

## **Quality Assurance and Enhancement in Romanian Research Libraries**

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**Abstract.** In the actual context of international competitiveness, but also of international collaboration, research libraries are increasingly interested to develop their role in supporting research and innovation, and the assurance of an effective quality management of library services is more advocated today than ever before.

Quality assurance and enhancement, by means of a wide range of irreproachable information services and collections of publications, but also by assessing the behavior of the stakeholders of research libraries, constitute very important aspects for the prestige of any research institute in Romania.

Research libraries represent one of the pillars for research activities at the highest level and, therefore, quality enhancement of library services is becoming increasingly challenging for the whole academic life. It is necessary to incorporate strategies, in order to permanently respond to education and research& innovation planning at national level. The study is intended to propose some measures for improving the service quality in research libraries in Romania, by evaluating facilities offered by libraries, according to users' requests and expectations.

Librarians in research libraries are nowadays also very involved in open access strategy and open science, through a proper data management, as well as in the ethical issues arising from these realities.

**Keywords:** research library; quality assurance; quality enhancement; Romania; behavior of library's stakeholders; role of librarians in open access strategy; data management.

### **1. Introduction**

Over the last decades, quality management in libraries - through quality assurance and enhancement - has progressively developed into an active line of research for specialists in library and information science (LIS).

My study aims at offering a short conceptual framework, through a literature review on quality assurance and enhancement in libraries, along with an empirical study of users' requirements, preferences and expectations from the Library of Institute of Mathematics of the Romanian Academy (IMAR), that represents an important pillar for researchers in Romanian academic mathematical life.

## 2. Conceptual framework

The assurance of an effective quality management of library services proves to be more advocated than even before. Taking into consideration the recent preoccupations and numerous publications on quality of libraries services, I mention only a series of them: Jethro Newton (2013), Olga Einasto (2014), Jeremy Atkinson (2016), Fiona Harald, Glenn Stewart and Christine Bruce (2013), Felicity McGregor (2004), international conferences such as QQML (ten editions until now), preoccupations of IFLA, American Library Association (ALA), Association of College and Research Libraries (ACRL), Association of European Research Libraries (LIBER), The European Quality Assurance Forum (EQUAF, since 2006), numerous audit programs such as *Bibliothek mit Qualität und Siegel*, *Audit Report on the Cape Peninsula University of Technology* (2011), *Quality Assurance Framework of Ontario Universities* (update 2017), the works of *Academic Quality and Enhancement Committee of the University of Chester* (2017-2018) etc.

Generally acknowledged, quality management means leadership, control and optimization, in order to achieve predetermined goals and user satisfaction. Quality management ensures customer - in our case the active and potential users of the library – orientation, resource planning and efficient work processes.

The terms of *quality assurance* and *quality enhancement* used throughout this study are related to the following studies and definitions:

1. According to ASQ Audit Division and J. P. Russell, editor for *Learn about Quality* (<http://asq.org/learn-about-quality/quality-assurance-quality-control/overview/overview.html>), one definition of **quality assurance** is: "all the planned and systematic activities implemented within the quality system that can be demonstrated to provide confidence that a product or service will fulfill requirements for quality; one definition for **quality control** is: the operational techniques and activities used to fulfill requirements for quality. Often, however, "quality assurance" and "quality control" are used interchangeably, referring to the actions performed to ensure the quality of a product, service or process".
2. Another good example regarding the definition of the terms *quality assurance*, *support*, *enhancement* and *monitoring* is that offered by the Cape Peninsula University of Technology (CPUT, 2011). On the occasion of an institutional audit for higher education quality in 2011,

they published on the website the following statements regarding their *strategic quality thrust* (<http://www.cput.ac.za/services/quality>):

- **“Quality assurance** represents the policies, systems, strategies and resources used by the institution to satisfy itself that the quality requirements are being met; *the implementation of harmonized quality assurance systems across all campuses*;
  - **Quality support** represents the policies, systems, strategies and resources used by the institution to support and sustain existing levels of quality; *to embark on a process of support of the quality management expertise* ;
  - **Quality development and enhancement** represents the policies, systems, strategies and resources used by the institution for support; *to embark on a process of quality development and promotion for the staff of the institution*
  - **Quality monitoring** represents the policies, systems, strategies and resources used by the institution to review monitor and act on quality issues. Research: to conduct research on the effectiveness and impact of quality initiatives and actions”.
3. In addressing the matter of impact of quality assurance in terms of **enhancement** in the last two decades, Jethro Newton (2013) studies what particular attention has to be paid to the notion of quality enhancement. His paper also focuses on the challenge of creating conditions for supporting enhancement and change. According to him, amongst other things, quality enhancement initiative is underpinned by effective leadership and effective communication. Further, the author considers that: “as the emphasis on quality enhancement grows, it becomes even more important politically”. In his context, he offers some clarification in the terminology, namely, quality assurance is taken to be a deliberate process to check, evaluate and make judgments about quality and standards. It may also indicate direction for enhancement and improvement.
  4. Referring to *service quality (SQ) in the library context*, Olga Einasto observed that: “There are two main streams of research on service quality, namely Nordic school – represented by Grönroos, Gummesson, Lehtinen, U., Lehtinen, J., Ojasalo - and The North American School researches – represented by Parasuraman, Zeithaml and Berry. The *Nordic school* defines SQ in terms of functional quality and technical quality. According to Einasto, in the library context the technical quality is associated with real objects – the building, the furnishing, books, computers, etc. Regarding the functional quality – that is defined as how the customer perceives the service- the typical factors, which influence the functional quality in the library are: competences of librarians, speed of services, simplicity of access. Researches belonging to the North American School developed the so-called *5 Gaps model*, according to which the consumer perception of service quality is based on five gaps, each constituting a certain discrepancy,

- namely 1. the gap between customers' expectations and the service quality specifications, because of insufficiently studied user's expectations; 2. the gap between the pursued quality and the service quality specification, caused by the fact that services, including e-services, are difficult to standardize due to their immaterial nature; 3. the gap between service quality specifications and the service quality actually delivered, for example, the answer to the information search cannot be delivered to the user in the specified time frame; 4. the gap between service delivery and external communication to customers about the service delivery; 5. the gap between the expected and perceived service quality". In adapting this model to the context of the research library, Einsato comes with an additional gap:"the gap between the information needs of the users and the availability of financial resources of the research library to meet these needs. This gap is caused primarily by the general price increase of scientific e-journals".
5. *Ontario Quality Assurance Framework* represents, also, a good example, which offers the following definition of quality assurance: the process by which existing library programs are evaluated against specific criteria.

Regarding my case study – a survey through a questionnaire at IMAR Library – a series of questions were adapted from a project of the Institut für Bibliotheks- und Informationswissenschaft, Humboldt-Universität zu Berlin in collaboration with the other libraries and information centers in German linguistic space, published by Blasetti, A. <sup>(2009)</sup> and from a study published by Hickson, Susan; Poulton, Kylie Ann ; Connor, Maria ; Richardson , Joanna ; Wolski, Malcolm (2016, in IFLA Journal:special issue)

### **3. Case Study: The IMAR Library**

#### **3.1. Context of the study**

In developing a proposal for quality improvement in research libraries it is necessary to understand users' requirements and information behavior.

Founded in 1949, Institute of Mathematics "Simion Stoilow" of the Romanian Academy (IMAR) represents one of the most significant centers of the Romanian mathematical life. According to the presentation on its webpage - <http://www.imar.ro/organization/presentation/presentation.php> -IMAR is organized on research groups, each group having its own research agenda for periods of 1-3 years. Each group has a staff of senior researchers and some young researchers at master, PhD or postdoctoral level and organizes at least one weekly seminar. Each group has permanent collaborations with many universities from Romania and important research centers worldwide (Europe, USA, Australia and Asia).

IMAR encourages teaching activities of its members at different universities and the integration of graduate students in the existing research teams. The institute also organizes PhD research on different problems in fundamental and applied mathematics under the supervision of some of its senior members.

In March 2000, The "Simion Stoilow" Institute has been nominated as a European Centre of Excellence, following the Call for Proposals for Support for Centers of Excellence (Fifth's Framework Programme of the European Commission). IMAR is a Centre of Excellence of the Romanian Academy and organizes monthly international conferences.

In this context, it is obviously that for the research library of IMAR, quality assurance and enhancement are essential objectives, in order to properly support the institute to achieve its scientific mission and research goals.

### **3.2. Objectives and methods**

Tacking into consideration the rapid shift towards electronic access to information and the proliferation of social networking, it is argued that - if the quality enhancement in research libraries is to be obtained-, there needs to be a realignment of the libraries with the stakeholder's expectations (in my case: active and potential users, scientific research institutes worldwide, librarians, professors, administrative organizations that offer financial support or institutes with which IMAR has had journal exchange agreements etc ). Harald, F. (2013) Harald, F.; Stewart, G. and Bruce, C. (2013) presented a substantive grounded theory about how library directors can ensure the library's relevance to the stakeholders by means of the following five strategies resulted: *aligning strategic vision with the university; continuously reinventing the library; engaging with stakeholders; building an agile and engaged culture; and demonstrating value to the university*. We could add here also *open access strategy*, as a range a scientific publications becomes now open access.

The main objective was to analyze the level of satisfaction and the research behavior of the users of the IMAR Library. A percent of 80% of the active users accepted to respond the questionnaire. The survey was conducted during the period 15 May 2017 – 15 March 2018.

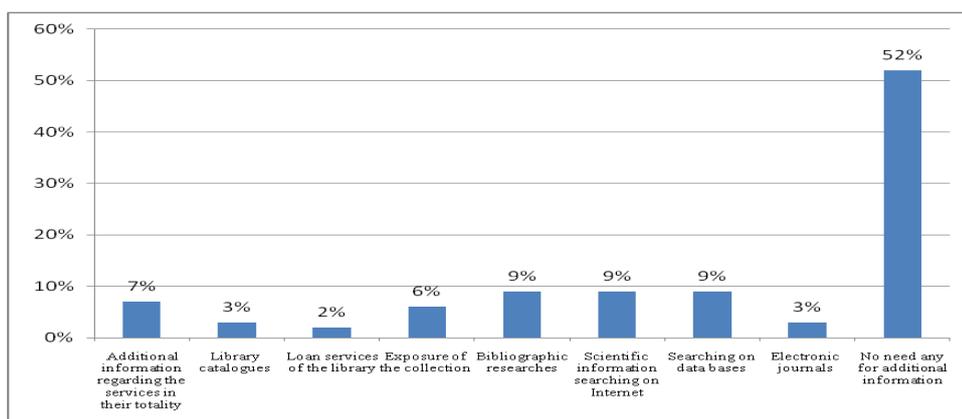
### **3.3. Results and discussions**

One of the questions was to observe for which of the IMAR Library's offer there is a need for more information or instruction from the IMAR librarians. The need for additional library information is, in the whole, of 48% at level of the respondents, as highlighted in the following table.

**Table 1: The principal need for additional information regarding the library services**

The need for additional information regarding the library services in their totality	7%
Library catalogues	3%
Loan services of the library	2%
Exposure of the collection	6%
Bibliographic researches	9%
Scientific information searching on Internet	9%
Searching on data bases	9%
Electronic journals	3%
I do not need any additional information regarding the services	52%

It is notable that only 2-9% of respondents need library training for using library's catalogues, Internet searches, loan, bibliographic research, electronic journals, printed collection or databases. With regard to the provision of information about loan services, the request is of 2%, and this is the case of external users, but not researchers at IMAR.



**Chart 1 shows the percentage for users of IMAR Library, who need additional information regarding the services offered, by category of services.**

Another question was to find the degree of satisfaction with the volume of publications, by category of publication and form. The answers were

synthesized in the following table:

**Table 2: The satisfaction level regarding the volume of collections**

	1 (very satisfied)	2 (satisfied)	3 (acceptable)	4 (slightly satisfied)	5 (totally unsatisfied)	6 (I do not use)
1. The Book Fund	24 answers = 30 %	56 answers = 69%	1 answer = 1%	0	0	0
2. Printed journals (subscriptions)	46 answers = 57%	21 answers = 26%	10 answers = 12%	0	0	4 answers = 5%
3. Printed journals (obtained as a result of the international exchange activity)	14 answers = 17%	59 answers = 73%	4 answers = 5%	0	0	4 answers = 5%
4. Journals in electronic format	29 answers = 37%	46 answers = 57%	1 answer = 1%	2 answers = 2%	0	3 answers = 3%
5. Data bases	42 answers = 52%	25 answers = 31%	2 answers = 2%	1 answer = 1%	0	11 answers = 14%
6. Preprints	9 answers = 11%	50 answers = 62%	5 answers = 6%	2 answers = 2%	0	15 answers = 19%

This table has been published also in Popescu Elena (2017), page 28, available at <http://www.lisr.ro/en21-popescu.pdf>.

The results of the survey revealed that users are generally satisfied or very satisfied with the volume of publications. Highest level of satisfaction (very satisfied) with volume is recorded by printed journals - through subscriptions - and electronic journals, followed by printed books.

The next questions aimed to collect primary data from the active users of the IMAR Library, in order to identify dominant behaviors and attitudes amongst respondents towards information seeking and information sharing (questions adapted from Hickson, S. et al , 2016, in IFLA Journal:special issue). Users were asked, as they were willing, to answer questions that do not yet form part of our Library's work, but for which the answers provided could serve to solve some issues, such as scientific data management, in order to reach a consensus in the near future of *open science*, according to Horizon 2020.

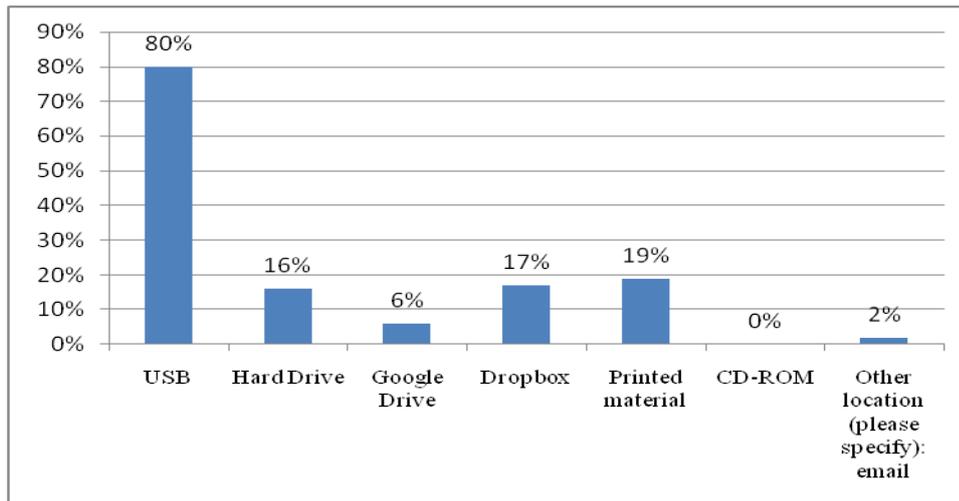
The Question was: *Where do you save your research data? (Several variants can be selected).*

**Table 3. The behavior of the interviewed researchers regarding the choice to save their scientific results:**

USB	80%
Hard Drive	16%
Google Drive	6%
Dropbox	17%
Printed material	19%
CD-ROM	0%
Other location (please specify): <b>email</b>	2%

Usually, the interviewed researchers save their scientific results on USB, sometimes on Hard Drive, but only 17% of them in Dropbox and 6% of them in Google Drive.

The situation is graphically represented in the below chart:



**Chart 2 shows the behavior of the interviewed researchers regarding the choice to save their scientific results**

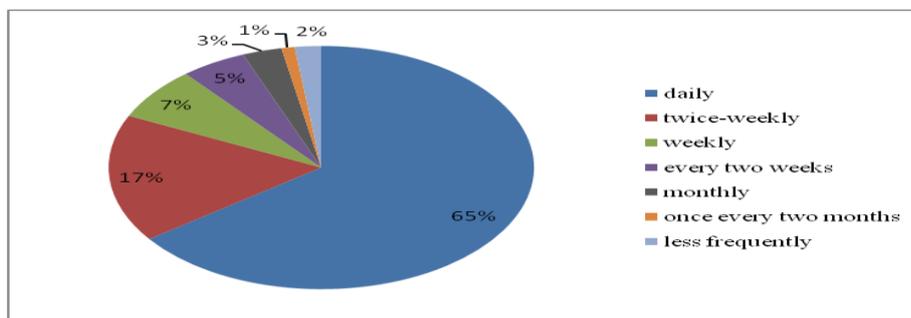
Researchers' behavior should be studied with a view to involving the IMAR Library in the management of scientific data in the near future, where uniformity in archiving and preservation should be achieved.

Asked to answer at the question *How often do you save your research data?* the respondents chose the variants as follows in the table below:

**Table 4. The frequency of research data storage**

daily	twice-weekly	weekly	every two weeks	monthly	once every two months	less frequently
65 %	17 %	7 %	5 %	3 %	1 %	2 %

It is obvious that the researchers prefer to save their results daily. This depends, also, on the time needed to obtain their scientific results.



**Chart 3 shows the frequency of research data storage**

Users were further asked to answer the question: *If you are writing text that serves research, study or teaching, please indicate which resources you want to extract the information from?*

Regarding the information-seeking behavior of my respondents, the answers are synthesized in the following table:

**Table 5. Preferred information resources for extracting information**

	1. very often	2. often	3. sometimes	4. seldom	5. only in very isolated cases	6. never
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By free access to the shelf and browsing the publications	83%	10%	5%	1%	1%	0
Asking the librarian for information	26%	29%	3%	40%	1%	1%
Due to the "advertisement" from the specialists in the field	33%	59%	2%	2%	2%	2%
References in articles or books	32%	60%	1%	3%	3%	1%
Printed journals of bibliographic references	28%	60%	6%	1%	3%	2%
Bibliographic database e.g. Mathscinet	30%	59%	2%	3%	3%	3%
Search in OPAC	58%	28%	1%	11%	1%	1%
Data bases (e.g. Web of Science)	30%	30%	15%	23%	1%	1%
Portals or pre-prints archives	2%	3%	1%	2%	15%	77%
Internet; using searching engine	79%	17%	1%	2%	1%	0

To the question referring to the types of communication of the research results to partners, the answers were as follows:

**Table 6: Method of communication of research results**

Preprints in institutional repository	1%
Open access journals	1%
Dropbox	80%
Google Drive	3%
Email	15%

It is worthy to observe the opening of the IMAR's researchers to communicate their scientific results.

They prefer to communicate their research results to their partners using the Dropbox variant, because they consider it safer and faster, and have used it since the existence of the Dropbox.

We used the following radial chart to display the proportions obtained.

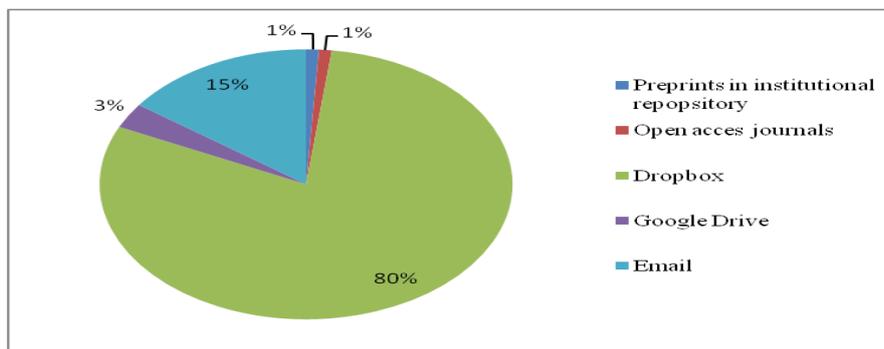


Chart 4 shows the preferred method of communication of research results

#### 3.4. Measures to improve the service quality in Romanian academic research libraries

- Librarians must ensure that the library is continually realigning strategies, reviewing the plans and services offered and track the changes in users' behavior and expectations. As Harald, F. et al..(2013) observed these things must occur rapidly and permanent, in order to maintain the library's competitive position within the institute and ensure its long-term sustainability.
- As scholarship is seen by the Association of College and Research Libraries (ACRL) as *Conversation*, we can affirm that this *conversation* represents a place where researchers, teachers and students can produce original scientific outputs. This means that librarians in research libraries must prove the competency of information literacy and a properly data management in order to enhance the quality of library services and, implicitly, their role in supporting researchers in different fields of science. It can also mean that the ambiance in the library must be optimal for scientific discussions.
- It could be a great advantage for Romanian research libraries to offer their users (most of them researchers and PhD candidates) facilities for research publishing activities, a good example for this case being offered by the Institut für Informationswissenschaft der TH Köln, with its service named PubLIS Cologne.
- As the first priority of the *LIBER* is *shared services* and *cloud services*, in the actual context when "*libraries are moving to shared services that need a solid foundation regarding funding, governance, trust and an evolving technical and social infrastructure*", librarians in Romanian research libraries must improve their IT abilities regarding metadata generation, research data selection and preservation, as well as cloud computing. They also must understand the legal and ethical dimensions of open data, open science and open access strategy.

- It must be implemented a quality assurance process, that can generate a quality enhancement by actions as: connecting with point people in the Institute and University of Bucharest, enlarge and develop partnerships with research libraries worldwide for professional discussions and for initiating and developing scientific journal exchange partnerships.
- An extensive service quality survey must be repeated every year, by including Libqual in assessing the level of satisfaction of all the involved stakeholders (active and potential users, partner research institutions, librarians, IT specialists and the general manager and senior staff from each research group).

#### **4. Conclusions**

The study was intended to propose some measures of improving the services offered by the Romanian research libraries, by confronting the conceptual framework with an empirical research through a case study. While recognizing the limitations of my study, I believe I have achieved its aim through a conceptual framework and an empirical research by means of a case study regarding the library of the Institute of Mathematics of the Romanian Academy (IMAR). I emphasized the necessity of quality assurance and quality enhancement in Romanian research libraries and also observed the level of satisfaction with the collection and services offered by the, as well as the information behavior of its stakeholders (in their majority, users like researchers, doctoral candidates and students).

#### **Limitations**

My research should not be considered exhaustive. It is valid regarding the IMAR researchers and only for the time span mentioned in section 3 – Case study. I did not capture as much information as to cover all the Romanian research libraries, while it is well known that there are differences among the diverse branches of sciences and, therefore, among the specialized libraries serving their scientific research institutes.

However it is certain that the trend regarding research librarians is to enhance the quality of the services they offer.

Further research should be undertaken, in the actual context of the rapid advancement in science and technology, which will affect also the research libraries' sector.

#### **Acknowledgement**

My presentation at the 10th QQML2018 International Conference (22-25 May 2018, Chania, Crete, Greece) has been financially supported by the University of Bucharest through a doctoral grant for PhD students.

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