evaluating the quality of services (Balog and Badulescu, 2008, p. 37-38).

The models are based on two theoretical concepts:

1. Customer (user) *perception* of service quality; and
2. Customer / user *expectation* regarding service quality.

The first concept – *customer perception* – was developed as a result of research on customers' behavior. Perception represents a process by which a certain significance is assigned to a certain experience (e.g. purchasing of a service or product). Perceptions may not always reflect reality in a clear way, because they are based on subjective assessments.

The second concept – *customer expectation* – represents the result of the research regarding customers' satisfaction and service quality assessment. In the sphere of services quality, "expectations" mean the client's wishes, which should be met by the service provider. Customer expectations with regard to the quality of service are of different types and involve a series of "norms" that are based on previous experience. "Normative expectations" represent an "ideal standard" of performance service.

Acording to Balog and Badulescu (2008), the purpose of using a quality management system is to holistically monitor and get evidence related to quality in all of the organization's processes and departments, with the general goal of continuous improvement in meeting customers' needs and requests.

With the family of ISO standards begins the maturity of quality. One can observe a series of improvements and revisions of ISO and US standard models, in conformance with the *principles of total quality management (TQM),* during the last three decades.

According to International Organization for Standardization – ISO (2015, p. 1), the seven quality management principles are the following:

1 – Customer focus

2 – Leadership

3 – Engagement of people

4 – Process approach

5 – Improvement

6 – Evidence-based decision making

7 – Relationship management

These principles are not listed in a priority order and the relative importance of each principle can vary from organization to organization and, also, can be expected to change over time (ISO, 2015, p. 1).

2. Quality management in research libraries

According to Poll (2009 a), quality management in libraries can include many aspects, and these aspects can be optimized, if they are taken into consideration simultaneously, from the point of view of interested groups: users (active and potential), institutional founders (university, research institute, community), library staff, library directors, policy makers and the general public.

There are also a number of essentials that can be tailored to the overall quality of library services. These adaptable criteria are (Poll 2009 a):

I. Orientation of services to the users: it doesn't mean satisfying any possible requirement, but by knowing the needs and complaints of the users and adapting the services accordingly;

II. Accuracy and reliability of services: users should be able to rely on a predetermined standard of service quality and services should be consistently offered;

III. Speed and timeliness of services: services (references, loans, document delivery (1), processing of new information media) must be provided adequately, quickly and must have up-to-date informational content (on-line catalogs, electronic publications);

IV. Accessibility: library space, print and electronic collections and all other services must be easily accessible, even for inexperienced users. Examples refer to: timetable according to the users' needs, appropriate signage of rooms and spaces, reliable catalogs and web-pages, easy-to-use online services, clarity of expression etc;

V. Competent and willing librarians to support users: library staff must be trained both in the sense of offering traditional services and offering new services; librarians must demonstrate friendly and responsible behavior, as well as communication skills;

VI. Performance and efficiency: all processes in a library (both background services, for example acquisition, cataloging, indexing, and direct working with users) must be organized and mapped so that they are performed with minimal resources.

3. Methods of quality assessment and their applications in research libraries

Libraries need to engage in a number of different activities in order to observe whether users value their services, collections and programs and whether desired quality or expectations are met or not and for which reasons. All services should be evaluated from the perspective of users' expectations (Lakos and Phipps, 2004, p. 354).

Quality assessment is always subjective, depending on the requirements and expectations of each user. For example, Becker (2011) points out that library users subjectively value if an intrinsic feature of the product or service is good or unsatisfactory, depending on the own purposes and needs.

According to Sputore and Fitzgibbons (2017), quality assessment enables academic library administrators to:

"• Understand their communities' perceptions of quality;

- Undertake planning and programs improvement;
- Operate strategically;
- Empower library staff as professionals with confidence and pride in high quality service;
- Demonstrate quality to current and potential students and staff;
- Demonstrate quality as part of the whole institution;
- Demonstrate value to the university executive, aligned to their values;
- Prevent future budgetary erosion;

- Find and leverage the library's point of difference (to competitor universities and services like Google)".

It is essential that libraries' quality assessment is efficient, sustainable and effective, and enables the achievement of the organization's objectives.

There are several options regarding the evaluation of library services (Poll, 2009 a), among which the most common ones are:

a) performance indicators – measure the profitability and cost efficiency of library services. These indicators produce quantifiable data and, therefore, are sometimes referred to as "objective indicators".

b) sociological surveys with users – measure perceived quality, users' estimations regarding library services. They produce qualitative data and have a subjective connotation.

c) evaluation of results – tries to prove the value and benefits that the library produces for individual users and for society. One can work with quantifiable data (statistics and performance indicators).

It is well known that the quality assurance is one of the most important managerial decisions. In this context, Becker (2011) studied quality management systems in libraries in Germany. According to her research, there are several models and procedures for quality certification, so that any library can adopt any model it wants. There are procedures at centralized level, but which can be adapted at the level of each branch library, depending on the purpose and needs of its users. In other cases, there are different projects, for example Ausgezeichnete Bibliothek / Exceptional Library or Sachsen-Anhalt Service Qualität / Quality of services in the Sachsen-Anhalt region, which are based on universally recognized quality assurance procedures, respectively the national standard DIN EN ISO 9001 or the model proposed by the European Foundation for Quality Management (EFQM).

The implementation of quality management implies the existence of an own strategy, culture and organizational policy and employees with skills and willingness to do a specific task.

Analyzing from the point of view of representativeness and applicability, Sputore and Fitzgibbons (2017) mentioned the following generic models and quality management techniques for international libraries: ISO 9001: 2015, two international library standards: ISO 11620: 2014-library performance indicators and ISO 16439: 2014 – methods and procedures for assessing the impact of

libraries, sociological surveys, data analysis based on the records of the institutes of which the libraries are integral part, ethnographic approaches, economic methods, scorecards (the well renowned balanced scorecard and a proposed value scorecard for libraries), narratives, national general frameworks, e.g. ABEF-Australian Business Excellence Framework, Common Assessment Framework (CAF) and EFQM etc.

The following paragraphs present the most popular models and systems of quality management according to the studies of Sputore & Fitzburg (2017) and Becker (2011). In these studies, the authors (Sputore & Fitzburg, 2017 and Becker, 2011) presented generic models, and therefore, at some point, the Australian and German models of quality presented here are overlapping.

ISO 9001:2015 Quality Management Systems

ISO 9001 Quality Management Systems is a comprehensive quality standard that can be applied to any organization in any sector. It was created in 1987, with the current version published in 2015, and has been used in a number of university libraries to manage and demonstrate quality since the 1990s. It is widely recognized internationally. A series of examples of university libraries with ISO 9001 certification includes: the University of Western Sydney, Fiji National University, Technische Universität München (TUM) in Germany, etc.

The audit represents a systematic verification and an evaluation carried out by audit specialists. They evaluate libraries on the basis of meeting certain certification criteria. The certification is valid for a period of three years. According to Becker (2011), the most renowned libraries that benefit from certification according to ISO 9001 are the following: Stadtbibliothek Freiberg (since 2001), Stadtbücherei Walldorf – Baden (since 2002), a union of the six city libraries in Dormagen, Erkrath, Krefeld, Leichlingen, Neuss and Wesel (since 2006), as well as the library of the renowned Technical University of Munich – Universitätsbibliothek der Technischen Universität München (since 2007).

Inconvenients/Difficulties in applying ISO 9001 in libraries:

- There is a heavy focus on processes in this framework, which may require more detailed analysis and consideration of intersections between processes, than is usual in libraries;

- The standard requires a significant workload of internal audits, which must be resourced and expensive.

ISO 11620:2014 Library Performance Indicators

Collection of usage statistics represents a staple of libraries' management procedures and is relevant for benchmarking purposes and for evidence-based decision-making.

ISO 11620 Library Performance Indicators is an important framework for leveraging all statistical data to demonstrate performance and quality in a significant way. The performance indicators described in the standard have been tested through widespread use in libraries or practical research.

There are four areas of quality management outlined in the standard:

(1) Resources, infrastructure: What services does the library offer?

(2) Use: How are the services accepted?

(3) Efficiency: Are the services offered cost-effectively?

(4) Potentials and development: Are there sufficient potentials for future development?

The structure of the standard is modeled on the balanced scorecard approach, providing libraries with a methodology to score a particular service, so that it can be linked to strategic goals or compared with others (for example, from a user survey on libraty collections, digital documents or opening hours requirements).

ISO 16439:2014 Methods and Procedures for Assessing the Impact of Libraries

Despite the standards described above, which focus on the quality and performance of the library's services, operations and staffing, ISO 16439 is designed to evaluate the impact of the library upon individuals and/or a community. Impact refers to a tangible or intangible change in an individual or group, resulting from contact with the library services. ISO 16439, adopted in 2014, intends to standardize definitions for impact assessment, and describe and harmonize methods that have been tested and that have delivered meaningful results (Poll, 2012).

ISO 16439 is one tool that libraries can use to operationalize their measurement of impact and contribute to the larger environment of impact measurement in higher education.

The Standard lays out the following terminology and definitions related to 'impact' in the library sector (De Jager, 2015; Laitinen, 2015; Poll, 2012, apud Sputore and Fitzgibbond, 2017):

- *Input: a library's resources, including funding, staff, collections, space, equipment.*
- *Output: Products that result from the library's services, e.g. books acquired, resources used, inquiries, etc.*
- *Process: Connected or mutually dependent activities that transform inputs into outputs, e.g. cataloging, lending, reference service.*
- *Outcomes: Effects of the output, defined according to the library's strategic objectives, e. g. loans, visits, and users' satisfaction.*
- *Benefit: a useful, helpful, or good effect.*
- *Impact: a tangible or intangible change that results from use or contact with a library service.*
- *Value: Views of the library's importance or significance from the perspective of users, community groups, decision-makers, etc. This is related to perceptions of benefits. From the perspective of an individual, impacts may include changes, for example improvement of skills, changes in attitude or feelings of self-efficacy, increased academic achievement etc.*

Social impact is indirect and, in general, more difficult to quantify. In the academic context this could include social inclusion on campus, organizational culture of academic institutes and identity, fostering lifelong learning, better student experience, long-term benefits of university education (e.g. mental health) (Norton and Cakitaki, 2016 apud Sputore and Fitzgibbons, 2017, p. 214), and, also, preserving institutions' academic heritage for future generations.

Both direct and indirect measures are identified for collecting evidence of impact, and it is generally advised to use a combination of methods and compare results (Poll, 2012). As this standard has been adopted recently, it has not been widely implemented in academic libraries' assessment management practices, but it has the potential to inform, and ideally standardize, approaches to assessment in the future.

The model proposed by the European Foundation for Quality Management (EFQM) represents a European model of self-assessment with a view to achieving the so-called *total quality management*. According to Becker (2011) the *Library of the Friedrich-Ebert Foundation* – Bibliothek der Friedrich-Ebert-Stiftung – represented, on that date, the only library in Germany that has introduced the quality management system based on the *EFQM* model.

General Common Assessment Framework (CAF)

CAF is a European quality assessment system. It is based on the EFQM model. Among others objectives, CAF wants to guide organizations progressively throughout the cycle *plan-do-check-act* (cycle Shewart-Deming PDCA/PDSA) and to facilitate the self-assessment of public organizations, with the purpose of diagnosing and improving actions.

Another generic model for quality assurance in German research libraries, mentioned by Becker (2011), refers to the service quality specific for libraries in the Sachsen-Anhalt / Service Qualität Sachsen-Anhalt area. The certification process is based on the philosophy of *Total Quality Management* (TQM) and also on the norms of DIN EN ISO 9001. It is preferred by these libraries because the concept of Total Quality Management (TQM) represents an all-inclusive management concept, oriented towards continuous optimization and complete quality in all areas. According to Becker (2011), for the implementation of the total quality management principles in libraries the following elements are decisive: *a continuous orientation towards users, employees and processes*, along with the *managerial responsibility*.

Assessment Methods

There are many methods which enable libraries to collect qualitative and quantitative evidence of quality. In the following paragraphs will be briefly presented three of them (user surveys, ethnographic approaches and economic methods), in accordance with their most popular use.

User Surveys

According to Sputore & Fitzgibbons (2017, p. 214), "satisfaction surveys are a common method of assessing the quality of library services. In general, authors agree that user satisfaction has been the most often evaluated. Surveys can be used to gather a wide range of perceptions of quality and value from users and potential users of the library that can aid the library in prioritizing further qualitative and quantitative analysis of particular aspects of their service. Libraries can obtain this valuable information from their communities by administering their own surveys. In terms of library-specific surveys, LibQUAL+, originating in 1999, represents a survey instrument preferred by many university libraries in the US and internationally, with more than 2,600 institutions reported to have used it (Atkinson & Walton, 2017)". One example for Romania is the running survey *What proposals do you have for ensuring optimal reading conditions in the reading*

rooms of the Library of the Romanian Academy ? (https://biblacad.ro// formular_propuneri.html).

Methods Based on Ethnographic Approaches

Ethnography is an interpretive, qualitative research approach used to obtain an in-depth cultural and social understanding of a group's experience. Ethnography has gained popularity in academic library settings. Ethnographic-style methods are often used to obtain evidence of impact, and are recognized in ISO 16439 as such (Sputore and Fitzgibbons, 2017, p. 217).

In general, library specialists recognize five primary types of ethnographic-style methods that have been used in library settings:

• Observation of subjects;

• Interviews;

• Fieldworks;

• Focus groups;

• Participants' recordings, related to their behavior or own experience.

Economic Methods

There is a wide variation of economic methods applied in different studies. For example: *direct use benefits, indirect use benefits, tangible asset valuation, intangible assets valuations, cost benchmarking* (Sputore and Fitzgibbons, 2017, p. 217-219).

Regarding the tools of communicating quality, balanced scorecard and narratives are the most common.

Balanced Scorecard

The Balanced Scorecard (proposed by Kaplan & Norton, 1996) was initially popularized in libraries in North America by initiatives of the ARL (Association of Research Libraries) to support libraries and develop capacity in their assessment activities (Sputore and Fitzgibbons, 2017, p. 219). It represents a performance measurement framework that has been used in many libraries across the world, including some Australian universities beginning in the early 2000s (de la Mano and Creaser, 2016; Tang, 2013 apud Sputore and Fitzgibbons, 2017, p. 219). De la Mano and Creaser (2016) mentioned more than fifty libraries all over the world

(USA, Europe, Australia, Asia, South Africa) that adopted this model, thereby a few examples: Kelvin Smith Library; Florida State University; James Madison University; New York University; University of North Texas; University of Notre Dame; University of Texas; University of Washington, Denver Public Library, University of Calgary; London Public Library, University of Glasgow; University of York; Warwickshire County Library; National Library of Scotland, German National Library of Science & Technology; University and Regional Library Munster; Bavarian State Library Munich; University Library Bremen, Royal Library, National Library of Denmark and University Library for Copenhagen, Finnish National Library, Bond University Library; Wollongong University; National Library of Australia, Hanyang University Library, Seoul, Pretoria University etc.

Narratives

Narratives represent an emerging approach for communicating about quality in the academic library sector. Narratives can be presented textually or visually, such as through videos and infographics (Sputore and Fitzgibbons, 2017, p. 219).

Practical examples

A series of good examples, regarding the use of quality assessment methods in libraries are exposed in the following paragraphs.

Balagué, Düren, Juntunen and Saarti (2014) analyzed the construction of quality systems and the audit of three European academic libraries, namely the Medical Library of the Hamburg-Eppendorf University Medical Center (Germany), the Universitat Autònoma de Barcelona (Spain) and the University Library of East Finland. The libraries were selected based on the fact that they all implemented ISO 9001 quality management systems (QMS) and audited them. Benchmarking is used, as it represent a method widely used in realization of the quality management system. The purpose stated in the article is to learn from other organizations and to put into practice the best practices found during the process and to avoid the pitfalls which other organizations have experienced. The authors recommend, first and foremost, international cooperation between libraries of the same type.

On the other side, Ambrozic (2003) correlates the use of performance indicators with the level of development of the respective library, by country. The author considers that the use of library indicators and the interpretation of their results is a very important criterion, which makes the difference between libraries in very high developed countries - where dedicated software of libraries are used, which measures the impact and value of the library for users and society in general - and

the less developed countries, that do not apply these quantitative methods for assessing the impact and value of the library for society. Also, the author observes that continuous improvements occur only where these quantitative performance indicators are applied and analyzed.

Poll (2009 a) conducted a study in which the performance indicators foreseen and described in the international ISO library standards and the German national model Bix are correlated with the four perspectives of the balanced scorecard, respectively:

1. The user perspective (customer service / services oriented to the community served);
2. The perspective of internal processes;
3. Financial perspective;
4. The learning and development perspective.

Poll's research (2009a, pp. 61-70) described benchmarking projects and the influence of the concept of balanced scorecard and – by means of examples – she tries to prove the usefulness of benchmarking data for quality management.

McGregor (2004) gave details about the process of implementing with success the ABEF-Australian Business Excellence Framework in the Library of Wollongong University.

For the Romanian landscape, a research using a combination of qualitative and quantitative methods in library assessment was undertaken by Madge (2013, p. 389) in order to study the information retrieval behavior of university users in Romanian research libraries. The study reveals the following aspects: traditional library publications are not excluded by library users, although we are in the digital age, marked by the unprecedented evolution of information and communication technologies, and many respondents admit that they, sometimes, need the assistance of librarians in finding and accessing digital resources. The author also mentioned that, among the important advantages enumerated by the respondent users regarding the digital library are: “speed of access to many different resources, opportunities for professional development and timely receipt of the desired information” (Madge, 2013, p. 389).

II. Case study on Romanian researchers' expectations regarding the quality of library services

Methodology

The survey was conducted in the time span 15 October - 15 November 2019. Twenty-six researchers (coded here as researchers 1-26), from the fifty invited active users of libraries, responded to the survey, for a 52% response rate. Depending on respondents' informed consents, the collecting of data involved twenty questionnaires and six semi-structured interviews with researchers in mathematics, chemical pharmaceutics, industrial ecology, and organic chemistry. For interpretation of results it was adopted a qualitative approach by means of content analysis, which is considered here as "a technique for collecting and organizing information in a format that allows researchers to make inferences about the characteristics and meaning of the messages – written or oral – and the artifacts of social communication" (according to the definition proposed by Agabrian (2006, p. 22). The principal aim of the case study was the optimization of the services offered by the Romanian research libraries.

The research questions were to identify what services should be developed and improved, specifically intended for a positive impact of libraries on the outcomes and visibility of researchers.

To these end, the survey and interview questions sought to answer these two broad questions:

1. How can Romanian research libraries have an impact on the production, consumption and dissemination of high quality scientific content for their users? and

2. How can Romanian research libraries contribute to the visibility of Romanian researchers nowadays worldwide?

Results and Discussions

One of the most significant aspects in the service quality in Romanian research libraries is represented by the ability of librarians to promote and offer to researchers high quality digital contents from subscribed databases and journals. 96% of the respondents argued that they prefer to use Google and digital archives, along with participating in conferences and personal communications with peers, in order to find out about interesting subjects or articles published in specialized

databases. This is one reason why Romanian research librarians must systematically integrate principle of service quality management into their strategic priorities and practices, by:

- doing online research for their users, and creating and maintaining electronic databases;

- promoting, at the same time, resources, services; and

- demonstrating a constantly friendly interaction with institutional and non-institutional users.

On the other side, 73% of respondents are very satisfied with the opening hours of the libraries that they have visited in general, as the libraries have the same working hours as the research institutes. However, 27 % of the respondents (seven mathematicians) consider that it would be of great advantage for them to have access to the library at any time of the day or to be offered the facilities of so called *self-service library system.*

At a same time, 75% of the Romanian mathematicians who responded to this survey were strongly positive about the value of the Library of the *Simion Stoilow Institute o*f Mathematics of the Romanian Academy (IMAR) as a whole, in terms of collections (print and digital) and services, for example:

"I have held several research positions abroad and on this occasion I have frequented libraries of various universities (in Italy, the United Kingdom, France and Germany). Due to the wealth of books available, I think that the IMAR library can be compared to the best libraries abroad. But the library of IMAR is an exception. I think that, in general, libraries in Romania are inferior to those abroad, they do not have so many electronic resources and specialized books" (researcher 7).

On the same line, researcher 4 considers that "the quality of services offered by IMAR library is similar with that offered by a series of libraries in western European countries. There are better international libraries (compared with IMAR Library) which are technically endowed with a larger collection of books and journals, but, also, there are others libraries that are worse from this point of view".

This is not the case for all Romanian research libraries. For example, researcher 12 (chemical pharmaceutics) considers that the difference between the library of her institute and libraries in high developed countries is very significant: "In 2000, I was at the library of the Faculty of Pharmacy in Madrid. I needed to consult some journals, which were quite difficult to find in Romanian libraries, for the

preparation of my doctoral thesis. I had access for two days to all collections of books and journals, to browse them, without any restriction. The difference is still high".

As regards to the support offered be the libraries to researchers, a series of respondents (researchers in chemical pharmaceutics, chemistry and industrial ecology) consider that closer links between researchers and librarians would bring benefits to both, and, also, to the research institute in general. However, librarians should do more efforts to promote the digital resources, even in the form of electronic alphabetical lists of valued titles of journals (available through subscriptions or through paid memberships to databases) and, also, researchers, on their side, should visit and rely more on library, as an important support in their scientific activities.

Besides, with reference to the support offered by librarians and their impact on production, consumption and dissemination of high quality scientific content for their users, in general mathematicians consider that Romanian librarians only have to know very well the collections and to be very prompt in giving the right answer. They do not need (as researchers) any suggestion from librarians regarding titles, subjects or authors, as they have their own bibliography and their own research questions. For example, researcher 7 affirms "For me, is very important for a library to have the materials I need in research (books, specialized article etc). Also, the help offered by a librarian is very important if he/she is a competent person who helps me in finding materials that I need, according to my own bibliography". Also, researcher 10 (mathematics) points out that "Nobody preserves scientific information for a long term. Libraries are the only ones that, traditionally, deal with this. The great advantage offered by libraries regarding production, consumption and dissemination of high quality scientific content for their users is represented by their function as of long-term archives of publications". Researcher 16 (mathematics) considers "it is impossible for a librarian to have an in-depth knowledge of the fields of advanced mathematics. The recommendation might go to a high school library. It helps, however, if the librarian has knowledge of mathematics at university level, to, at least initially, classify books, journals or to use key words and classification numbers, which in mathematics are very complex and various." By contrary, researchers in chemical pharmaceutics, chemistry and industrial ecology consider that librarians must recommend adequate publications for study or for publishing to young researchers and PhD students. To this end, researcher 12 affirms : "In this way (suggestions of a librarian) it is possible to avoid publishing in predatory journals by young and inexperienced researchers".

All respondents consider that dedicated spaces (quiet working conditions offered in reading rooms and special rooms for team working) provide a better work environment for researchers, and also a space for scientific dialogues among researchers.

In relation with second question, respectively how can Romanian research libraries contribute to the visibility of Romanian researchers nowadays worldwide, all respondents consider that first and foremost libraries can have a very significant role through the institutional digital repositories and through digitization of their old preprints. Also, they consider that the libraries contribute very much to their visibility as authors due to the fact that libraries offer them access to research materials that cannot be obtained from elsewhere and in this way libraries help them to do further research and publish it in scientific journals or as books.

Conclusions

The concept of quality and quality management have been approached on the base of scientific methods from the early twentieth century to the present day.

The quality assessment frameworks presented in this paper consist of a number of generic models previously published, which were adopted by libraries around the world.

Several techniques exist for measuring quality in libraries and for reporting internally and internationally. Also, the theoretical models presented here remain open to further developments and updates pertaining to collection of data, methods of analyzing, tools and good practices.

Related to the case study presented here, the success of Romanian research libraries depends today in a good part on librarians' abilities to connect to the actual researchers' information needs and to aggregate and analyze data related to the perceived importance of library through the lens of users.

The results of the empirical research reveled the fact that, in comparison with other academic research libraries on an international level, Romanian researchers consider that the Romanian libraries are, in a certain part, comparative as regards collections, services, support offered by librarians, but, related to the endowments of reading rooms, modern furniture and new working stations remain almost constant requests. Also, regarding the library collections, with the exceptions of most of mathematicians, respondents consider that Romanian research libraries must drastically improve and develop their digital and print collections.

The limitations of the case study are linked to the number of respondents and to the principal research question, namely the relevance and impact of Romanian research libraries on academic visibility of scientists.

The case study is conducive to further studies on quality assessment in libraries. Future research can explore, for example, the relationship between knowledge management and quality management of Romanian libraries or between the organizational culture and the strategy of libraries to remain relevant, in the context of further developments in scientific works in Romanian academic or research institutes.

Note

(1) Document delivery (DD) represents a library service which copies non-returnable literature required by library users, including book chapters, images, journal articles, manuscripts, maps, reports, and other library collections and then emails or sends them to library users directly or indirectly (Source: https://www.sciencedirect.com/topics/social-sciences/document-delivery).

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