2012

# Twenty Years After: Armenian Research Libraries Today

D. Aram Donabedian
*CUNY Hunter College*

John Carey
*CUNY Hunter College*

Arshak Balayan
*Yerevan State University*

# Twenty Years After: Armenian Research Libraries Today

## D. Aram Donabedian

MFA, MLS, Head, Access Services, Hunter College Libraries,
Hunter College, 695 Park Avenue, New York, NY 10065, 212.772.4176,
ddonabed@hunter.cuny.edu

## John Carey

MA, MLS, Head Librarian, Health Professions Library, Hunter College -
Brookdale Campus, 425 E. 25th St., New York, NY 10010, 212.481.4326,
 John.Carey@hunter.cuny.edu

## Arshak Balayan

PhD, Assistant Professor, Yerevan State University, Yerevan, Armenia,
Visiting Scholar, Department of Philosophy, Harvard University,
Cambridge, MA, arshakbalayan@fas.harvard.edu

## Abstract

Since achieving statehood in 1991, Armenia has faced major economic and
political obstacles which have significantly affected the nation's research
libraries. This research paper will quantitatively and qualitatively examine the
challenges facing Armenian research libraries just over twenty years after the
collapse of the Soviet Union. Specifically, the authors analyze their interviews
with five library administrators[1] at five major institutions, respectively. These
include Yerevan State University Library, the National Library of Armenia, the

---

Fundamental Scientific Library of the National Academy of Sciences of Armenia, the Republican Scientific-Medical Library of Armenia, and the Papazian Library of the American University of Armenia. The instrument for the interviews consists of 73 questions based on the 2004 Association of College and Research Libraries *Standards for Libraries in Higher Education*[2] and evaluates the following factors:

- The library's mission, goals and objectives
- Public or user services
- Instruction activities at the library
- Resources (print, media, or electronic) and collection development
- Access to the library's resources
- Outcome assessment, or evaluation of the library
- Staffing issues
- Facility maintenance and plans for library development
- Communication and cooperation both within the library and with the user community
- Administration
- Budget

In addition, we will focus on the strengths and weaknesses of these libraries and investigate the growing open access movement in Armenia. Based on our findings, the authors wish to facilitate dialogue and consider possible approaches to help these libraries meet Armenia's pressing information needs.

**Key Words:** academic libraries; Armenian libraries; post-Soviet countries; quality management

## Background

The origins of the Armenian research library reach back into the nation's long history of the written word and its tradition of illuminated manuscripts and printed books. Soon after the invention of the Armenian alphabet in the early fifth century, monasteries began keeping manuscript collections. (Kasinec and Davis, 2007). The oldest dated illuminated Armenian manuscript was created in the ninth century (http://armenianstudies.csufresno.edu/arts_of_armenia/miniatures.htm) and rich libraries, attached to monasteries, were well established by the eleventh (http://www.yerevan2012.

org/index.php?option=com_content&view=article&id=101&Itemid=119&lang=en). Armenia is currently celebrating the 500th anniversary of the first book printed in the Armenian language, published in Venice in 1512, sixty years after Gutenberg's invention. By the early 16th century, more than ten centuries after the development of an extensive literature, the advent of the printed book provided an impetus for the wider dissemination of works in the Armenian language and further opportunity for their growth and development.

The evolution of the Armenian Republic's libraries is closely bound to changes that took place in late Russian and early Soviet society. Russian libraries in number began to be established in the years just before the 1917 October Revolution and during the first several years of Soviet rule. The eventual cultural transformation brought on by the establishment of various research and other types of libraries is linked to the activities of Vladimir Lenin and Liubov' Borisovna Khavkina (1871–1949), the eminent Russian and Soviet library educator.

Before the First World War, Lenin "spent countless hours in the libraries of many countries, and reflected on various kinds of library service" (Anderson, Friis-Hansen and Kajberg, 1985, p. 29). As a library model, however, it appears that the New York Public Library, established in 1911, impressed him greatly. Indeed, it is noteworthy that preceding the nascent development of late Russian/Soviet libraries "[e]vidence suggests that exiled Russian revolutionaries" had "worked with resources of the New York Public Library before World War I and brought news of them when they returned to Russia. Lenin praised the methods and services of the New York Public Library after reading its 1911 report, and even after his assumption of power he continued to interest himself in literature concerning the library" (Kasinec, 2007). Khavkina was so impressed by the Central Research Library, she wrote a 1914 monograph[3] about it that over time was reissued in several editions.

 In Khavkina's work before 1917 she argued that "Russian library and practice had much to gain from a closer knowledge with Western ideas and methods; …that the proper role and function of a librarian was to serve, not dictate readers' interests and that library collections, catalogs, and bibliographical guides must be arranged as to present the reader with an open, easily accessible, and unbiased array of materials for research and study;… that service to readers should not be based on class; and…that librarianship

was a science whose further development required research on both practical and theoretical questions, as well as institutions and journals to support this research" (Kasinec, 2007). Moreover, regarding the New York Public Library, she was especially impressed by "the important role the Central Research Library played in the country, represent[ing] for Khavkina the ideal of American Librarianship" (Kasinec, 2007). Kasinec also notes that one aspect of librarianship Khavkina witnessed in the West was resource sharing, or interlibrary loan. Interlibrary loan was employed through Soviet times and continues to serve Armenia's research libraries. Other ideas and practices recommended by Khavkina — for instance, the librarian's role serving readers' interests through an array of unbiased materials — became officially possible only in 1991, with the gaining of Armenian independence. Khavkina's interest in American librarianship extended to American educational policy, adult education, public and children's library service and to bringing Western library philosophy and practices to the Russian/Soviet sphere. In this regard her influence on Soviet librarianship and by extension Armenian libraries has been great.

Armenia's near annihilation by the end of the First World War and the subsequent Sovietization of the first Armenian Republic (1918–1921) provided the economic and social conditions for the establishment and growth of modern Armenian research libraries. "Under Soviet rule, libraries in the South Caucasus enjoyed a steady level of support. According to Tatiana Usova, libraries were a priority for the Communist Party because they were 'assigned a mission of spreading socialist ideas to the masses'" (Donabedian and Carey, 2011). The Soviets also applied this centralizing approach to higher education. Under the Soviet model, knowledge was expected to be delivered by professor "experts" and received by students as a sanctioned "truth." The importance of inquiry and active participation on the part of the learners was neglected, and in fact discouraged. As Baker and Thompson write, "[i]ndependent student work or choice is foreign to this process, and a direct challenge to the entire educational paradigm — a paradigm in which students have invested as heavily as their instructors" (Baker and Thompson, 2010). This inheritance continues to influence the educational pedagogy of Armenia and other post-Soviet states in the CIS.

 After more than seventy years of central funding from Moscow, the collapse of the Soviet Union in 1991 left its republics without the necessary funds to support their infrastructures. The removal of Soviet control also changed

the dynamics between countries in the region, as "fractious republics that worked together cooperatively under the force of Soviet law asserted their independence. . . . In the case of Armenia and Azerbaijan, this new freedom found expression in the continuing war over Nagorno-Karabakh. . . . This outbreak of hostilities and political instability has compounded the problem of decreased funding" (Donabedian and Carey, 2011). Today, wars or rumors of wars involving Armenia and its neighbors, along with global financial uncertainty, continue to exacerbate these challenges.

## Interpretation and Analysis

Before analyzing the actual data, it will be helpful to provide some general information about the libraries under examination and the challenges they are currently facing. The libraries included in this survey were:

- Yerevan State University (YSU) Library, with two million volumes, was established in 1920 and is the oldest academic library in Armenia. Thirteen thousand students are enrolled in Armenia's largest university in 20 faculties and in more than one hundred departments.
- The National Library of Armenia is the country's library of record and holds copies of all works published within its borders. It is also the largest repository of rare and early printed Armenian books from 1512 to the present. The Library was founded in 1832 and is comprised of approximately seven million volumes.
- The Fundamental Scientific Library (FSL) of the National Academy of Sciences of Armenia was founded in 1935 and contains three million volumes. The Library's book holdings of literature in Armenian are among the largest and it also has strong collection of rare and antique books. These include 16th through 18th century works in Armenian, Russian and other languages. In addition, the library has 27 special collections of the papers of eminent Armenian artists and scientists and regularly publishes various bibliographies and biographies.
- The Republican Scientific-Medical Library (RSML) of Armenia was established in 1939 as the main source of medical information for health professionals. The library's collection is comprised of 500,000 volumes. "The RSML...provides access to the literature of the health sciences including access to the Armenian medical

literature, provides education and training to health professionals and health sciences librarians, and manages a national network of libraries of the major health care institutions in Armenia" (Braude et al., 2001).

- The Papazian Library of the American University of Armenia was established in 1991 with the founding of the university. AUA's beginnings coincided to the day with the founding of the second Armenian Republic on September 21 of the same year (http://www.aua.am/news/press/96.shtml). The library contains over 42,500 volumes and readers may also access 73,000 online journals and books. It is Armenia's only fully open-stack library.

In brief, the challenges these libraries face today, as we shall examine in greater detail below, primarily involve the following: 1) establishing standards to define a librarian's qualifications, role, and work expectations; 2) overcoming budgetary deficits and decreased funding; 3) increasing the emphasis on library instruction and the pedagogical role of the librarian; and 4) offsetting the high cost of a wide array of electronic database subscriptions and increasing access to available research content. The data collected here illuminate various approaches these libraries are taking in response to these challenges, and in the paper's conclusion the authors will offer several suggestions for making further progress on these issues.

## Mission, Goals, and Objectives

To meaningfully assess performance and measure outcomes, any institution must have a clear sense of its mission. According to the ACRL *Standards for Libraries in Higher Education*, a library's mission statement and goals must "align with and advance those developed by the institution" which the library serves (http://www.ala.org/acrl/standards/standardslibraries#principles). Thus, we began by asking the library directors whether their libraries create and maintain such mission statements.

 As seen in Appendix II, Responses Table, part 1, all libraries have written mission statements, have communicated this mission clearly to staff, and (in some cases) periodically revise the mission. It should be noted that the libraries surveyed here display a heterogeneous range of missions. For AUA and YSU, the library supports the educational mission of the larger

institution. At the National Library of Armenia, however, the mission is to collect and catalog all books published in Armenian in the country, as well as additional materials published about Armenia whether in the form of books, periodicals, or digital media. To carry out this broad mission, the NLA also must negotiate issues of language and geography. For instance, 70% of the NLA's literature is in Russian, and their English collection is also starting to grow — so indexes must be multilingual. The library also must maintain good cooperation with Armenian diaspora communities with regard to several ambitious projects, including the creation of national bibliographic lists that will compile the writings of outstanding Armenian authors; a subject headings project; a national universal catalog; and an index of publishers and related organizations. Much of this work has not been done before in post-Soviet Armenia. The scientific and technical libraries have more specific professional missions. The RSML serves as a fundamental library for the working Armenian medical community, serving doctors and health professions students from within Yerevan as well as patrons who visit from elsewhere in Armenia. Similarly, the FSL exists to serve the scientific and technological development of the country and the professional needs of researchers throughout Armenia. Another task of the FSL right now, according to Mr. Minasyan, is to digitize the scholarly heritage of the NAS to create a more widely accessible digital library.

The libraries also employ diverse means of evaluating their performance and informing patrons of the library's accomplishments. The AUA library reports not only to the university's administration but also to an American accreditation body, the Western Association of Schools and Colleges (WASC), while the NLA reports to Armenia's Ministry of Culture. At Yerevan State, Mr. Mirzoyan indicated that one important means of evaluation is through comparison with academic libraries in other European countries. The FSL uses patron surveys, whether oral or online, and has managed to improve user satisfaction through increased communication. The library also employs a feedback system that allows administrators to know how often and from where patrons are accessing the library's databases. Other libraries are also moving toward electronic means of communication with patrons — the RSML notifies patrons of library news via its website and Facebook page. The AUA library stays in touch with patrons via a bi-monthly e-bulletin and several listservs, and the YSU library uses its website, newsletter, and e-mail blasts to anyone with a YSU e-mail account.

## Services

As can be seen in Appendix II, Responses Table, part 2, four out of the five libraries maintain and utilize qualitative and quantitative measurements in terms of their ability to serve users. The YSU library qualitatively surveys students for user attitude regarding library services and as a result of their findings have allowed patrons more direct access to the collection. Moreover, YSU has opened the following communication channels for patrons: communicating in-person, by email, telephone and via the library website. Quantitatively the library counts gate traffic, number of items circulating, titles of books requested, and numbers of those using the reading halls. Due at least in part to these measures, user attitudes have improved in the past few years. The RSML also conducts periodic surveys of users which it finds work well to provide a general picture of how the library is serving its users. Through its evaluation services, the AUA library has found that while patrons are generally satisfied they would like to see an improved or expanded collection.

While the NLA, due to extensive renovations, is not currently performing qualitative or quantitative assessment, its Director, Dr. Tigran Zargaryan, mentioned the library will definitely focus on this once the work is complete within the next year. Like the four other research libraries explored in this paper, the NLA continues to make strides in providing the best possible service to its patrons. To facilitate this, the NLA gives importance to assessing the needs, opinions and views of its users, especially in encouraging users to share their views on library services in-person through regular meetings with its reading council. The FSL takes a related approach through its administration of periodical oral surveys. The library has found this oral method more effective than a written one as readers are encouraged to speak up with positive comments or with criticism. Criticism is particularly valued by the FSL as it directs attention to areas that need further examination.

The library administrators interviewed stated they encouraged their users to share their views on library services. It was clear, however, from Mr. Mirzoyan that the response of faculty is not often forthcoming. In fact, the Library receives little faculty input regarding collection development and curricular needs. In contrast to this, according to Ms. Avakian, the library interacts with the faculty senate to find out their curricular needs and to inform them of library news. The library works with faculty mostly instead of students to find out about required texts.

Three of the five research libraries are generally open until 7PM on weekdays with shorter hours offered on the weekend. Three libraries are closed on Sundays. The AUA library is open the latest, offering service until 9PM on weekdays and is also open both Saturday and Sunday. The RSML operates the fewest hours of all and is only open until 5PM Monday through Friday with no weekend hours. As can be seen in the table, existing hours were judged by library administrators, with the exception of Ms. Shirinyan, as being sufficient for demand. According to Ms. Shirinyan, medical doctors desire longer hours but the funding and the personnel are not available to extend the Library's operations. There is also some demand on the part of NLA patrons to extend its hours weekdays until 9PM. Fiscal constraints have also been a consideration in deciding not to extend the NLA's hours.

When asked about how well the library establishes, promotes, maintains and evaluates a range of quality services that support the academic programs or mission of the institution and library for optimal use, responses depended on the focus of a given library. While responses differ, respondents' attention is centered on supporting the following activities: acquiring new digital resources, digitizing existing collections and meeting accreditation guidelines. To help ensure quality services, the AUA library relies on following the WASC accreditation guidelines (http://www.wascsenior.org/). The YSU library and the NLA have already started placing an increasing emphasis on digital resources. As we have seen, the FSL is also moving in this direction and has its entire staff participating in the digitization effort previously mentioned.

Mr. Mirzoyan mentioned the use of the Russian resource "E-Library," comprised of 250 journals that can be accessed from the YSU computer network. According to Mr. Mirzoyan, a great strength of the YSU library is its large circulating collection. At one point the library had four thousand copies of one Russian textbook. When the textbook was dropped for another, the library had to weed all four thousand copies. Mr. Mirzoyan also mentioned there are many grants awarded providing free digital literature to scholars. In addition, access to databases is available through academic partnerships, such as one that YSU has with Fresno State, for example. Also available for use is a Russian dissertation database, free of charge. In addition, Mr. Mirzoyan stated that popularly used books are scanned and placed on the YSU website. This YSU library practice, like FSL's digitization of its print collection, raises the issue of copyright compliance in light of national, international, and

post-soviet copyright law versus the argument for open access to such material. It is instructive to note that the new Master's program in Library and Information Science, offered in Armenia contains a copyright component and thus can address the legal and philosophical issues involved in providing partial or full electronic access to a given work.

## Instruction

In recent years the role of the librarian in instruction — both within and beyond the library — has greatly expanded in Western higher education. Most often this involves teaching information literacy, one of the most powerful ways in which librarians can contribute to learning. The ACRL has stated, in Standard Three of its *Information Literacy Competency Standards for Higher Education*, that "the information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base or value system" (http://www.ala.org/acrl/standards/inf ormationliteracycompetency#ildef). Librarians, as the foremost practitioners of information literacy, therefore have a fundamental contribution to make in the development of students or other patrons into lifelong learners and critical thinkers. As this role has expanded for librarians in recent decades, topics related to information literacy (and variants such as data literacy or visual literacy) have flourished in the library science literature. For instance, a search for the term "information literacy" in the Wilson database *Library Literature and Information Science Full Text* retrieves only 54 journal articles appearing by 1991, with the earliest from 1988. A search for an earlier term, "bibliographic instruction," yielded 1,234 results, all published between 1981 and 1991. By February of 2012, however, a total of 2,454 articles referencing "information literacy" had been published and indexed in this database, along with 6,176 referencing "bibliographic instruction." With this surge of interest primarily occurring after the loss of Soviet control over the South Caucasus, it stands to reason that supporting the pedagogical role of the librarian would emerge as a significant new challenge for research libraries in post-Soviet Armenia.

It became clear in the responses to these questions that instruction in a library setting can take multiple forms and mean different things to different people. Librarians may deliver instruction to patrons in a one-on-one setting, whether at the reference desk or at a workstation in the library, or in a group setting such as a computer lab or university classroom. The instruction may

occur spontaneously or by appointment, or even by integrating a customized library session into the semester-long syllabus for a course. For the purposes of this study, the idea of "instruction" is understood to honor this flexibility of tasks performed by librarians everywhere, while nevertheless emphasizing the notion of information literacy instruction integrated into a library or classroom setting.

As Appendix II, table part 3 shows, only two of the libraries surveyed here necessarily require librarians to provide instruction in research skills. One of these is the AUA library — not surprising given its affiliation with Western accrediting bodies. Although library instruction at AUA is not officially included in the curriculum, the library does offer orientation sessions and hands-on workshops for databases. These sessions are open not just to AUA students and faculty but also to anyone in the general public who has become a member of the Papazian Library. The other institution identified, however, is the RSML, which despite the fact that it is not a medical school or university library still requires its librarians to perform instruction. In fact, Ms. Shirinyan specifically identifies an acute need for information literacy instruction in Armenia. She notes that many patrons at RSML think they don't need to attend library sessions because "everything is online" (a sentiment no doubt heard by librarians everywhere) but that this doesn't mean a patron knows how to use the Internet or databases for scientific or scholarly purposes. Thus, the RSML offers instruction in a number of formats — informal conversation, appointments with a librarian, or seminars, all aimed at raising the information literacy of users. Many of these seminars are also attended by residency students from Yerevan State Medical University, an institution with which the RSML cooperates. Medical doctors working in various regions of Armenia also travel to the RSML to participate. The library has also organized a few distance lectures via videoconference and hopes to do more of this in the future.

Unlike AUA, the other university library in this group, Yerevan State, does not require its librarians to perform instruction. In the YSU system, it is usually the academic advisor's job to teach a student research skills, and it is generally considered a job only for someone who holds a PhD. While currently four staff members of the YSU library do hold PhDs, librarians teach only the basics, including an orientation for first-year students to show them the library's resources and technology. However, both libraries do still contribute to instruction by supporting faculty research with book purchases

and other print and online sources. The remaining two libraries in this group, the NLA and FSL, have different institutional missions and therefore found fewer questions to be applicable in this part of the survey. However, according to Dr. Zargaryan, the FSL does sometimes organize consultations or seminars on library use, but the NLA itself does not. With regard to the FSL, Mr. Minasyan notes that since most patrons are working researchers, they arrive at the library already possessing a deep knowledge of their field and a high level of technology skills; so, there is not as much demand for instruction on the part of librarians. However, the librarians can sometimes inform users of new technological capacities or opportunities.

In general, the role of the librarian as one who works with teaching faculty to develop library curricula in support of specific courses was not as widespread in these libraries as it currently is in their Western counterparts. Perhaps this will change as Armenian higher education moves beyond the more regimented Soviet model and as Armenian research libraries come to define the qualifications, role, and work expectations of their librarians. Of course, it should be noted that even when librarians at these institutions do not teach students directly, they do provide material support for teaching faculty by connecting users with print and electronic resources.

## Resources

This section focuses on collection development policies and practices of the various libraries. Questions here address the acquisition, retention, evaluation, and eventual deselection of print and online resources. While collection development in any research library is a complex process, the responses gathered here reveal additional factors unique to Armenia's social and political history that can pose additional complications.

The first question to be addressed is what criteria the library will use to select resources for its users. At the National Library of Armenia, the acquisitions process is governed by law: an acquisitions council, consisting of professional librarians, composes a list of desired acquisitions every year, based on reader demands, the demands of researchers and employees, and the requirements of the NLA as a national library as described in Section I. Using the list prepared by the council the NLA then declares a "tender," and the company that successfully bids on the tender fulfills the acquisitions, per the guidelines of

the law. At the FSL, one of the main criteria is that the literature purchased must be contemporary; additionally, the abstract or brief description of the book must be approved by the academy's Science Council. Beyond these criteria the FSL relies heavily on the experience of the librarians making the selections to guide the process. However, there are pragmatic considerations as well: for instance, many resources are acquired in Russian because an English scientific textbook can cost twice as much as a Russian version. Mr. Minasyan also noted that the Armenian academic community tends to master Russian rather than English, and the acquisitions process must take this into account.

The university libraries examined here followed collection development policies typical of academic libraries. Both the YSU and AUA libraries indicated that they cooperate as much as possible with faculty and chairs of departments to help determine what will be selected or retained; at both libraries, preferences of faculty carry great influence, and faculty can submit purchase requests. Similarly, at RSML, one of the first criteria cited was to pay attention to demand and consult with doctors. Other factors specific to a given institution sometimes affect acquisition and retention of resources as well. For instance, Ms. Avakian described how the Papazian library is currently pursuing an increased commitment to providing online resources for students' remote use, and Ms. Shirinyan stated that the RSML is committed to preserving all its Armenian periodicals, and will begin digitizing them when sufficient funding becomes available.

The responses in Appendix II, table part 4 indicate whether the libraries in question have ongoing, systemic procedures in place to evaluate and maintain their collections, including the deselection of obsolete materials to assure the collection's relevancy and to make room for new purchases. As seen in the table, four out of the five libraries do have a program in place, at least informally, to evaluate their collections. The NLA is a special case, in that it has no right to revise its collection outside of the parameters of its role as a national library, bound by law to acquire and keep any and all documents published in Armenia. Similarly, the FSL operates as a depository library for books of academic scientific value and is required to maintain those materials, and so therefore does not weed the collection. In fact, only the YSU and AUA libraries indicated that they periodically weed the collection for relevancy, on a schedule ranging from every year to perhaps only once every few years.

At AUA, YSU, and the RSML, librarians track the usage of electronic resources by means of online management systems, to see how many times resources are used or viewed. Many of these electronic resources are made available through consortia. However, the RSML has created its own bibliographic database, called Armenian Medicine, which contains medical journal articles, theses, information from scientific conferences organized in Armenia, and biographical data on famous Armenian physicians. At the YSU library, Mr. Mirzoyan indicated that in addition to purchases, donations from Russian, US, or European organizations are a valuable means of enriching the collection — in particular, this wealth of Russian resources is one of the reasons why the YSU library usually compares its collection not against other Armenian libraries but rather against foreign libraries. The RSML also owns many resources in Russian, but in their case this actually makes it harder to compare the library's collection against that of its peers — as Ms. Shirinyan explained, during the Soviet era libraries were equipped with the same books from the same centralized sources, so when comparing one medical library against another medical library today, much of the collection is the same. Since the fall of the Soviet Union, purchasing has varied more but the problem is funding; therefore, libraries have agreed to buy different books so as not to duplicate resources. Ensuring access to all these resources emphasizes the importance of a unified catalog system for Armenia.

It is impossible to discuss collection development in contemporary libraries without addressing the growing open access movement in scholarly communication. For purposes of this discussion, we will accept Peter Suber's definition of open access literature as literature that is "digital, online, free of charge, and free of most copyright and licensing restrictions" (http://www.earlham.edu/~peters/fos/overview.htm). Open access publishing usually takes one of two forms — literature published in electronic journals or articles deposited into open repositories. Obviously, the removal of subscription barriers has much to offer institutions seeking to maintain or increase access to digital resources while still controlling costs, and free access to the output of the global scholarly community has much to offer researchers in developing and transition countries or at non-elite institutions. As the responses gathered here show, open access resources have already begun to establish a leading presence in Armenian research library collections.

At present five open access journals are published in Armenia: *Mechanics. Proceedings of National Academy of Sciences of Armenia*, http://mechanics.asj-oa.

am/; the *Biological Journal of Armenia,* http://biology.asj-oa.am/; the *Armenian Journal of Mathematics,* http://ajm.asj-oa.am/; the *Armenian Journal of Physics,* http://ajp.asj-oa.am/; and the *Historical-Philological Journal*, http://hpj.asj-oa.am (Donabedian and Carey, 2011). As can be seen from the titles, much of this activity centers around the sciences, and these journals are published by the NAS and thus affiliated with the FSL. In fact, on the home page of its Web site, the FSL notes that part of its mission includes a commitment "[t]o create and promote digital library systems based on open standards, open access models, and open source software solutions" (http://www.flib.sci.am/eng/node/1). The FSL's Web site also offers other definitions and descriptions of open access. Part of the library's mission also includes digitizing and preserving Armenia's academic scientific heritage, which is then made available to users worldwide on the library's Web site. The FSL has digitized rare and ancient Armenian books — the oldest being from 1643 — but the effort is focused primarily on periodicals from recent decades; the FSL has even created a search engine to help users discover these articles. Thus, not only is open access helping connect researchers in Armenia with resources; it is also helping to make the work of Armenian researchers more visible and accessible to the international community.

The other libraries studied here also expressed a growing interest in open access. Ms. Avakian stated that open access resources have had a role at the Papazian Library from the start and mentioned the independence and flexibility of open access as being important for patrons. At the RSML, Ms. Shirinyan stated that open access more and more represents the future for libraries, and the RSML tries to promote OA resources as much as possible on the library's Web site. No doubt these initiatives will expand as awareness of the open access movement continues to spread among both producers and consumers of scholarly literature within Armenia.

## Access

In order to provide maximum intellectual and physical accessibility to their collections, the five research libraries acquire, preserve, organize and disseminate their resources guided by their respective mission statements and in response to information they collect from researchers, readers and, in regards to academic libraries, faculty. In an effort to provide maximum access, the YSU library communicates regularly with the public, through a variety of means

including its website, newsletter, and email service. By pursuing the mass digitization of its print collections, the FSL continues to extend its intellectual access into the virtual realm. The AUA library is open to the general public as well as the AUA community. Members of the public may obtain borrowing privileges and have on-site access to electronic resources once they take out paid subscriptions to use the library. As mentioned previously, members may also attend information sessions. For a brief discussion of library hours and their impact on serving patron needs, see Section II.

According to Appendix II, table part 5, four of the libraries catalog and organize their collections according to national standards and share a union catalog while one of them does not. In contrast, the AUA library is organized according to the American standard of Dewey and Library of Congress and is not part of the national catalog. Collections are cataloged and organized according to these two standards. It is also evident from the table that the five libraries provide interlibrary loan or document delivery service, discussed below. In regards to Armenian research libraries, there are several library consortium borrowing programs active in resource sharing and they each serve their respective patrons well. There is also an interlibrary loan consortium within Yerevan serving research libraries. While this service is not heavily used it does receive regular traffic. Moreover, in terms of borrowing, the NLA is a member of the European Library Consortium. Of major importance to most research libraries is the wide-ranging Electronic Library Consortium of Armenia (ELCA). In part, ELCA is comprised of university libraries, national libraries, research institute libraries, and special libraries. It currently has 61 members and focuses its activities on "[c]ollective access to e-resources, education and training, local systems and union catalog services" (http://www.eifl.net/country/armenia).

The five research libraries explored here participate in ELCA, which has been collaborating with the international not-for-profit organization Electronic Information for Libraries (EIFL) for the last 10 years. To fulfill its mission EIFL "works with libraries worldwide to enable access to digital information in developing and transition countries" (http://www.eifl.net/who-we-are). As reported by Mr. Mirzoyan, local interlibrary loan is not in high demand, as Armenia's capital Yerevan is a small city and students can easily travel to obtain needed materials. Mr. Mirzoyan also credited the lack of demand for ILL books as being due to the library's large holdings of books. In another instance of resource sharing, the AUA library is a member of the American

International Consortium of Academic Libraries (AMICAL). The consortium brings together "American-model, liberal arts institutions…" and its "mission is to advance learning, teaching and research through the collaborative development of library and information services…." (http://www.amical-net.org). In addition, the AUA library "acts as a national focal point for the Electronic Information for Libraries-Intellectual Property (eIFL-IP) EIFL.net" (http://www.aua.am/library/goals.html).

In comparison to its mastery of Russian, the Armenian population's knowledge of English is relatively weak. Therefore, along with Armenian works, Russian-language resources are the most accessible for most users. The AUA library offers a wide array of electronic resources and, like the NLA, has international ILL agreements. And yet, use of these resources is to a large degree contingent on the ability to read the English language which, according to Dr. Zargaryan, is only just beginning to penetrate society. To help address this situation EIFL, in 2010, held a 2-day training workshops for the regional libraries of Armenia in order to help make English language works more accessible. Those in attendance were introduced to Google Translator as an aid to achieving this purpose (http://www.eifl.net/no-46-july-august-2010).

As is also evident from the table, all the libraries have an online catalog. Moreover, four of the five library administrators interviewed agreed that their libraries provide a sufficient number of computer workstations from which to access electronic resources. Dr. Zargaryan, however, is dissatisfied with the current number of computers at the NLA and thinks that more should be added. Although, in reference to the FSL, Mr. Minasyan stated that the number of computers was sufficient, he added that more workstations would be helpful.

## Outcome Assessment

This area of the study examines the mechanisms in place for evaluating the quality of research libraries. Responses showed that most libraries examined here do not undergo formal evaluation by an outside body or agency, but do implement their own measures for assessing performance and obtaining user feedback.

As seen in Appendix II, table part 6, only one of the libraries indicated that they answer to an accrediting body. The Papazian Library at AUA is

evaluated by the Western Association of Schools and Colleges. Additionally, the library conducts its own survey of users to assess performance, and the university itself conducts an integrated survey that includes questions about the library. At YSU, Mr. Mirzoyan noted that prior to the collapse of the Soviet Union there was a body that assessed libraries — at which time the YSU library received a first-class rating — but that there is no post-Soviet equivalent. The RSML does not report directly to any such body, but as a Republic library is required by the government to have a strategic plan, against which outcomes can be measured. At the FSL, there is no formal accreditation system but the library presents annual reports to the President of the NAS. At the NLA, Dr. Zargaryan noted that Armenia has a Center for Assessment of Quality, which works on standards for education but is considering expanding its role to also assess libraries. This was the only mention of any mechanism emerging to help fill the gap left by the absence of centralized Soviet means of assessment.

Nonetheless, the libraries examined here collect internal data on usage and user satisfaction. Means of collecting these data included online surveys, face-to-face or oral interviews, and feedback on the library's Web site or Facebook page. Many respondents stressed the importance of listening to patrons' demands. Topics addressed include number of books checked out by users, number of e-books viewed, adequacy of the library's hours of operation, accessibility for disabled patrons, use of study rooms, and noise. At the YSU library, this data is collected in a report that then goes to the university president but is also used by the library to track its own internal rhythms with regard to peak use and changes in use. For instance, when library staff had to go to the stacks to get print books for patrons, the YSU library was able to loan out about 700 books per day, but with the advent of e-books has had days where as many as 2,300 patrons accessed e-books. Thus, while it may never be possible to satisfy all patrons — especially during times of limited funding — all these libraries are tracking their own internal metrics with an eye toward best use of resources and improved user satisfaction.

## Staff

The authors asked respondents several questions regarding library staff pertaining to its education, size, work preparedness, responsibility for instruction, and departmental organization. Appendix II, table part 7 is instructive for the

marked differences it reveals in many of the responses from practices that, in North America, for example, would be part of standard library education and practice. Indeed, in reply to five of the questions, respondents either for the most part replied in the negative or did not answer at all. For example, four of the five administrators interviewed replied that there is no accrediting body to evaluate the quality of their research libraries while the fifth respondent gave no reply. At the AUA library, Ms. Avakian answered yes when asked if the library employs staff capable of supporting and delivering information in all available formats, including electronic resources. The remaining four respondents gave no reply to this question. Three of the five libraries employed no support staff and/or student assistants while one, the Papazian, did. Although the YSU library does not employ support staff or students to assist librarians, the library does schedule interns and volunteers. The RSML gave no reply when asked if they employed support staff or students.

Underlying the staffing issues described above is perhaps Armenian librarianship's greatest and most fundamental challenge: the lack of a national standard that delineates the status and responsibility of librarians. This is revealed in the reply to question 42, table part 7, where all five responses confirm this to be the case. Given the lack of a national standard to make clear the role and responsibility of librarians, it stands to reason that there are no "best practices" for library instruction. Indeed, both at the YSU library and the FSL staff members are not responsible for library instruction. While at the NLA, librarians do perform non-classroom based instruction their eventual aim is to provide this service without the interaction of librarians and instead rely on printed leaflets or webpages. The two libraries that see value in librarians delivering instruction programs are the RSML and the AUA.

As mentioned earlier, not all the administrators interviewed agreed on the importance of librarians providing library instruction. They did, however, concur that the overall educational qualification of librarians should be upgraded in light of educational, technological and academic needs. Although there is a lack of a national standard in terms of the role and responsibility of librarians, the International Scientific Educational Center's (ISEC) recently introduced MLIS progam, launched in 2009, may help remedy this situation (http://www. flib.sci.am/eng/Master/index%28e%29.html). The authors view the establishment of this program as a rich opportunity to arrive at a national standard and define the role of librarians in Armenia. To gain a better understanding of this issue, it will be helpful to review what qualities and skills some of our

respondents are looking for in a prospective librarian. The views Mr. Mirzoyan and Mr. Minasyan coincided over the importance of employees having a higher education, knowing a foreign language and having some computer skills. For Mr. Mirzoyan having a flexible workforce is important. For Dr. Zargaryan it is of paramount importance that prospective librarians have a librarian's education. The second factor he mentioned is the importance of being literate, to be knowledgeable in different things. He also went on to stress the importance of, not primary education or initial education, but life-long learning. According to Dr. Zargaryan, librarians should be learning all the time. Libraries should have librarians going back to universities on a regular basis because, he related, life is going forward and new demands are emerging.

In terms of budgetary support to ensure the ongoing training of all staff, the respondents, with one not answering, were split between those who were provided such support and those who were not. Only the FSL and the AUA library responded affirmatively. See the table for more information.

Finally, while all the respondents indicated their staff sizes were appropriate for the successful accomplishment of the library's goals and services, this judgment was qualified in some instances. Ms. Shirinyan of the RSML noted that due to building space constraints existing resources cannot be used to full capacity. This being the case, staff size is sufficient for now. Once the library can move to a better building, the staff will be insufficient. AUA library librarian Ms. Avakian mentioned that for new programs which are planned, the library will need one more instructional librarian. Finally, Dr. Zargaryan shared that there are 340 individuals working at the NLA. Nearly 50 of those are doing technical work and the rest are librarians. The biggest sections are "stocks" or holdings and Reference. They maintain seven million pieces of literature. They store, classify, clean and page these books. Because the library lacks new surveillance technology, according to Dr. Zargaryan, some NLA employees have to supervise in the reading halls when they might be employed in more useful library work.

## Facilities

It became clear in the responses to this section that maintaining or improving the library's physical plant is a priority for most of these libraries. Sometimes these concerns centered around the age or condition of buildings, access or

proper space for patrons, or around issues of information technology infrastructure. Appendix II, table part 8 summarizes some of the responses regarding physical resources.

As can immediately be seen in the table, the RSML in particular suffers from physical space issues, responding negatively to all of these questions. With the exception of the library's newest renovated conference room, issues affecting the building included insufficient space for staff and users, insufficient space for growth of the library's collection, insufficient electrical and network wiring for contemporary workstations, and a lack of proper temperature control. Many of these issues may stem from the age of the building. However, another factor revealed in these interviews is the conversion of non-library buildings to be used as libraries. According to Dr. Zargaryan, the NLA is one of only two libraries in Armenia that were actually designed and built to serve as libraries. And even at the NLA, the main library building is under renovation and the library is currently in temporary quarters (the answers in this table are based on the renovated facilities to come). Given the predominance of information technology in modern libraries, even a building that was designed as a library would need renovation if built several decades ago.

Other libraries did not face issues as acute as those at the RSML, but were nevertheless moving to address issues of physical space at their libraries. Ms. Avakian indicated that an expansion was currently under way at the Papazian to increase study space for students and room for the print collection to grow. The FSL and YSU libraries reported that space was not an issue. However, one important element that most of these libraries have not yet addressed is access for disabled patrons. Out of the five libraries, only the NLA and the Papazian are accessible to patrons in wheelchairs. Perhaps this will emerge as an area for future renovations to address.

## Communication and Cooperation

The nearly uniformly positive responses revealed in Appendix II, table part 9 indicate that communication and cooperation is of concern to the five libraries. Overall, the libraries seek to employ effective strategies that allow for the free flow of information; encourage staff to suggest new ideas or procedures; establish a regular means to exchange information; engender effective working relationships with other departments on campus (or in the case of FSL

with the Academy of Sciences); provide technical support for information technology; and maintain networks sufficient to provide reasonable response times for local and remote information.

An exception to this pattern is found at the RSML. Ms. Shirinyan has expressed her concern that, in the provision of electronic resources to onsite and remote users, in-house expertise for the technical support of information technology, is not, at present adequate. She qualified this statement though by saying that the service is on an acceptable level supported by existing staff. Ms. Shirinyan also emphasized that more staff to help with technical matters would be useful.

In terms of fostering suggestions of new ideas or procedures to improve operating and working conditions the YSU library and the FSL mentioned the practice of holding regular meetings with their respective staff members. The YSU library and the FSL hold these meetings with department heads and they also encourage and take suggestions on an informal basis. The FSL distinguishes itself by providing year-end bonuses to those employees they consider best. The AUA library, in addition to encouraging new ideas, also provides training for innovation. To provide an example of how new ideas are encouraged, Ms. Avakian related that a librarian once introduced new software to handle textbook distribution. Unlike academic libraries the NLA does not work with college or university departments. It does regularly publish a newsletter entitled "Spiritual Motherland" to distribute information about its activities and collections.

Three of the five libraries administer their own library and information technology. These include the YSU library, the NLA and the FSL. By contrast, at the AUA library, library and information technology are administered separately. Irrespective of how these technologies are administered technical support was reported as being adequate. In addition, the administrators stated that network response times are sufficient with regards to providing timely access to local and remote information resources.

## Administration

In response to the question, how effective are the policies and procedures that determine internal library governance operations, Mr. Minasyan replied that

at the FSL they work smoothly and are not bureaucratic. At the FSL on the administrative level there are scientific council meetings and weekly meetings with the directorship where encouraging the effective use of library resources is among the matters addressed. According to Mr. Minasyan, individuals are free to express opinions in both of the above mentioned types of meetings. Mr. Mirzoyan reported that library governance policies and procedures work well at YSU also. The three remaining respondents gave no reply to the above mentioned question. When examining Appendix II, table part 10, we see that the NLA reported that it has a standing advisory committee. The YSU library, the FSL and the AUA do not have such a committee. Regarding the existence of a standing advisory committee, the RSML gave no reply.

At the NLA, the committee or council meets every three months. There is a board of administration and a board of council readers. The board is comprised of persons from a variety of fields. At present, these include the Head of the Institute of the National Academy of Sciences and writers, scholars, and painters. At present, there is no standing advisory committee at the YSU library. There is, however, a plan to create a library board.


## Budget

As discussed earlier, the Soviet Union provided funding for research libraries in Armenia and other South Caucasus countries not just for the libraries' intrinsic value but as part of a mission to spread Soviet political and social influence. Since the fall of the Soviet Union, libraries in the region have suffered from inconsistent levels of funding. This section of the questionnaire assesses the state of funding in Armenian research libraries today.

As we see in Appendix II, table part 11, most libraries indicate a need for increased funding when asked whether or not current budgets are sufficient. Perhaps not surprisingly, the library most comfortable with its current budget is the one still drawing most of its support from a wealthy foreign superpower — the American University of Armenia. Dr. Zargaryan also indicated that the NLA enjoys good support from the government of Armenia, noting that the Ministry seldom makes major changes to his requested allocation. However, the budget must be justified in detail, and once allocated for a given area (e.g., periodicals) funds cannot be reallocated within the library budget. Similarly, all costs at the FSL are covered by the government,

according to a budget that the directorship and accountants of the library prepare and submit to the Ministry of Culture. The RSML also prepares and submits a budget to the government, but knows beforehand the general limits of what it can request, and must justify requests by presenting new projects in detail. Yerevan State differs from this model in that the library prepares a budget which must be approved by the director of YSU, who then submits it to the university council. A common theme among these responses was that even before submitting their budgets, the libraries have a good general idea of how much they can pragmatically ask for and, from experience, have learned to work within their means.

Thus, despite an overall wish for greater funding, most of the librarians interviewed offered surprisingly positive responses to issues surrounding allocations. For instance, three out of the five indicated that their budgets do support an appropriate level of staffing; and four out of five indicated that funds for access to media and computer resources are sufficient. However, it is worth noting that demand for these services has not yet risen as high in Armenia as levels seen in the West. For instance, in 2008 the Open Net Initiative reported that only 5.8% of Armenia's population had Internet access (Donabedian and Carey, 2011). Therefore, expectations for technology funding and related services may be lower. Ms. Shirinyan indicated that the RSML has already faced challenges in compensating workers with high-demand skills such as Web designers, IT specialists, and translators. Perceptions of how much online access is enough may change as Armenian researchers and students more fully engage with an expanding array of electronic resources, at which point demand for greater funding in this area may grow.

Respondents also indicated some room for improvement, mainly with regard to collection development and rates of usage. At the AUA library, Ms. Avakian indicated that the library's budget can expand to reflect new programs or increased enrollment; in fact, AUA will be hiring a new librarian this year in response to a new bachelor's program, despite cuts in funding university-wide. At YSU, however, Mr. Mirzoyan reported that the library's budget increases only in proportion to the overall budget of the university. At the NLA, Dr. Zargaryan confirmed that the budget is not related to the number of readers. And at the FSL, Mr. Minasyan expressed a common frustration when noting that the library has sufficient money for basic needs but only for survival, not growth. However, Armenian libraries certainly are not alone in this regard in today's economic climate.

## Conclusion

Before advancing some recommendations and conclusions regarding Armenian research libraries, the authors would like to address some possible limitations of the methodology employed. Methodology in this case refers to using established Western library standards to evaluate Armenian research libraries via structured interviews with administrators. While the study has yielded much valuable data, it should be noted that because the interview subjects were the directors of the libraries examined, responses to certain questions may be more subjective than if the respondents had been other staff members or patrons. For instance, some questions went unanswered, which may indicate reluctance to give a negative response or political concerns. Further research could help validate this paper's methodology by applying it to libraries in other post-Soviet countries. In closing, the authors would like to identify several primary challenges facing the libraries examined: budgetary limitations, open access development, establishing national standards and best practices, and furthering instruction and information literacy. While we cannot categorically state that these issues apply universally to all post-Soviet libraries, we nevertheless hold that the suggestions we make here for Armenian libraries would be helpful to many libraries in developing and transition countries such as those in the South Caucasus.

Perhaps the most immediate concern is overcoming budgetary challenges, which after all prevent progress from being made in other areas. With regard to subscription fees for journals or licensing fees for databases, the libraries here may sometimes be eligible for special pricing — for instance, the RSML accesses a huge store of biomedical literature through HINARI, an initiative of the World Health Organization that offers free or very low cost online access to institutions in developing or transition countries ([http://www.who.int/hinari/about/en/](http://www.who.int/hinari/about/en/)). Certainly, no such opportunity should be missed. However, barring some unexpected increase in funding for these libraries, the most promising option might be to pursue consortial efforts as aggressively as possible. Cooperation on matters of collection development, database access, and interlibrary loan all emerged as common themes in this data. As we have seen, the libraries in this study participate in consortia including ELCA on the national level and EIFL on the international level.

It should also be noted that as part of its outreach to developing and transition countries, EIFL seeks to encourage initiatives regarding open access

publishing and open source software. Within Armenia, Dr. Tigran Zakaryan at the Institute of Radiophysics and Electronics is EIFL-Open Access country coordinator, and Dr. Zargaryan of the NLA is the ILS project coordinator for EIFL-FOSS, a project that supports the international distribution of free and open source software (Donabedian and Carey, 2011). We have already noted that so far, open access publishing in Armenia tends to center around the sciences. In part, this may be driven by the notoriously high prices of scientific, technical, and medical journals; however, part of the answer also comes from the nature of contemporary scientific research. As Carol Wagner has written, science in the twenty-first century "operates at the global level as a network — an invisible college. . . . The more elite the scientist, the more likely it is that he or she will be an active member of the global invisible college" (Wagner, 2008). By providing open access resources, these libraries can help local researchers stay current with the work of their colleagues internationally. And by publishing in open access journals, Armenian scholars can hope to increase the impact of their own research in the international community.

In addition, the Armenian government could also consider mandating open access for articles drawn from taxpayer-funded research — following the example of the U.S. National Institutes of Health — as this has been shown to help maximize the impact of research findings among the scientific community and can "catalyze . . . economic innovation and growth" (Wagner, 2008). Iryna Kuchma, the EIFL Open Access Programme Manager, has identified this and other crucial points for countries to address when formulating open access policies. As Kuchma writes:

- "Policies mandating open access to publicly funded research enhance access to and greater use of research findings, increase the efficiency of research and development, accelerate use and innovation, and stimulate economy.
- Alliances are crucial and local and regional partners needed.
- Targeted Web sites and workshops are useful tools for raising awareness and lobbying. Good media coverage of open access projects is important to create public awareness." (Kuchma, 2008).

Another way libraries can facilitate open access publishing is through the founding of institutional or disciplinary repositories. One possible local model for this might be the Khazar University Institutional Repository (KUIR) in Azerbaijan. This repository currently holds more than 650 items, including

peer-reviewed journal articles, textbooks, dissertations, and presentations, all produced by faculty associated with Khazar University (Donabedian and Carey, 2011). The creation of similar repositories at Armenian universities would make the work of Armenian scholars even more widely available. Of course, for researchers in Armenia to fully participate in this global network, an unrestricted Internet is also essential.[4]

Another major area of concern is the establishment of national standards for the education and job duties of librarians. Before discussing how libraries might facilitate this, however, it is important to note that even without such standards, as evidenced by the results of our survey, Armenian research libraries have continued to collect, catalog, and index materials in multiple languages; automate, go online, and digitize their collections; and increasingly participate in the open access movement. Indeed, Armenian research libraries have grown significantly despite fiscal ruin brought on by the collapse of the U.S.S.R. As enumerated in the activities listed above, over the last 20 years, Armenia has created a model of librarianship that has, to a large extent, met its particular historical and social requirements. With the ISEC's creation of its MLIS degree came the need to develop the program's structure, goals and curricula and the necessity of attracting a new generation of librarians to the field. This makes establishing national standards all the more pressing.

When the ISEC launched its MLIS program, Armenia chose to align itself with European or Western library standards. These standards inform the Armenian MLIS "programme goals" (http://www.flib.sci.am/eng/Master/index%28e%29.html). We read here that by completing the course of instruction students are "prepared for a diverse variety of careers in library administration, public services, technical services, reference services and collection development...." In fact, however, in examining the program's course descriptions (http://www.flib.sci.am/eng/Master/curriculum%28e%29.html) and structure (http://www.flib.sci.am/eng/Master/Model%28e%29.html), the authors find the curriculum weighted toward technical services and library/systems technology without a corresponding strength in the other areas listed. While the program's array of courses such as those on copyright and English language acquisition may work well to support some current library activities, i.e. processing foreign language materials, digitization and working with networks, the authors recommend that this *de facto* standard in time be broadened to include other kinds of courses that will support the

program's stated outcomes in terms of job placements as described above. For example, the area of collection development could be supported by accompanying coursework. Moreover, reference and instruction related content could be introduced as part of a larger course on the delivery of public services.

Once a more diverse and balanced program is in place to align with the program's stated outcomes, the time may then be propitious to establish national standards that will support the many kinds of activities in which Armenian research librarians are involved. At this point, a national standard could be established requiring the MLIS degree as the prerequitse credential with which to obtain library work. At the same time quality assurance could be ensured through a national accreditation program, administered by a professional library association. Establishing standards and a system of accreditation for library programs and research libraries could also aid in attracting a new generation of students to Armenian librarianship. This would be more likely if it were possible to create a new salary range for trained academic research librarians that is above the customary starting salary.

In answer to the concern on the part of some respondents over the lack of support for life-long learning among librarians, this could be encouraged in at least a couple of ways: 1) through partial or full government grants awarded to librarians to update or expand their knowledge in the field or 2) through the creation of a tuition remission benefit where a given institution of higher learning would offer to waive the fees for one class each semester. Alternately, a librarian could receive a lump-sum payment per year to be used solely for study at a college or university of the librarian's choice.

Perhaps of all the above-mentioned issues, the area needing the most attention, both in terms of MLIS program theory and with regards to library practice, is instruction. In fact, much progress remains to be made in expanding the role of the librarian in instruction and information literacy activities. We have already noted the central role librarians play in teaching patrons to find and evaluate resources. However, the instruction that librarians provide can go far beyond the level of computer skills or database training, as important as those things are. As expert teachers of information literacy, librarians have a crucial role to play in the development of patrons into lifelong learners and critical thinkers. The successful practice of "critical information literacy" teaches students to "question the social, political, and economic forces involved in the creation, transmission, reception, and use of information," ultimately leading

them to recognize "the complicity of the individual — and the individual as a community member — in information-based power structures and struggles" (Harris, 2009). Thus, successful information literacy raises the learner's critical awareness in a way that carries over into public life. As Paolo Friere, a founding figure of critical pedagogy, wrote, "[t]he educator with a democratic vision or posture cannot avoid in his teaching praxis insisting on the critical capacity, curiosity, and autonomy of the learner." As Armenia looks back on its first twenty years of post-Soviet autonomy and continues to transition to an open democracy, libraries may have a more important role to play than ever before in the country's long history of the printed word.

# Appendix I

## Research Instrument — Interview Protocol

### Mission, Goals and Objectives

1. Does your library have a mission statement and related long and short term goals and objectives? If yes, could you please share it with us? If not, what is your understanding or library's mission and its goals and objectives?
2. How does the library incorporate the institution's mission into its goals and objectives?
3. How does the library maintain a systematic and continuous program for evaluating its performance, for informing the institution's community of its accomplishments and for identifying and implementing needed improvements?
4. a) Is the library mission statement clearly understood by library staff and the institution's administration? b) Is the library mission reviewed periodically?

### Services

5. How well does the library establish, promote, maintain and evaluate a range of quality services that support the academics program of the institution and optimal library use?

6. Does the library maintain hours of access consistent with reasonable demand?
7. How well do interlibrary loan and document delivery services support the needs of qualified users?
8. Does the library maintain and utilize quantitative and qualitative measurements of its ability to serve its users?
9. Do you encourage users to share their views on library services? Are needs of users and their satisfaction determined at those sites and on-line? How do student and faculty expectations affect library services?

**Instruction**

10. a) Is the library professional staff expected to deliver instruction of research skills and  b) are they provided with adequate time and resources to do so? If yes, what forms does this instruction take. If not, what is your understanding of the librarian's role in the educational/research process?
11. Do librarians work with classroom faculty in developing and evaluating library curricula in support of specific courses? If so, how?
12. Does your library support materially, through book purchases, database subscriptions or other means, faculty research?
13. Does your library support the life-long learning of its alumni by providing access to library resources?
14. Does your library provide information and instruction to users through a variety of reference and user education services, such as course related and course integrated instruction, hands-on active learning, orientations, formal courses, tutorials, pathfinders, and point-of-use instruction, including the reference interview?

**Resources**

15. What criteria are used to make decisions about the acquisition, retention, and use of print, electronic, and media resources? How does the library select resources for its users? Do you consult with departments?
16. What is the role of the classroom faculty in the selection of library resources and in the ongoing development and evaluation of the collection?

17. Does the library have a continuing and effective program to evaluate its collections, resources and online databases, both quantitatively and qualitatively?
18. Do you periodically weed the collection to assure its relevancy to research and to make room for new acquisitions?
19. Do you compare your library's collections and online databases with its peers?
20. The growing open access movement's goal is to make online journal articles and books available to researchers at no cost to users. How do you see your library's role in the open access movement?
21. How are consortium purchasing and licensing agreements utilized?
22. How well is your facility maintained? Is there adequate heat, light, functioning rest rooms, comfortable chairs and desks, etc?

**Access**

23. What methods are used to provide maximum intellectual and physical accessibility to the library and its resources?
24. Is the library collection and catalog organized according to National bibliographic standards?
25. Does the library provide timely and effective interlibrary loan or document delivery service for materials not owned by the library?
26. Does the library participate in available consortial borrowing programs? If so, how many libraries participate in the consortium? Are requests patron-initiated? What is the frequency of use?
27. Does the library provide sufficient numbers of appropriately capable computer workstations for access to electronic resources?
28. Do you have an on-line catalog? If so, is access to the catalog and to other library resources available across campus and off-campus?
29. Currently Armenia's participation in open access movement can be seen as its publication of two open access journals (with plans of more). What plans, if any, does Armenia have for creating institutional repositories for author self-archiving? What methods are being considered to fund this initiative?
30. Currently Armenia has 2 open access journals. To publish this journals money must be raised beforehand. What methods of fundraising are used?

**Outcome Assessment**

31. Is there an accrediting body to evaluate the quality of your research library? If so, is the library's assessment plan an integral component of the institution's assessment and accreditation strategies?
32. How does the library assess itself? (e.g., What quantitative and qualitative data does the library collect about its performance? How does it take into account special needs, such as those of physically challenged users?)
33. What outcomes does the library measure, and how does it measure these outcomes?
34. How does the library compare with its peers?

**Staff**

35. Do librarians need a professional degree to work in your library? If so, is there an accredited program in place?
36. What does your library/institution consider an appropriate combination of training, experience, and/or degrees when hiring librarians?
37. Does the library employ staff capable of supporting and delivering information in all available formats, including electronic resources?
38. How is the library organized in terms of its various divisions — Technical services, Acquisitions, Public services [circulation, reference (creating subject bibliographies), and reserves] archives, special collections?
39. On a typical working day, what kinds of tasks does a librarian perform at your library?
40. Do you employ support staff and/or students to assist your librarians and to accomplish the work at hand?
41. Do you offer your librarians opportunities for professional development, including continuing education and attending conferences etc?
42. Is there a national standard that delineates the status (who is a librarian and who is not) and responsibilities of a research librarian.
43. Are staff members responsible for library instruction? If so how do staff members who are responsible for instruction maintain sufficient knowledge and skills to be effective instructors?

44. In your view should the overall educational qualification of librarians in Armenia be upgraded in light of educational, technological and academic needs?

45. Is any budgetary support provided to ensure the ongoing training of all staff? If so what kind of support?

46. Is the size of your staff proportionate to the successful accomplishment of the library's goals and services?

**Facilities**

47. Does the library provide well-planned, secure, and sufficient space to meet the perceived needs of staff and users?

48. Are building mechanical systems properly designed and maintained to control temperature and humidity at recommended levels?

49. What are the perceptions of users regarding the provision of conducive study spaces, including a sufficient number of seats and varied types of seating?

50. Is there enough space for current library collections and future growth of print resources?

51. Does the staff have sufficient workspace, and is it configured to promote efficient operations for current and future needs?

52. Does the library provide ergonomic workstations for its users and staff?

53. Are electrical and network wiring sufficient to meet the needs associated with electronic access?

54. Can patrons with disabilities access the library building?

**Communication and Cooperation**

55. Is there effective communication within the library that allows for a free flow of administrative and managerial information?

56. Are staff members encouraged to suggest new ideas or procedures to improve operations or working conditions within the library? Is there a process to facilitate this?

57. Does the library have a regular means to exchange information with the campus?

58. Has the library established cooperative working relationships with other departments on campus?

59. If the library and information technology are administered separately, does the organizational structure provide opportunities for productive communication and collaboration?
60. If one administrator has responsibility for both the library and information technology, how well have the two functions been integrated?
61. Is the library able to obtain technical support for information technology in the form of in-house expertise to provide electronic resources to on-site and remote users?
62. Is the capacity of the campus network sufficient to provide reasonable response times for local and remote information resources?

**Administration**

63. How does the library administration encourage effective use of available library resources?
64. Does the library have a standing advisory committee? Does the committee have adequate classroom faculty and student representation? How effective is the committee?
65. How effective are the policies and procedures that determine internal library governance and operations?

**Budget**

66. Who prepares, justifies and administers the library budget?
67. Who apportions funds and initiates expenditures within the library budget and in accordance with institutional policy?
68. Are the library's annual authorized expenditures adequate to meet the ongoing, appropriate needs of the library, including all units such as special collections and archives?
69. How is the institution's curriculum taken into account when formulating the library's budget?
70. What methods are used to determine the adequacy of existing collections? Is the budget adequate to maintain an appropriate rate of collection development in fields pertinent to the curriculum?
71. How does the size, or anticipated size, of the student body and the classroom faculty affect the library budget?
72. Does the budget support an appropriate level of staffing and compensation?

73. Does the library budget reflect the library's responsibility for acquiring, processing, servicing, and providing access to media and computer resources?

## Appendix II

## Responses Table

The following system of notation is used for all responses:
Y = YES; N = NO; n/a = not applicable; X = not answered.

The libraries examined are identified by the following abbreviations:
YSU = Yerevan State University, Library
NLA = National Library of Armenia
FSL = Fundamental Scientific Library of the National Academy of Sciences
RSML = Republican Scientific-Medical Library
AUA = American University of Armenia, Papazian Library

NB: This table addresses only those elements of the instrument that can be answered with a yes or no. For the full text of the questions used in the survey instrument, see Appendix I.

| Instrument Question | YSU | NLA | FSL | RSML | AUA |
|---|---|---|---|---|---|
| 1. Mission, Goals and Objectives | | | | | |
| 1 | Y | Y | Y | Y | Y |
| 4(a) | Y | Y | Y | Y | Y |
| 4(b) | N | N | N | Y | Y |
| 2. Services | | | | | |
| 6 | Y | Y | Y | N | Y |
| 8 | Y | N | Y | Y | Y |
| 9 | Y | Y | Y | Y | Y |
| 3. Instruction | | | | | |
| 10(a) | N | N | N | Y | Y |
| 10(b) | N | N | N | Y | Y |
| 11 | N | N | N | N | Y |
| 12 | Y | Y | N | N | Y |
| 13 | Y | n/a | n/a | Y | Y |
| 14 | N | N | N | Y | Y |

Table continued

| Instrument Question | YSU | NLA | FSL | RSML | AUA |
|---|---|---|---|---|---|
| 4. Resources | | | | | |
| 17 | Y | N | Y | Y | Y |
| 18 | Y | N | N | N | Y |
| 19 | Y | N | N | X | Y |
| 5. Access | | | | | |
| 24 | Y | Y | Y | Y | N |
| 25 | Y | Y | Y | Y | Y |
| 26 | Y | Y | Y | Y | Y |
| 27 | Y | N | Y | Y | Y |
| 28 | Y | Y | Y | Y | Y |
| 6. Outcome Assessment | | | | | |
| 31 | N | N | N | X | Y |
| 7. Staff | | | | | |
| 35 | N | N | N | N | N |
| 37 | X | X | X | X | Y |
| 40 | N | N | N | X | Y |
| 41 | Y | Y | Y | Y | Y |
| 42 | N | N | N | N | N |
| 43 | N | Y | N | Y | Y |
| 44 | Y | Y | Y | Y | Y |
| 45 | N | N | Y | X | Y |
| 46 | Y | Y | Y | Y | Y |
| 8. Facilities | | | | | |
| 47 | Y | Y | Y | N | Y |
| 48 | Y | Y | Y | N | Y |
| 50 | Y | Y | Y | N | Y |
| 51 | Y | Y | Y | N | Y |
| 52 | Y | Y | Y | N | Y |
| 53 | Y | Y | Y | N | Y |
| 54 | N | Y | N | N | Y |
| 9. Communication and Cooperation | | | | | |
| 55 | Y | Y | Y | Y | Y |
| 56 | Y | Y | Y | Y | Y |
| 57 | Y | n/a | Y | Y | Y |
| 58 | Y | n/a | Y | n/a | Y |
| 61 | Y | Y | Y | N | Y |
| 62 | Y | n/a | Y | Y | Y |
| 10. Administration | | | | | |
| 64 | N | Y | N | X | N |
| 11. Budget | | | | | |
| 68 | N | X | N | N | Y |
| 72 | Y | N | Y | N | Y |
| 73 | Y | Y | Y | N | Y |

# References

Anderson, A., J.B., Friis-Hansen and L. Kajberg (1985). *Libraries and information centres in the Soviet Union*. Ballerup: Bibliotekscentralen forlag.

Baker, N.J. and D. Thompson (2010). Ideologies of civic participation in central Asia: Liberal arts in the post-Soviet democratic ethos. *Education, Citizenship, and Social Justice* 51(1): 57–59.

Braude, R.M., A. Shirinyan and T. Zargaryan (2001). Republican Scientific-Medical Library, the Republic of Armenia: progress and programs. *Bulletin of the Medical Library Association* 89(1): 45–50.

Donabedian, D. and J. Carey (2011). Open access and liberal education: A look at Armenia, Azerbaijan, and Georgia. *Slavic and Eastern European Information Resources,* 12(4): 201–223.

Kasinec, E. (2007). L.B. Khavkina (1871–1949), American library ideas in Russian and the development of Soviet librarianship. In: E. Kasinec and R.H. Davis (eds.), *Slavic and Russian books and libraries: Occasional essays and notes* (134–143). New York: Ross.

Kasinec, E. and R.H. Davis with D. Kimmage (2007). Former Soviet republics. In: E. Kasinec and R.H. Davis (eds.), *Slavic and Russian books and libraries: Occasional essays and notes* (31–42). New York: Ross.

Kuchma, I. (2008). Open access, equity, and strong economy in developing and transition countries: policy perspective. *Serials Review* 34(1): 13–20.

Wagner, C. (2008). *The new invisible college: Science for development*. Washington, D.C.: Brookings Institution.

# Websites Referred to in the Text

Armenian Studies Program, California State U., Fresno: http://armenianstudies. csufresno.edu/arts_of_armenia/miniatures.htm

Libraries / Yerevan World Book Capital: http://www.yerevan2012.org/index. php?option=com_content&view=article&id=101&Itemid=119&lang=en

Standards for Libraries in Higher Education, ACRL: http://www.ala.org/acrl/ standards/standardslibraries#principles

Western Association of Schools and Colleges: http://www.wascsenior.org/

Information Literacy Competency Standards for Higher Education / Association of College and Research Libraries: http://www.ala.org/acrl/standards/informationliteracycompetency#ildef

Peter Suber, Open Access Overview: http://www.earlham.edu/~peters/fos/overview.htm

Mechanics. Proceedings of National Academy of Sciences of Armenia: http://mechanics.asj-oa.am

Biological Journal of Armenia: http://biology.asj-oa.am/

Armenian Journal of Mathematics: http://ajm.asj-oa.am/

Armenian Journal of Physics: http://ajp.asj-oa.am/

Historical-Philological Journal: http://hpj.asj-oa.am

News and Events, Fundamental Scientific Library of the NAS: http://www.flib.sci.am/eng/node/1

Armenia, EIFL: http://www.eifl.net/country/armenia

Library, American University of Armenia: http://www.aua.am/library/goals.html

Who We Are / EIFL: http://www.eifl.net/who-we-are

EIFL Newsletter, no. 46: http://www.eifl.net/no-46-july-august-2010

Library and Information Science Master's Programme, Goals: http://www.flib.sci.am/eng/Master/index%28e%29.html

WHO / About Hinari: http://www.who.int/hinari/about/en/

## Notes

[1] The administrators we interviewed were as follows: Tigran Zargaryan, Director, National Library of Armenia, October 25, 2011; Satenik Avakian, Director, Papazian library, American University of Armenia, October 21, 2011; Karapet Minasyan, Director, Fundamental Scientific Library, National Academy of Sciences, October 25, 2011; Anna Shirinyan, Director, Republican Scientific-Medical Library, November 1, 2011; and Yeznik Mirzoyan, Deputy director, Izmirlian Library, Yerevan State University, October 12, 2011. It should be understood that respondents commented on their own libraries only.

2 It should be noted that even though a new edition of the standards became available in November 2011, this research was nearly concluded by that time. In addition, the authors find the earlier version of the standards more relevant to the circumstances of the libraries studied. Those interested in further assessment of these or other research libraries might also find useful the following source: Oakleaf, M. (2010). *The Value of Academic Libraries: A Comprehensive Research Review and Report* (Chicago: American Library Association).

3 Khavkina, Liubov' Borisovna, *Niu Iorkskaia publichnoia biblioteka* [s.n.]: Moskva, 1914.

4 See Diebert et al., *Access Controlled: The Shaping of Power, Rights, and Rule in Cyberspace* (Cambridge, MA: MIT Press, 2010).