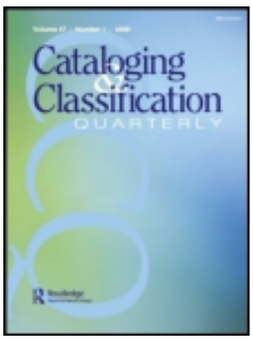

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Awareness, Perceptions, and Expectations of Academic Librarians in Turkey about *Resource Description and Access* (RDA)

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Resource Description and Access *(RDA), as a new cataloging standard, supports libraries in their bibliographic description processes by increasing access points. The increasing importance of RDA implementation requires adaptation to a new bibliographic universe. Furthermore, many initiatives have been launched by countries who would like to keep themselves up-to-date by using and implementing RDA in their library catalogs. This study points out the awareness and expectations of catalogers in academic libraries in Turkey about the transition from* Anglo-American Cataloguing Rules, *Second Edition (AACR2) to RDA and their potential problems in adapting RDA. The situation in Turkey in terms of academic libraries is evaluated and reported.*

KEYWORDS cataloging standards, Anglo-American Cataloguing Rules*, Second Edition (AACR2),* Resource Description and Access (RDA)*, catalogers, academic libraries, Turkey*

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Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/wccq.

INTRODUCTION

The new information environments emerging with the development of technology lead to changes in catalogs, cataloging principles, and rules and standards related to information organization and access. Describing information resources by indicating their relation to other information resources in addition to the integration of these descriptions with different information systems is of great importance. It allows library users to reach information more effectively and quickly. Viewed in this context, a new cataloging standard for the digital future called *Resource Description and Access* (RDA) has been developed to replace the *Anglo-American Cataloguing Rules*, Second Edition (AACR2). It provides instructions and guidelines on listing bibliographic resources more functionally, describing information resources in all formats including printed resources, sharing metadata in the digital environment, and integrating libraries with the Semantic Web. Evaluation of awareness, perceptions, and expectations of catalogers as creators of bibliographic records in accordance with RDA is necessary to manage and ensure a smooth and effective transition from AACR2 to RDA. This study describes the awareness levels, perceptions, and expectations of catalogers working in academic libraries in Turkey in the process of this transition.

CATALOGING AND DEVELOPMENT OF RDA

Information has gained importance with the transition from an industrial society to a new form of society—the information society. This results in increasing numbers of available information resources. In addition, the concept of "information technology" that allows librarians to collect, process, store, and deliver information and present it to users, has come to the fore with the usage of computers and communication networks.[1] Thus, the applications of the organization of information have been directly affected by the development of information technology.

In addition to the hitherto predominant printed materials (books and serials), graphical materials, microforms, and audio-visual materials, other resources such as digital audio and video recordings, multimedia resources, computer files and programs, databases, websites, and so on have been increasingly available in library collections. Therefore the variety of information resources has steadily risen. In this context, international principles, rules, standards, and systems describing information resources bibliographically in library collections have been reshaped.

A statement known as the "Paris Principles" was published in 1961 after a meeting of the International Federation of Library Associations and Institutions (IFLA). These principles facilitated sharing of information and gave rise to global cooperation and provided international

standardization in the applications of cataloging.[2] This statement laid the foundations of cataloging rules and principles applied by countries throughout the world.

Information resources could be recorded in the electronic environment through the MARC format developed by Library of Congress in 1966 to make catalog records readable electronically. As the number of countries increased, so did the variety of MARC formats and UNIMARC (UNIversal MARC) was developed, which permits international sharing of bibliographic records.[3] This provided a basis for the services of sharing catalog records and communication between libraries and information centers. Some institutions established to provide bibliographic services within this scope developed central cataloging projects, and the MARC format was taken into consideration within the context of these projects.[4]

International cataloging projects made important contributions to the cataloging field. They prevent unnecessary repetitions in cataloging, help to create more effective catalog records, promote uniformity, permit sharing of bibliographic records and serve as a bridge between libraries and information centers for circulation services. In this framework, international cataloging projects had an important role in providing cooperation between libraries and information centers in terms of cataloging. As this cooperation increasingly gained importance, it became necessary to create standards to allow consistent cataloging of various library materials across the world and determine new rules of cataloging by adding new capabilities to the old ones. In this respect, AACR was published in 1967, designed for use in the construction of catalogs following its rules. However, the first edition of AACR, in British and North American texts published by the British Library and American Library Association (ALA), respectively, reflected disagreement in the rules due to different applications. The second edition (AACR2) was published in 1978 by expanding the scope of the rules by taking various kinds of information resources into account. AACR2 was based on the International Standard Bibliographic Description (ISBD) developed by IFLA in 1969 that aimed to provide international standardization in cataloging.[5] The diversity in information resources caused AACR2 to be revised and updated and thus the accepted cataloging rules achieved uniformity and standardization in cataloging.

Microcomputer and optical disc technologies introduced in the 1980s presented different media with regard to information storage. Information resources moved from printed media to optical disc and the number of bibliographic and full text databases increased. This made sharing of the MARC records of bibliographic service providers and institutions possible.

The increased availability of information in electronic formats that have followed the development of information networks and widespread use of the Internet since the 1990s led to problems in the organization of these

resources. The concept of structured metadata that defines, explains, points, and manages electronic information resources was designed to solve this problem. It enabled the organization of information resources in electronic media and enhancement of their access.[6]

Computer applications (Internet, integrated library systems, e-mail, and PC software packages), markup languages (Hyper Text Markup Language [HTML], Extensible Markup Language [XML], Standard Generalized Markup Language [SGML], etc.) and metadata schemas and tools (Dublin Core, OCLC Cooperative Online Resource Catalog [CORC], Encoded Archival Description [EAD], Text Encoding Initiative [TEI], Resource Description Framework [RDF], etc.) became significant with the influence of the Internet on information resources.[7]

As a result of the constant increase in printed and electronic resources, the creation of different bibliographic records for resources with the same intellectual and artistic content placed a huge burden on libraries in terms of time and cost.[8] Some studies were made with a view to determining how to reduce these costs. Furthermore, the focus on storage and protection of information resources by libraries and information centers turned to access. Usage of these resources and improving the visibility of information resources in the international environment gained importance. This required new developments to make existing rules and library catalogs functional in relation to the organization of information resources. IFLA published a report called *Functional Requirements for Bibliographic Records* (FRBR) in 1998 and proposed a conceptual model for functionalization of bibliographic records.[9] This model represented the relationships between a variety of presentations and expressions of information resources in different formats, which facilitated the organization and use of these resources.

All these developments influenced the development of cataloging rules, which were discussed again in two meetings held in Canada and Germany. Some recommendations were made about analyzing AACR, revising the logical structure of AACR in accordance with the changes in concepts associated with FRBR and the tasks of users (find, identify, select, and obtain) and the main rules were stated clearly at the "International Conference on the Principles and Future Development of AACR" by the Joint Steering Committee for Revision of Anglo-American Cataloging Rules (JSC) meeting in 1997.[10]

Another meeting under the aegis of IFLA was held in Frankfurt in 2003. It aimed to share the cataloging rules and codes used by catalogers, question the "Paris Principles" again, make necessary updates for today's environment, ensure the developments of catalogers as regards cataloging and classification, and to plan future systems.[11] At the end of the meeting, the "Statement of International Cataloguing Principles" (ICP) was published, all kinds of information resources were emphasized, the replacement and expansion of "Paris Principles" were advocated, and new principles were introduced.[12] Owing to these meetings in Toronto and Frankfurt, it became necessary to

prepare new cataloging rules (AACR3) following the effects on the rules of all formats of information sources, the fundamental cataloging concepts, the FRBR terminology, the FRBR user tasks for library catalogs, and the "Statement of International Cataloguing Principles" by IFLA.

Studies to prepare new cataloging rules, AACR2, began in 2004. Then the studies were completely reshaped and the set of rules named as RDA was created. Thanks to RDA, it became possible to eliminate the borders in access to information and reflect electronic media and web applications. The first draft of RDA initially began as AACR3 Draft Part I in 2004 and from December 2005 to November 2008, a series of RDA drafts were prepared by stakeholders and new cataloging rules and implementations launched as the RDA Toolkit in 2010.[13] International studies and tests are currently being carried out on these new rules regarding the definition of information resources and access to these resources.

RDA can be described as the new standard for description and access to all types of information resources in the digital environment. It is built on the principles, conceptual models, and standards such as AACR2, FRBR, Functional Requirements for Authority Data (FRAD), and ISBD. There are some important differences between AACR2 and RDA. RDA allows the recording of what is seen by following the ICP principle of representation, eliminates incomprehensible abbreviations, uses related FRBR entities (for finding, identifying, selecting, and obtaining information resources), and provides better display opportunities in library catalogs for clustering information about titles and authority data. RDA has been developed by the Joint Steering Committee for Development of RDA (JSC), with representatives from the ALA, The Australian Committee on Cataloguing, The British Library, The Canadian Committee on Cataloguing, CILIP: Chartered Institute of Library and Information Professionals, Deutsche Nationalbibliothek, and the Library of Congress.[14,15,16]

Moreover, the Bibliographic Framework (BIBFRAME) Initiative helps to create a platform that makes "the network" central and interconnectedness commonplace for libraries.[17] The Virtual International Authority File (VIAF) Initiative provides identification of entities, links national- and regional-level authority records by creating clusters of related records and supplies localization of bibliographic data through making local versions of names (e.g., in different scripts, spellings, or other variations) available for searching and display of data sets.[18] Therefore, BIBFRAME and VIAF are significant initiatives that support RDA.

RDA also impacts online public access catalogs (OPACs) and provides more opportunities for better display and searching. It presents more accessibility, details about the content and format of information resources in the library catalogs, and relationships among these resources.[19] Ongoing international efforts addressing the arrangement and organization of the bibliographical universe that includes all types of information resources can be seen on a continuous basis.

CATALOGING AND RDA IMPLEMENTATIONS IN TURKEY

New developments in cataloging principles, rules, and standards at the international level have a direct influence on studies and implementations related to cataloging in Turkey. The initial studies with respect to cataloging principles, rules, and standards included "Alfabetik Katalog Kaideleri" (Alphabetical Catalog Rules) in 1941, "Basma Eserler Alfabetik Katalog Kaideleri" (Printed Resources Alphabetical Catalog Rules) prepared by the Turkish Librarians' Association in 1957, "Kitap Kataloglama Kuralları" (Rules for Cataloging Books) published by the Republic of Turkey, Ministry of Culture and Tourism, General Directorate of Libraries and Publications in 1961, and "Tüzel Kişi Yazarlığı ve Alfabetik Katalog Kuralları" (Authorship of Corporate Body and Alphabetical Catalog Rules).[20]

Academic libraries and research libraries started to use AACR after its first edition was published in 1967. However, public libraries and the National Library of Turkey used different cataloging rules for a long time, which led to different applications in cataloging. After AACR gained importance worldwide and was published, a translation of AACR into Turkish began in the mid-1970s. These rules, translated by The Scientific and Technological Research Council of Turkey (TUBITAK), were not published until the beginning of the 1980s, while AACR2 had been published in the meantime.[21]

The National Library of Turkey, which followed "Printed Resources Alphabetical Catalog Rules" before, started to apply AACR2 in 1985 without using the first edition of AACR. Then the Republic of Turkey, Ministry of Culture and Tourism, General Directorate of Libraries and Publications, and public libraries began to use it, too.[22] The updated versions of these rules were published in 1988, 1998, and 2001.

A variety of books in Turkish with an explanation of different editions of AACR2 and samples of applications were published in the following years. These books covered "Özleştirilmiş Kataloglama Kuralları" (Simplified Cataloging Rules) by Necmeddin Sefercioğlu in 1988, "Kataloglama Kuralları: Örnekleriyle Anglo-Amerikan Kataloglama Kuralları" (Cataloging Rules: Samples of Anglo-American Catologing Rules) by Hasan Sacit Keseroğlu in 1988 with its revised versions in 1994, 1995, 2006, and "Kataloglama İçin Kurallar" (Rules for Cataloging) by Necmeddin Sefercioğlu in 2003.

Although AACR has been applied in libraries in Turkey since 1980, different implementations of cataloging principles, rules, and standards can be observed among libraries, which leads to problems in providing bibliographic control and difficulty in providing standardization in cataloging. In this framework, while some of the libraries use Turkish adaptations of the rules, others, especially academic libraries, use the rules in the original version.

After the emergence of MARC, developed for the identification of information resources in the electronic environment, libraries in Turkey began to use this standard and created their bibliographic records according to it. In this context, libraries have shared their bibliographic records with other libraries by using national and international union catalogs such as OCLC WorldCat), Ulusal Toplu Katalog (TO-KAT), and Yordam Bilgi Teknolojileri (Yordam BT). Although policies and methods related to the application of the MARC standard have been determined, discrepancies have been found among bibliographic records of libraries in Turkey.[23]

On the other hand, the lack of subject authority headings and name authority headings specific to Turkey at the international level causes problems in the applications of principles, rules, and standards as well as access to information. Only a subject authority list that was developed by the University and Research Librarians' Association (URLA) in Turkey can be evaluated as a local initiative. The catalogers, engaged in copy cataloging, use the titles in the records they download directly or translate them into Turkish. Furthermore, there are some differences in creating catalog records depending on the period when they are made and the people who make them.[24]

The digital environment and web applications have gained importance since 2000, thus leading to the preparation of RDA. Transition from AACR2 to RDA internationally was announced by the pioneer libraries after the first draft was developed in June 2009. The rules were published in 2010 as the RDA Toolkit, and RDA tests were implemented. This made libraries in Turkey question their current situation and accelerate the studies on applications of RDA.

A workshop was organized in June 2012 for the catalogers in academic libraries and institutions. It helped to create awareness and joint action in the implementation of the rules in the libraries in Turkey. At this workshop, it was decided to form the RDA Turkey working group. Plans were also made to create RDA terminology, develop subject and name authority headings, design educational materials, and organize education to make catalogers more aware of RDA.

After this workshop, four sub-groups (the groups developing subject authority headings, name authority headings, technology, and terminology) were formed during another meeting held in September 2012 in Ankara. These groups included librarians in libraries and professional associations and the faculty members in the field of library and information science.

In terms of educational materials and activities, the RDA brochure designed by the JSC was translated into Turkish by Nevzat Özel, and conferences were held by national and international specialists in RDA in Ankara, Istanbul, and Izmir. All of these studies were carried out with the

contributions of the RDA Turkey working group, URLA, and the faculty members in the departments of library and information science.

The transition from AACR2 to RDA can be regarded as an ongoing process that will continue for many years in Turkey. Because the future of library catalogs lies with RDA, its implementation should be internalized and encouraged and problems about cataloging should be reviewed.

METHODOLOGY

This study aims to analyze awareness, expectations, perceptions, and sufficiency levels of the librarians who work in cataloging sections of academic libraries in Turkey on RDA approaches and implementation. Qualitative and quantitative data were obtained by using the descriptive method, which is a widely preferred methodology, especially in social sciences. Intentional sampling was used to determine the target group. In the context of the sampling technique, data were gathered from the librarians who work in cataloging sections of academic libraries via a web-based interview form. The online interview form was disseminated to catalogers via e-mail and local discussion lists. Catalogers' e-mail addresses were collected from the webpages of academic libraries.

The online interview form, which generated 76 responses, was developed with the aim of identification of potential problems in RDA implementation, educational needs, individual and institutional requirements, sufficiency of integrated library systems and cataloging environments (policies, tools, and guidelines used for cataloging and interfaces of integrated library systems) that can be fundamental components for RDA developments. The study's research questions can be described as follows:

1. Which tools are being used for cataloging processes?
2. How sufficient are the integrated library systems libraries have for the creation of RDA-based bibliographic records according to catalogers' experiences?
3. What is the professional preparation level of catalogers for RDA and RDA implementation?
4. In which RDA areas do catalogers have education or in-service training needs?
5. How sufficient are the technological infrastructure, personnel capabilities, and administration approaches for RDA implementation phases that libraries have?
6. What kinds of potential problems can arise during RDA implementation?

In order to gather data required to answer these research questions, an online interview form, which included selective and open-ended questions, was designed. Qualitative findings obtained within the scope of the research were analyzed using the program Predictive Analytics SoftWare (PASW). Cross-tables and descriptive statistics were used for analyses. Furthermore, quantitative findings were analyzed and reported by coding according to their topics and their similarities.

RESULTS

Cataloging Environment

In the beginning of the online interview form, classification systems were identified that are used by the catalogers in their cataloging processes. According to the results, the *Library of Congress Classification* (LCC) system is the most intensively used due to the nature of academic libraries. As a second tool, Dewey Decimal Classification (DDC) is used by the participants. Also, the National Library of Medicine (NLM) Classification Systems is used by some catalogers.

Subject authority headings that are used by the catalogers were also investigated as a cataloging environment component in the study. Results reflect that Turkish catalogers use *Library of Congress Subject Headings* (LCSH), Sears List of Subject Headings (Sears), and Medical Subject Headings (MeSH) as well as local solutions. As local solutions, web-based Turkish subject authority headings that were mostly translated from LCSH and provided by the URLA in Turkey, is used by the catalogers. Moreover, some librarians pointed out that they have used the subject authority headings of other academic libraries.

In the context of analysis of the cataloging environment, the levels of description of bibliographic records created by catalogers were questioned. These levels, defined by AACR2, are Level I (minimal), Level II (full), and Level III (detailed). According to the results, more than half of the respondents (52.6%; 40 respondents) stated that they create the third level; 38.1% (29 respondents) indicated that their bibliographic records meet the second level; and only 6.6% explained that their bibliographic records are at the first level. On the other hand, 60.5% of respondents (46 respondents) stated that they create original bibliographic records while 36.9% explained that they mostly use copy cataloging facilities.

Analysis regarding the sharing of bibliographic records shows that more than half of the respondents (55.3%; 42 respondents) share their bibliographic records via national and international record sharing software while 39.5% (30 respondents) state that they do not share their bibliographic records. Four respondents (5.3%) did not respond to the question. In this

TABLE 1 Perceived Efficiency of ILS ($N = 75$)

	Very Poor		Poor		Fair		Good		Very Good	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Cataloging module interface	4	5.33	7	9.33	23	30.67	25	33.33	16	21.33
OPAC interface	6	8.00	14	18.67	17	22.67	26	34.67	12	16.00
Sufficiency of displayed information	3	4.00	13	17.33	15	20.00	33	44.00	11	14.6

respect, respondents explained that they use some useful tools and platforms for their bibliographic record sharing activities. These are the national union catalog (available at: http://www.toplukatalog.gov.tr/) known as TOKAT; Yordam BT, a local platform created by an integrated library system; and solutions such as OCLC WorldCat. Lastly, the language of cataloged collections was questioned. According to the results, cataloged collections mostly consist of Turkish resources, followed by English language resources. German and Italian resources are the other sources cataloged. Due to the rich cultural harmony of the country, Ottoman Turkish and Arabic resources are also cataloged.

The Usefulness of Integrated Library Systems

The efficiency of Integrated Library Systems (ILSs) that are widely used for cataloging processes was revealed using different usability and effectiveness factors. In this context, usability of cataloging modules and cataloging interfaces presented to end users and the sufficiency level of information displayed for the description of resources were examined via three Likert scale questions (Table 1).

As can be seen in Table 1, the perceived usability level of cataloging module interfaces is considerably high (33.3% Good, 21.3% Very Good). On the other hand, 30.7% of respondents indicated that cataloging module interfaces are at Fair level.

Secondly, the perceived usability of OPAC interfaces was investigated. According to the results, more than one-third of the respondents (34.7%) described the usability of the OPAC interface to be at the Good level. Furthermore, more than one-fifth (22.7%) of the respondents marked the usability of the OPAC interface as Fair. It is also notable that 26.7% of the respondents described the OPAC interface at low levels.

Catalogers were also asked about the sufficiency of information displayed in OPACs. According to 44% of respondents, the sufficiency level of displayed information in OPACs is Good while 14.6% of them think it is Very Good. One-fifth of the respondents stated that the sufficiency level is Fair while 21.3% marked Poor and Very Poor.

TABLE 2 Professional Preparation Levels on RDA, Conceptual Models, Principles, Initiatives and Platforms

	Very Low		Low		Medium		Good		Very Good	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
RDA ($N = 75$)	3	4.00	14	18.67	26	34.67	24	32.00	8	10.67
ICP ($N = 64$)	29	45.31	14	21.88	11	17.19	8	12.50	2	3.13
FRBR ($N = 69$)	16	23.19	17	24.64	22	31.88	9	13.04	5	7.25
FRAD ($N = 66$)	29	43.94	15	22.73	12	18.18	8	12.12	2	3.03
BIBFRAME ($N = 65$)	31	47.69	16	24.62	10	15.38	5	7.69	3	4.62
VIAF ($N = 65$)	27	41.54	17	26.15	11	16.92	7	10.77	3	4.62

Proficiency Levels of Catalogers/Respondents

In this part of the study, the proficiency levels of respondents on RDA and conceptual models, principles, initiatives and platforms related to RDA such as ICP, FRBR, FRAD, BIBFRAME, and VIAF were measured via Likert scale questions (Table 2).

As displayed in Table 2, more than one-third of the respondents consider themselves at mid-level about RDA. Thirty-two percent of 75 participants who responded to the question consider their levels as Good, while 10,7% evaluate their level as Very Good.

As to the proficiency level of participants with ICP, many respondents (45.3%) stated that their proficiency level is Very Low and 21.9% are at Low. However, almost 15% of participants who responded to the question were at Good and Very Good levels. On the other hand 16% of participants did not respond to the question. It is understood that participants prefer not to respond to the question when they evaluate their levels as Low or Very Low.

Results about FRBR reflect that nearly half of the respondents stated their proficiency levels to be in the low levels (23.2% and 24.6%). Plus, almost one-third of the participants (32%) who responded to the question explained their levels are at mid-level. Twenty percent described their levels as Good and Very Good. Seven participants did not respond to the question.

Analysis of proficiency levels on the FRAD conceptual model shows that 10 participants did not respond to the question. On the other hand, two-thirds of the participants who responded to the question were at Low and Very Low levels (43.9% and 22.7%) on the FRAD conceptual model. Only 15.1% of the respondents stated their proficiency levels were High or Very High.

Similar to the results obtained from the FRAD conceptual model, almost three quarters of respondents (72%) explained their levels about BIBFRAME to be at Low and Very Low. Only 12% stated their levels were high (7.7% High and 4.6% Very High). Eleven participants did not respond to the question.

Another analyzed platform for the RDA implementation is VIAF. Results obtained from 65 participants reflect that two-thirds of the respondents were

TABLE 3 Proficiency of Respondents Related to Statements and Processes

		Very Low	Low	Middle	High	Very High
Reasons for RDA's development instead of updating AACR2 ($N = 74$)	*n*	5	7	17	27	18
	%	6.76	9.46	22.97	36.49	24.32
Use of RDA element set ($N = 70$)	*n*	21	14	22	6	7
	%	30.00	20.00	31.43	8.57	10.00
Use of RDA vocabularies ($N = 69$)	*n*	22	18	19	7	3
	%	31.88	26.09	27.54	10.14	4.35

in Very Low and Low levels (41.5% and 26.2%). Of respondents, 16.9% were in the mid-level while 15.3% were in High and Very High levels (10.8% and 4.6%).

After the analysis of fundamental concepts, platforms, and conceptual models related to RDA, this study sought to evaluate the processes and statements that are related to development of RDA. Table 3 presents proficiency levels of respondents about the given statements and processes in the form.

As seen in Table 3, 60% of respondents are in the High and Very High levels regarding the reasons for RDA development in contrast to updating AACR2. Results obtained from 74 respondents show that 16% of the respondents are at Low and Very Low levels for this topic while more than one fifth (23%) evaluated their knowledge as being at the mid-level.

Use of the RDA Element Set was also investigated within the scope of this part of the study. Results obtained from 70 respondents show that half of the respondents are in Low and Very Low levels and 31.4% are in the mid-level. Furthermore, 18.6% of the respondents' described their proficiency levels to be High or Very High.

Lastly, results about the use of RDA vocabularies were found. According to the results, 57.9% of the respondents described their proficiency levels as Low and Very Low, while 27.5% evaluated their levels as mid-level. About 14.5% of the respondents are at High and Very High levels. Seven participants did not respond to the question. On the other hand, three quarters of the participants (75%) stated that a Turkish translation of RDA is required. However, 15.8% were of the view that RDA should not be translated into Turkish. Of the participants, 9.2% did not have an opinion on the topic.

Perceived Sufficiency Level of Institutions

The catalogers were asked to evaluate their libraries in terms of technological infrastructure, managerial frameworks, personnel qualifications, and

TABLE 4 Evaluation of Libraries during the RDA Implementation and Adaptation Phases

	Very Poor		Poor		Fair		Good		Very Good	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Technical infrastructure ($N = 68$)	14	20.59	12	17.65	13	19.12	16	23.53	13	19.12
Personnel qualification ($N = 69$)	17	24.64	7	10.14	16	23.19	22	31.88	7	10.14
Managerial framework ($N = 68$)	15	22.06	7	10.29	16	23.53	20	29.41	10	14.71

general overview. The results within the scope of described components are displayed in Table 4.

Of 68 respondents, 38.2% stated that the technological infrastructure of their library for RDA implementation is at Poor or Very Poor levels. Of the respondents, 23.5% considered the technological infrastructures as Good. Also, 19.1% of respondents considered it to be Fair or Very High.

Of the catalogers who responded to the question, 24.6% considered personnel qualifications in their libraries to be Very Poor in terms of RDA implementation. Moreover, 31.9% of the librarians evaluated personnel qualifications as Good and 23.2% thought the qualifications to be in the mid-level.

Perceptions of catalogers about administrative approaches in libraries that reflect awareness and perspectives of library patrons as decision makers on RDA implementation were investigated via another five scale Likert question. Of catalogers who responded to the question, 29.4% thought the administrative approaches on RDA implementation were Good and 23.5% considered it Fair, while 22.1% evaluated the managerial frameworks as Very Poor. Eight participants did not respond to the question. The general status of libraries with respect to RDA implementation is drawn in Figure 1 via a radar chart.

The radar chart displayed in Figure 1 represents catalogers' perceptions on the sufficiency level of their libraries regarding RDA implementation. According to the results, libraries are regarded as at Fair (28.36%) and Good (26.87%) levels in terms of RDA implementation. Furthermore, 17.9% of respondents evaluated their libraries as Very Poor while 13.4% considered them Very Good. Nineteen participants did not respond to this question.

Perceived Education Needs

In this part of the study, the education and training requirements of catalogers in RDA and related topics were determined via Likert scale questions. In this context, eight topics were described and directed to participants. These topics are presented in Table 5.

The results presented in Table 5 revealed that respondents think that they need education and training activities for all topics. More than half of

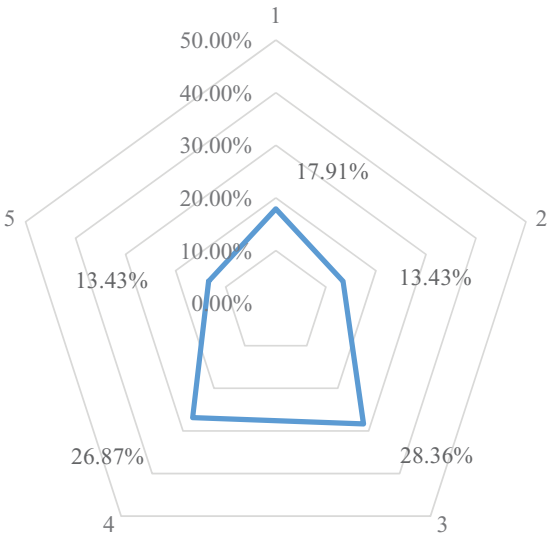

FIGURE 1 Evaluation of Libraries about RDA Implementations.

the respondents marked their education needs at High and Very High levels for eight topics. In this respect, they mostly stated that FRBR and FRAD, and Entities, Attributes, and Relationships are the first two topics that were marked with high rates. It is also seen that the education and training needs

TABLE 5 Perceived Education Needs

		Very Low	Low	Middle	High	Very High
MARC 21 and RDA ($N = 74$)	*n*	8	5	18	18	25
	%	10.81	6.76	24.32	24.32	33.78
Differences between AACR 2 and RDA ($N = 76$)	*n*	10	5	21	18	22
	%	13.16	6.58	27.63	23.68	28.95
RDA elements and core elements ($N = 76$)	*n*	3	6	17	20	30
	%	3.95	7.89	22.37	26.32	39.47
RDA concepts ($N = 75$)	*n*	3	8	16	20	28
	%	4.00	10.67	21.33	26.67	37.33
RDA content and carrier types ($N = 74$)	*n*	6	8	12	18	30
	%	8.11	10.81	16.22	24.32	40.54
Entities, attributes, and relationships ($N = 73$)	*n*	6	6	12	21	28
	%	8.22	8.22	16.44	28.77	38.36
RDA encoding structures and display ($N = 73$)	*n*	5	6	14	18	30
	%	6.85	8.22	19.18	24.66	41.10
FRBR and FRAD ($N = 72$)	*n*	7	6	10	18	31
	%	9.72	8.33	13.89	25.00	43.06

of respondents on topics like MARC 21 and RDA, and differences between AACR2 and RDA are at the lowest percentages (51% and 58%) among the eight topics. Education and training needs marked as High and Very High are more than 64% for all other topics.

Perceived Potential Problems during the RDA Implementation Phase

At the end of the survey, potential problems during the RDA implementation and adaptation processes were asked of the participants as a separate open-ended question. Quantitative results obtained from 36 participants were classified and coded according to their similarities. In this context, potential problems fall into the following categories:

- Software/technology development and implementation
- Educational/in-service training requirements
- Implementation of standardized authority files
- Change management
- Awareness
- Personnel management
- Terminology
- Digital collection management
- Funding
- Innovation management
- Managerial factors/frameworks
- Time management

According to catalogers' perspectives on the potential problems about RDA implementation in Turkey, it is a remarkable point that a standardization problem is not only an institutional problem but also a national problem for Turkey. Software and technology development and implementation problems, as well as educational/in-service training requirements were also evaluated as posing significant problems.

CONCLUSION AND RECOMMENDATIONS

This study concludes that usability levels of cataloging module interfaces and OPAC interfaces of ILSs are at the fair level. On the other hand, one out of five respondents found information displayed in OPACs insufficient and very insufficient. It is pointed out that most of them found it sufficient (good/very good level). When evaluating this situation for users, it contradicts OCLC reports and the studies that reflect the academic library users' expectations in Turkey.[25,26,27] In these reports and studies, information presented in the

OPAC is evaluated as insufficient by users. As to the proficiency levels of respondents on RDA, their levels about conceptual models, principles, initiatives, and platforms related to RDA such as ICP, FRBR, FRAD, BIBFRAME, and VIAF are found to be low. Their levels of using RDA vocabularies and the RDA Element Set are low, too. It is also noted that they prefer not to give responses to questions about subjects of which they have insufficient information.

Participants feel the need for education concerning RDA and related subjects in which they think their levels are low. In this framework, meeting their needs about the differences between MARC 21 and RDA; AACR2 and RDA; the RDA Element Set and RDA Fundamentals; concepts concerned with RDA, RDA Content, and Carrier Types; RDA Entities, Attributes, and Relationships; RDA Encoding Structures and Display; FRBR; and FRAD is highly important.

As the participants have stated, the main problem of the transition process from AACR2 to RDA in academic libraries in Turkey involves technical issues. The structure of integrated library systems is not a convenient application for RDA implementation. The problems of educational/in-service training requirements and standardization problems are also emphasized. In addition, developing national subject authority headings and name authority headings is seen as important. The findings obtained from the questions about education requirements are highly parallel to the probable problems the participants face in education. Other important problems such as change, personnel, and time management are also highlighted. The results on the general conditions of libraries in this transition process reveal that the libraries are at the fair level respecting infrastructure, management, and staff. Therefore, developing technological solutions and increasing the level of management and personnel education will lead to a rise in awareness and proficiency levels of librarians about the subject.

According to the results obtained from the survey, some improvements and revisions on integrated library systems are required due to the nature of RDA implementations in Turkey as well as in many other countries. In-service training needs are one of the prominent requirements for catalogers. At the same time, their anxiety about time management reflects the need to develop a careful strategy for RDA transition in terms of change and human resources management in Turkish academic libraries.

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