

# Cataloging and Classification History in Mexico

Filiberto Felipe Martínez-Arellano

BIBLIOTECA



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**SUMMARY.** This article discusses cataloging and classification history in Mexico and how cataloging and classification have evolved according to the changes that libraries and library science have experienced on both a national and international level. The first part of the article refers to the first half of the twentieth century, detailing the origins of cataloging and classification history. The second part presents discussion of the development and consolidation of both cataloging and classification during the second half of the twentieth century. The article also discusses subject headings, automation, centralization, and union catalogs in Mexico. It discusses past difficulties in creating a union catalog at a national level and the advantages of automated systems in helping to develop this needed union catalog. The article discusses the need to resume publication of the *Bibliografía Mexicana*. One of the main problems that Mexican libraries have faced is a scarcity of librarians adequately prepared to perform cataloging and classification of their collections. This lack of librarians is even more acute in the Mexican states. There are insufficient numbers of students in library schools to provide

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Filiberto Felipe Martínez-Arellano, PhD, is Director, Center for Research in Library Science, National Autonomous University of México (E-mail: felipe@servidor.unam.mx).

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the staffing that libraries demand not only for cataloging and classification but also for many other library activities. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <getinfo@haworthpressinc.com> Website: <http://www.HaworthPress.com> © 2002 by The Haworth Press, Inc. All rights reserved.]*

**KEYWORDS.** Cataloging, classification, subject headings, union catalogs, centralized cataloging, cataloging automation, Mexico

**RESUMEN.** Este artículo presenta la historia de la catalogación y clasificación en México. Menciona como la catalogación y clasificación han evolucionado en nuestro país de acuerdo con los cambios que las bibliotecas y la bibliotecología han experimentado como producto de la problemática nacional e internacional. En la primera parte se hace referencia a los inicios de la catalogación y clasificación durante la primera mitad del siglo veinte. El desarrollo y consolidación de la catalogación y clasificación en México tuvo lugar durante la segunda mitad del siglo veinte, lo cual es abordado en una segunda parte. Este artículo también hace referencia a la problemática de los encabezamientos de materia, la automatización, la centralización y los catálogos colectivos en México. Algunos de los puntos discutidos en el artículo son los siguientes: Es un hecho que no ha sido posible la creación de catálogos colectivos a nivel nacional. La elaboración de la "Bibliografía Mexicana" debe ser continuada. Los sistemas de automatización tienen una serie de ventajas para desarrollar los catálogos colectivos que el país requiere. Uno de los principales problemas que las bibliotecas mexicanas han enfrentado es la falta de recursos adecuadamente preparados para llevar a cabo la catalogación y clasificación de sus colecciones. Esta falta de bibliotecarios es más acentuada en los estados. Aún en nuestros días, el número de estudiantes de las escuelas de bibliotecología es insuficiente para cubrir las demandas de las bibliotecas, no sólo en catalogación y clasificación, sino en otras muchas actividades.

**PALABRAS CLAVES.** Catalogación, clasificación, encabezamientos de material, catálogos colectivos, catalogación centralizada, catalogación automatizada, México

Diverse methods, procedures, tools, systems, and standards have long affected cataloging practice and principles. In recent years the use of computers and new information technologies in cataloging and classification activities have brought about substantial changes. As in other countries, cataloging and classification in Mexico have evolved; and they have also been modified by the changes that libraries and library science have experienced from national and international settings.

The main objective of this article is to show how cataloging and classification in Mexico have evolved, to show what the factors are that have induced cataloging and classification development, to describe what the environment of cataloging and classification changes have been, and to learn how cataloging and classification have progressed in Mexico so that Mexican librarians understand the foundations of library practices in addition to bringing out opportunities to improve them.

### ***THE BEGINNINGS: THE FIRST HALF OF THE TWENTIETH CENTURY***

The emergence of library science in Mexico began at the start of the twentieth century, and its development has continued throughout the century. During the first half of the century, several important events contributed to the confirmation of library science in Mexico. "The National Library began to have its peculiar nature; public libraries were thought of as a support to popular culture; library associations were created. In addition to the European point of view, American library science, the leader in many aspects, became known. The first Mexican librarians were to study abroad, and they supported the learning of the new generation of librarians. They also introduced changes in library services; library science schools, with a formal curriculum, were established" (Morales Campos 1988, 1-3).

Certainly, during the first half of the twentieth century, the development of library science in Mexico was highlighted by the establishment of a large number of libraries, particularly public libraries, and a constant concern to train people to organize the newly created libraries to offer modern services. In this context library science education played an important role. Librarian training was carried out by both informal and formal courses in the first schools of library science schools. In librarian training, the teaching of cataloging and classification played a leading role.

On April 14, 1915, the Academia de Bibliografía [Academy of Bibliography] was created and assigned to the Biblioteca del Pueblo [People's Library] in Veracruz City. Its objective was "to prepare capable employees for the study

and organization of libraries in the country and for the unification of guiding criteria for all bibliographic institutions of the Republic." In order to attain this objective, Mr. Agustín Loera y Chávez gave a course to government libraries and archives employees that included twenty-five conferences on classification (Morales Campos 1988, 5).

Afterwards, "the necessity of having trained personnel and the wish to improve the functioning of libraries in the country, as well as library technical processes, led to the creation of the first school for librarians" (Morales Campos 1988, 5). Thus, on June 24, 1916, the *Escuela Nacional de Bibliotecarios y Archiveros* [National School of Librarians and Archivists] was created; the school lasted only until 1918. During its short life it had two curricula. The first one, in 1916, lasted one year and the second between 1917 and 1918 for two years. The first curriculum contained the following courses: library and archives organization, cataloging, library and archives classification, study of the book, Latin, French, and English. The two-year curriculum offered eleven courses that included bibliography and cataloging, palaeography, and the second courses of Latin and English" (Morales Campos 1988, 5-6).

The second attempt at establishing a school for librarians took place on April 25, 1925, when the *Escuela Nacional de Bibliotecarios* [National School of Librarians] was inaugurated. This school was administered by the *Departamento de Bibliotecas de la Secretaría de Educación Pública* [Department of Libraries of the Ministry of Public Education]. Unfortunately, this school also had a fleeting life, functioning only during its foundation year. "The subjects which made up the curriculum were study of the book, classification, cataloging, book selection, library organization, bibliography, and reference" (Morales Campos 1988, 8).

In addition to the efforts for the creation of library schools during the first half of the twentieth century, many non-curricular courses were conducted throughout the country. Their purpose was to prepare the employees needed for Mexican libraries, and courses included subject cataloging and classification.

In an analysis of curricular and non-curricular courses that were available from 1916 to 1945 in Mexico, Morales Campos (1988, 14-18) found that the most frequent subjects were librarianship, bibliography, cataloging, and classification. Likewise, these courses were divided into three main groups: technical subjects, foreign language courses, and cultural subjects. The technical subjects group had at its core five types of courses: cataloging, classification, bibliography, librarianship, and study of the book. Included in the cataloging courses were cataloging systems, catalog types and arrangement, bibliographic entries, and standardized rules of entry. The classification courses in-

cluded classification systems, Dewey Decimal Classification (DDC), and classification methodology.

It can be seen, therefore, that the history of cataloging and classification in Mexico is tightly linked with the history of library science education. The main goal was to prepare librarians with the adequate knowledge to organize the libraries that were created at that time. A technical focus was given to library science education during the first half of the twentieth century.

### ***DEVELOPMENT AND CONSOLIDATION: THE SECOND HALF OF THE TWENTIETH CENTURY***

The definitive establishment of schools of library science in the second half of the twentieth century marks the beginning of library science development in Mexico. The efforts to create a school that would train the librarians that our country needed were rewarded on April 5, 1945. On that date the Escuela Nacional de Bibliotecarios y Archivistas [National School of Librarians and Archivists] was established under the administration of the Secretaría de Educación Pública [Ministry of Public Education]. This school exists today under the name Escuela Nacional de Biblioteconomía y Archivonomía [National School of Library and Archive Sciences].

Rodríguez Gallardo (1998, 192) points out that the subjects included in the first curriculum of this school "basically tended to train students in the technical area with a great humanistic culture." The subjects that comprised the initial curriculum were: cataloging I, II, III; classification I, II; subject headings I, II; foundations of library service; introduction to librarianship and to the library and its environment; bibliography; reference sources, book selection, and reference service; book history; advanced Spanish; Mexican history; cultural history I, II; Latin I, II, III; and English I, II.

Moreover, in 1952, the Ciudad Universitaria, the main campus of the largest Mexican university, the Universidad Nacional Autónoma de México (UNAM) [National Autonomous University of Mexico], was inaugurated. This occurrence marked the beginning of a support cycle for university libraries and the starting of specialized libraries development (Tecuatl Quechol 2000, 39). The inauguration of Ciudad Universitaria led to an increase of UNAM schools and their libraries. Therefore, there was an increased need for trained employees in library science. Furthermore, the first Jornadas Mexicanas de Biblioteconomía, the annual Mexican Conference on Library Science, held in 1956, featured discussions on the need for having trained library science professionals to manage libraries.

In this context, on January 12, 1955, a project for the establishment of the Colegio de Biblioteconomía y Archivonomía [Librarianship and Archival College], actually the Colegio de Bibliotecología [College of Library Science], was submitted to UNAM authorities. The goal of this project was to resolve the problem that had confronted the university for many years: how to provide thirty-six university libraries with adequate staff for effective operation (Solís Valdespino 1980, 12).

The first Library Science College curriculum included thirty-six courses with four of them in the technical areas: classification and subject headings, cataloging 1, cataloging 2, and special problems of cataloging. In 1958 four courses were added to the curriculum, of which two were in technical areas: technical services of the book and Library of Congress Classification (Rodríguez Gallardo 1998, 222-225).

As can be observed, library education in Mexico featured strong emphasis on cataloging and classification, which continues to be an important part of the curricula of these two schools and in the four schools of library science schools that were established afterwards in Mexico (Martínez Arellano, 2000).

Mexico is a country characterized by a strong centralism that has influence in the social, economic, cultural, educational, and library areas. As mentioned, UNAM is the largest institution of higher education in the country, and its library system is the one that has the greatest influence in library practice, including cataloging and classification activities.

The number of UNAM students is around 250,000, a number that represents approximately thirty-five percent of the population in Mexican public and private universities (Ornelas & Levy 1991). Also, nearly sixty percent of research in Mexico is carried out in this higher education institution by first-level researchers in their respective disciplines (Adelman & Ortega Salazar 1995). The UNAM library system, comprised of approximately 140 libraries, is coordinated by a General Direction for Libraries, which was established in 1966. One of the functions of the General Direction is to carry out, in a centralized way, the cataloging of materials that UNAM libraries acquire—approximately 120,000 titles per year, of which 50,000 are new titles with the remaining ones being added copies acquired by the same or another library in this large system (García López 2000, 74).

Other significant occurrences in the history of library science in Mexico with relevance to understanding the evolution of cataloging and classification evolution in this country are revival of public libraries due to the establishment in 1983 of a National Plan for Public Libraries and the foundation of the Centro Universitario de Investigaciones Bibliotecológicas (CUIB) [University Center for Library Science Research] at UNAM in 1981.



On August 2, 1983, the National Plan for Public Libraries was set up to create the Public Libraries National Network, which has opened more than 6,000 libraries around the country. This library network, under the administration of the Consejo Nacional para la Cultura y las Artes [National Council for Culture and the Arts], is coordinated by a General Direction for Libraries that provides collections, according to the local user needs, to all the Mexican public libraries. Likewise, the General Direction for Libraries performs the centralized cataloging and classification of these collections and sends them to public libraries throughout Mexico ready for service.

The CUIB has its background in a research program initiated in 1988 at the UNAM General Direction for Libraries. It was established on December 14, 1981; and one of its goals is to carry out research dealing with diverse aspects of library science, among them cataloging, classification, storage and retrieval languages, and standardization in bibliographic organization.

### CATALOGING

Cataloging practices in Mexican libraries have been greatly influenced by standards, methods, and procedures used in American libraries. This influence stems in part from the geographical proximity of Mexico and the United States as well as to easy access to the specialized literature produced in the neighboring country, but also it is a consequence of the preparation that the first professional librarians in Mexico received in American universities. These first librarians were founders and professors of the first Mexican schools of library science where, as has been previously mentioned, there was a strong emphasis in the teaching of cataloging and classification.

Cataloging standards taught in library science schools in Mexico and later applied in Mexican libraries were the same employed in most of the foreign libraries. Referring to the cataloging standards utilized in the first half of the twentieth century, Chávez Campomanes (1947, 245) mentions the following: "In our country, with the exception of some old libraries that used their own criteria to catalog their books, and others that adopted the French rules, libraries have been following for more than forty years the North American rules."

In spite of the fact that libraries in our country used the North American rules, particularly the *ALA Catalog Rules: Author and Title Entries* (1941) and the *A.L.A. Cataloging Rules: Author and Title Entries* (1949), their inconsistent application led to diverse problems. Chávez Campomanes (1947, 245), for example, points out the following:

Unfortunately, a complete unification in rules application has not been accomplished since, in some libraries, cataloging rules are used in the same way they were imposed a long time ago. In others they are applied according to criteria from people with very weak preparation; in others necessary adaptations and changes, additions and corrections have not been done from the original standards to the latest publication; and in some others Library of Congress printed cards are copied. A lack of uniformity is also noted in the margins, spacing, and other card aspects but mostly in subject headings. This lack of uniformity has not allowed the implementation of cooperative cataloging programs, which would bring great advantages to our libraries and avoid job duplication that would save money and effort and would make possible cataloging standardization in our libraries.

As has been stated, one of the great problems confronting cataloging in Mexico during the first half of the twentieth century was a scarcity of properly prepared librarians, a situation that precipitated the need for training librarians through non-formal courses and the sending of scholarship students abroad, particularly to U.S. library schools.

The creation of libraries in Mexico increased greatly from 1920 to 1924, a period in which José Vasconcelos was Minister of Public Education. Vasconcelos organized the *Secretaría de Educación Pública* [Ministry of Public Education] in three great departments: Scholarly Issues, Fine Arts, and Libraries. Certainly, the impulse that the creation of libraries received during the Vasconcelos period was notable, but also there was concern about preparing librarians to take care of the new libraries. In an official report, cited by Rodríguez Gallardo (1986, 65), it was pointed out: "The Department has sent two technicians so that they can study the best classification systems in New York City." The scholarship students who were sent to study in the United States were María Teresa Chávez and Juana Manrique de Lara, both of whom had a profound influence on cataloging and classification practices and in teaching in our country, particularly Chávez (Rodríguez Gallardo 1986, 65).

María Teresa Chávez Campomanes studied at the Pratt Institute Junior Undergraduate Library School (Morales Campos 1988, 24). After her return, Chávez Campomanes was an untiring promoter of the *Escuela Nacional de Bibliotecarios* [National School of Librarians], promoting her posture since the *Primer Congreso Nacional de Bibliotecarios* [First National Congress of Librarians], held in 1927 (Rodríguez Gallardo 1998, 170). Once the *Escuela Nacional de Bibliotecarios y Archiveros* [National School of Librarians and Archivists] was established, María Teresa Chávez Campomanes, who had attained a leadership role in the area of cataloging, was a member of its first pro-



fessors group (Tecuatl Quechol 2000, 15). She was also a member of the professors group that founded the UNAM Colegio de Bibliotecología [College of Library Science] (Rodríguez Gallardo 1998, 222). In both schools María Teresa Chávez Campomanes taught cataloging courses for many years.

As a learning tool for her cataloging classes, Chávez Campomanes prepared a didactic tool titled "Catalogers and Classifiers Manual" (Morales Campos 1988). This manual became a basic reference work for catalogers and library science students. Esther Gama, a student of Professor Chávez Campomanes, was interviewed by Morales Campos (1988, 59) and points out the following memories related to this manual: "... and for cataloging (Professor Chávez) used to give us her notes that she elaborated in folded sheets of paper, using mimeograph; the first one to learn the card-making, and the second one to learn the rules that she had adapted."

The use of North American cataloging standards (*A.L.A. Cataloging Rules*), as noted, was adopted by Mexican libraries in the mid-twentieth century. Besides the arguments mentioned by Chávez Campomanes (1947, 245), Zamora Rodríguez (1947, 256) argued Mexican librarian participation in the making of this code:

The main problem that has to be solved, if a (national) uniformity is to be reached for making catalogs in our country, is the adoption of a cataloging code, either the American Library Association one (later on called ALA code) or the Vatican one.

We keep up our advocacy for the ALA code, because it is the one that has had more influence in libraries from the Occidental world, in library catalogs, in indexes, in bibliographies, and in printed reference works, and because at the current time, a new revision of it is being made, with the purpose of reaching greater international acceptance, and because in this time, Latin American librarians' opinions are being considered through the Committee of Cooperation with Latin American Cataloguers and Classifiers created since the end of 1953, to which the one who writes this paper is proud to belong.

Regarding the cataloging rules used in Mexico during the second half of the twentieth century, Morales Campos (1984, ix) mentions the following:

During the last 25 years, the main libraries in Mexico—public, specialized, and university—have used as a standard to catalog their monographic collections the 1949 A.L.A. Cataloging Rules for Author and Title Entries, the 1967 Anglo-American Cataloging Rules, and in the last years, the revised chapter VI of the Anglo-American Cataloging Rules,

edited in 1976 by the UNAM Instituto de Investigaciones Bibliográficas.  
[Institute for Bibliographic Research]

Although Mexican librarians have made use of cataloging codes generated and adopted at an international level, sometimes these codes were not used at the same time as in other places due, among other reasons, to the language barriers. Regarding this problem, Morales Campos (1984, ix) points out:

The 1949 American Library Association (ALA) code had plenty of followers in Mexico. Up to 1970, when the 1967 Anglo-American cataloging rules translation into Spanish was published, library science schools continued teaching the 1949 rules. In fact, the Spanish translation that Doctor Ma. Teresa Chávez C. has done as an educational tool for the learning of cataloging had a strong influence. Likewise, due to our librarians' limitations in reading English, new generations continued applying the 1949 code; and once a routine application of the 1967 Anglo-American cataloging rules, whose Spanish version was published in 1970 by the Organization of American States, the Chapter VI revision had already started.

To talk about cataloging in Mexico during the second half of the twentieth century, one must mention Gloria Escamilla, who was professor of many Latin American and Mexican catalogers. Gloria Escamilla González was one of the first-generation students from the UNAM Colegio de Bibliotecología [College of Library Science]. After concluding her studies in 1961, she received a scholarship from the Organization of American States that allowed her to study at Catholic University in Washington, D.C., and to work at the Library of Congress. Professor Escamilla had been interested in cataloging since her work at LC. The goal of her experience there was to learn the organization, procedures, routines, and management of bibliographic information in a library of that magnitude and to apply this knowledge in a smaller one like the Biblioteca Nacional de México [National Library of Mexico]. Her relationship with AACR emerged first as a cataloging student and afterwards as a professional interested in the application of the rules. She had studied with María Teresa Chávez at the time the ALA rules were used and later when AACR was adopted (Lira Luna 1999, 21).

Gloria Escamilla became a cataloging professor at the UNAM Colegio de Bibliotecología upon her return from Washington in 1963, a position she held until her death in 2001. The textbooks that she wrote to support the learning of cataloging—*Interpretación catalográfica de los libros* [Cataloging interpretation of books] (1979) and *Manual de catalogación descriptiva* [Manual of descriptive cataloging] (1981)—became classic works for catalogers and are still

used. In addition, her translation "Chapter VI" of the *Anglo-American Cataloging Rules*, published in 1976, became a basic reference work for Mexican catalogers in spite of the polemics that they caused. Her participation in international discussions on cataloging was also important, as can be seen in this citation:

In the development of rules, experiences from different nations have been considered. Although it is clear that most of them have been from the United States and England, there have been committees where we have been asked to express our opinions regarding diverse aspects that we have found. When I was in cataloging, in technical processing [at the National Library], I took part in some of those meetings with some contributions.

I took part in studies of standards with the hope of getting new editions. That means the new edition does not come from the nothingness; they come from contributions of librarians who are working with current problems. (Lira Luna 1999, 21)

At this point it can be seen that most Mexican libraries use the Anglo-American Cataloging Rules to organize their materials; however, their interpretation and application have been inconsistent. One explanation for this inconsistency is the scarcity of librarians emerging from library schools; then cataloging sometimes has to be done by personnel from other disciplines, who are not trained in cataloging.

Bearing in mind the necessary standardization of AACR application and the need for updating of cataloging information, the Mexican Cataloging Group, sponsored by the "Centro Universitario de Investigaciones Bibliotecológicas" [Universitary Center for Research in Library Science], was formed in 1984. One goal of this group was "to be a forum for Mexican catalogers to share experiences and projects that would contribute to the daily technical work improvement and to cataloger self-improvement" (Solís Valdespino 1984). As a result of this group's meetings, a set of recommendations has been printed in a publication entitled *The Problems of Entry of Personal Authors, Geographic Names, Corporate Authors, and Uniform Titles in Five Technical Processing Units in México City* (Solís Valdespino 1984). Regretfully, this group's activities did not continue.

### CLASSIFICATION

As in many other countries, classification systems used in Mexican libraries have been mainly Dewey Decimal Classification (DDC) and Library of Con-

gress Classification (LCC). Likewise, discussions about the adoption of a particular system or about the change from one system to another have been similar to those worldwide. At the beginning of the twentieth century, the use of DDC became popular in Mexican libraries. Díaz Mercado y Santamaría (1945, 45), in a speech given to the III National Congress of Librarians, held in 1944, pointed out:

Once the Melvil Dewey Classification was known in Mexico, there immediately appeared a reasoned movement in favour of this classification . . . In fact, Mister Fernando Pérez Ferrari, Groups Head of the Mexican Commission for the 1900 Universal Exhibition of París, addressed Mister Fernández Leal, at that time Minister of Promotion, saying in a letter of October 27, 1899, the following:

As soon as the printed brochure that included three different articles about the Decimal Classification for libraries was finished, I tried to give it the most possible circulation in the country so that this very useful system would be known and to make popular its use in public libraries.

At the beginning of the twentieth century, Mexican libraries began to use DDC; however, in many libraries, the Brussels Decimal Classification was adopted because it was considered a more complete variation of DDC. Díaz Mercado y Santamaría (1945) mentioned in a speech given in 1916 at the Third National Congress of Librarians that the National Library of Mexico adopted the Brussels Classification as a substitute for the Namur System. A number of libraries, mainly governmental, adopted this classification system although there were also some from the National University of Mexico. Proposed was "the adoption of the Brussels International Institute Classification system for all the libraries ruled by the Federal Government and for the ones that, for any reason, were considered as incorporated or recognized by the National Executive" (p. 23). The Díaz Mercado and Santamaría proposal was adopted as a resolution of the Congress.

In 1956 Tobías Chávez, head of the UNAM Library Department and professor of the UNAM Colegio de Bibliotecología, criticized the adoption of this resolution: "In Mexican governmental libraries, the Melvil Dewey Decimal system, amplified and punctualized by the Brussels International Bibliography Institute, should be adopted" (Chávez 1957, 232). Chávez states in his criticism: "From this conclusion, in my opinion, the part that says 'amplified and punctualized by the Brussels International Bibliography Institute' should be suppressed. The Dewey system was, in fact, amplified in Brussels so it could be applied to museums, archives, and other similar institutions. It was also

punctualized through the use of new symbols—(O) (.) “. ” = + - X—and others. However, these new symbols unnecessarily complicate the system as it was first thought of for libraries. In our library field it is almost absurd to complicate what in the beginning was smooth; and if it became complicated, it was for possible extra-library uses” (Chávez 1957, 232). Additionally, Chávez (234) proposed the following:

The institutions that involve several coordinated libraries should exclusively work with the Dewey Decimal system . . .

It is recommended that all the remaining libraries of the country use the Dewey system, since this would make easier the formation of bibliographic consortiums and the librarian preparation in all aspects . . .

Independent libraries that have a considerable part of their collection classified with the Brussels system or with the United States Library of Congress system could continue using the adopted system.

Tobías Chávez’s position represents a break with the European influence on library science and classification in Mexican libraries and the beginning of North American systems and adoption of standards, considered more pragmatic.

Textbooks used in the first schools of library science, such as the Escuela Nacional de Bibliotecarios y Archiveros, were centered on DDC. An example of such educational materials is the one elaborated by Juan B. Iguíniz, *Instructions for the Writing and Formation of Bibliographic Catalogs According to the Melvin Dewey System Adapted by Hispano-American Libraries* (Iguíniz 1954, 15), which was published by the National Library in 1919 (Morales Campos 1988, 59). Another work for the learning of this classification system is Chávez Campomanes mimeographed notes entitled “Melvin Dewey Decimal Classification, adapted by Doctor Ma. Teresa Chávez, course professor; tables” (Morales Campos 1988, 59).

It is important to point out that in the Tobías Chávez document the Library of Congress Classification system was mentioned for the first time. Regarding this classification system, Zamora Rodríguez (1975, 307) states: “[I]n our country, the Congress Classification was implanted for the first time in 1942 at the Anthropology and History National Institute Library. By 1955 there were already three more libraries with that classification: a specialized library (the Cardiology Institute Library) and two university ones (the UNAM Central Library and the UNAM Physics Institute Library).”



As can be observed, the adoption of LCC in Mexican libraries has taken place since the 1950s. One of its main proponents is Professor Pedro Zamora Rodríguez, who did his library science studies at Louisiana State University. In referring to the Zamora work, Salas Estrada (1983, 20) states: "In March of 1954, he occupied the position of head of Technical Processes at the Central Library and was the most important promoter for the adoption of Library of Congress Classification as the official one for this library system [UNAM libraries]." It should also be mentioned that Zamora Rodríguez was one of the professors who founded the UNAM Colegio de Bibliotecología.

In a paper presented at the VI Mexican Conference on Library Science, Zamora Rodríguez (1975, 307) pointed out that after nineteen years since the adoption of LCC at UNAM, there had been a considerable increase in the number of libraries that also used this classification system. Among the libraries that had adopted it were 100 of the most important in the country in the pure and applied sciences, libraries belonging to great and prestigious institutions of higher education, such as UNAM and the National Polytechnic Institute. As in other parts of the world, the adoption of the LCC system was necessary because of the need for cataloging and classification and the lack of specialized personnel for these activities. Zamora Rodríguez stated:

It has been demonstrated that the use of Library of Congress Classification is cheaper than the Decimal Classification. This low classification cost, together with centralized cataloging or shared cataloging programs, the use of the National Union Catalog, the catalogs . . . of library systems like UNAM's, and also the future possibility of MARC use in Mexico make the Congress classification highly recommended as the most convenient for our bibliographic centers of higher education and research institutions in the future. (p. 309)

It can thus be seen that the most widely used classification systems in Mexico in the second half of the century are the Dewey Decimal Classification and the Library of Congress Classification. Public libraries, coordinated by the Public Libraries National Network, use DDC. Other important libraries that use DDC are the National Library of Mexico and the Library of El Colegio de México, the most important in social sciences and humanities. As the result of a survey conducted among university libraries in Mexico in the 1980s, Martínez Arellano, García López, and Briseño Gómez (1992, 115) learned that 227 libraries used DDC, 270 LCC, one the Universal Decimal Classification (UDC), and 32 their own classification; 280 libraries did not respond to the survey. The survey also shows that the majority of libraries using LCC are found in the capital city. Moreover, it states that "a great majority of

university libraries use the Dewey Decimal Classification; however, many of them are adopting Library of Congress Classification due to the advantages in its use, represented by the existence of diverse catalogs and mechanisms that can be used as tools for classification tasks, such as cataloging in publication (CIP), the LIBRUNAM data base, the United States Library of Congress National Union Catalog, and the Bibliofile database" (115-116).

Commenting on the problems of applying LCC in Mexican libraries, Abell Bennett (1975, 324) points out that the main difficulty was the inadequate preparation of library science students. There was a lack of mastery of English and an absence of manuals or guides to support the learning of this classification system. Years later, Roberto Abell contributed to the solution of this problem when he was adviser of Martínez Arellano (1979) and Garza Avalos (1979) studies, which were carried out in the research program of the UNAM General Direction for Libraries. Years later, when Roberto Abell became part of the CUIB research team, he was responsible for a series of manuals to support the learning and management of Library of Congress Classification in Mexican libraries. Following are some of the manuals that have been produced to facilitate the acquisition of these skills:

- *Some Problems in the Management and Application of L. C. Classification in Latin American Materials* (Martínez Arellano 1979).
- *Introduction to Science Classification: Class Q of the Library of Congress System* (Garza Avalos 1979).
- *Management and Application of the Library of Congress Classification in History: Classes C, D, and E-F* (Abell Bennet 1988).
- *Manual for Management and Application of the Library of Congress Classification in Geography, Anthropology, and Recreation: Class G* (Abell Bennett 1989).
- *Manual for Management and Application of the Library of Congress Classification in European Law: Class KJ-KKZ* (Abell Bennett 1992).
- *Management and Application of Tables for Latin American Law in L. C. Classification* [Also available on compact disc] (Martínez Arellano & Abell Bennet 2002).

With the goal of discussing and analyzing problems inherent in the use of Library of Congress Classification, Abell Bennet and Garza Avalos (1989), under CUIB sponsorship, called together Mexican classifiers for a series of meetings in 1985 and 1986. The discussions concluded with the creation of a group to study proposals for modifying LCC. One of the products of this group was the Martínez Arellano work (1987) about classification of Mexican educational institutions.

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It is important to point out that the online catalog (LIBRUNAM) of the UNAM General Direction for Libraries is used as a support tool for cataloging in many Mexican libraries. Records may include both LCC and DDC (García López 2000, 76).

### **SUBJECT HEADINGS**

One of the major problems that Mexican libraries have faced during the twentieth century is the lack of a subject headings list that adequately responds to their needs. A first attempt to make such a list that would be useful for the organization of materials in Mexican libraries was carried out by Juana Manrique de Lara. In 1934 he published *Lista de encabezamientos de materia para catálogos diccionarios* [Subject Headings List for Dictionary Catalogs]. In spite of this work, however, a lack of uniformity on catalog cards, particularly in subject headings, remained a problem during the first half of the twentieth century. As it has been previously mentioned, Chávez Campomanes (1957, 245) punctuated this fact in the First Conference on Library Science when she pointed out that many LC cards were used as they were with headings in English.

The problem of lack of uniformity in subject headings in Mexican libraries has also been pointed out by Datshkovsky (1957, 236):

Due to the fact that we did not still have a complete list in Spanish to specify ample subject headings, in library catalogs there is a notable lack of uniformity in their use. In some libraries can be found subject headings based on instructions of the classification manual [the Manrique de Lara one perhaps, since none is indicated], in others the ones that the cataloger thinks are most adequate, and in others headings in English.

Certainly the insufficiency of trained librarians to adequately perform cataloging tasks and the easy accessibility of LC cards during the first half of the twentieth century meant that Mexican catalogers did not worry about creating subject heading lists according to local needs.

Since the 1950s, however, Mexican libraries began to compile their own lists, based on LC subject headings. In speaking of this practice, Datshkovsky (1957, 236), at that time head of the Technical Department of the Mexico Library, the largest and most important public library in the country, stated:

To achieve our goal, we took as a base the 5th and last edition of the subject headings list used in the dictionary catalog of the Library of Con-

gress in Washington because we considered it the most complete among the ones that had been published in English. Our work has not only been a literal translation of terms or expressions, even though in many cases isolated words unavoidably have to be translated, but also an interpretation of the words or expressions has been made to fit them to the readers' needs, although perhaps giving more importance to those of public libraries than specialized ones.

At the same time, the Organization of American States, through the Colon Commemorative Library of the Pan American Union (Unión Panamericana), undertook a project (1957, 239) "to compile and to publish one of the indispensable manuals for library technical organization, an authorized Spanish subject headings list, with the purpose of easing the interpretation of material that technically is organized in libraries, using as basic works for the compilation of such a list other lists published in Spanish and English and subject headings lists used in important Latin American libraries." As a result of this project, the *Lista de encabezamientos de materia para bibliotecas* [Subject Headings List for Libraries], compiled by Carmen Rovira and Jorge Aguayo, was published in 1967.

This subject headings list was also based on the *Library of Congress Subject Headings* (LCSH), but local terms were incorporated. A second edition of this subject headings list was published in 1985 by the Instituto Colombiano para el Fomento de la Educación Superior (ICFES) [Colombian Institute to the Promotion of Higher Education] and a third one in 1998 by the Luis Angel Arango Library of the Banco de la República de Colombia [Bank of the Republic of Colombia].

Another effort at producing a subject headings list suitable to local needs was done by the National Library of Mexico. Escamilla González (1985, 35) states: "It has been since 1962 when the National Library of Mexico began to create its authorities system to ease the management of information that was processed to serve as a basis for a national system, which would later on be integrated into an international authorities system."

As a result of the authority work accomplished at the National Library of Mexico in 1967, this institution published its "Subject Headings List" compiled by Gloria Escamilla González, which has since come to be known as the "Escamilla List." This work was based on a translation of LCSH; however, many local terms were also included. Since its appearance, this list has been adopted by the majority of Mexican libraries for the subject cataloging of their collections. A second edition published in 1978 continues to be used in the majority of Mexican libraries.

## AUTOMATION

The last twenty-five years of the twentieth century are characterized by the rise of automation and the application of new technologies in cataloging and classification. The most outstanding development in Mexico was the creation of the LIBRUNAM database. LIBRUNAM (from Spanish *libro* = book and the Spanish acronym for Universidad Nacional Autónoma de México) was created in 1978 with the goal of expediting cataloging and classification of materials acquired by the UNAM library system where the Technical Department of the UNAM General Direction for Libraries is the centralized agency. The UNAM union catalog of approximately 359,000 records created until 1977 were integrated into the LIBRUNAM database, and it has annually increased with the titles acquired and cataloged in the library system (Martínez-Arellano & Ramírez Nieto 1990). In 2000, LIBRUNAM had grown to approximately 730,000 records. To automate LIBRUNAM records, the MARC format was used; but it was modified according to local needs and characteristics resulting in a version called MARC-DGB. These modifications are explained in detail in the work *Manual de codificación para catalogadores* [Codification manual for catalogers] (Martínez Arellano and García López 1989).

After the creation of the LIBRUNAM database, other automation systems were created for catalog records management. In 1990, in addition to LIBRUNAM, there were LOGICAT, SIABUC, BIBLOS, and CDS/ISIS (Flores y Rodríguez Reyes 1991).

LOGICAT was the second Mexican experience in cataloging automation. It was derived from LIBRUNAM since one of LIBRUNAM's creators developed this new system, oriented to library technical, reference, and administrative processes (Flores y Rodríguez Reyes 1991). In the years following its creation in 1983, LOGICAT was used to produce catalog cards, bibliographic records, lending records, and bookshelf labels with book classification (Martínez-Arellano, García López & Briceño Gómez 1992). In 1990 LOGICAT was used in fifty libraries (Flores and Rodríguez Reyes 1991) and by 1992 in 150 libraries (Martínez-Arellano, García López & Briceño Gómez 1992).

SIABUC, an acronym for Sistema Integral Automatizado de Bibliotecas [Integrated Library System], was created in 1984 by Colima University as a support tool for technical and administrative library functions. This integrated system included the following modules: acquisitions, bibliographic analysis, reference, collection control and lending, and statistical information (Flores y Rodríguez Reyes 1991). Since its creation, SIABUC use has been popular, particularly to support cataloging and classification activities. In 1990 it was reported that SIABUC was used by seventy Mexican libraries and two abroad,



in Ecuador and Costa Rica (Flores and Rodríguez Reyes 1991). By 1992, the number had increased to 150 libraries (Martínez-Arellano, García López & Briceño Gómez 1992).

BIBLOS was a system developed to generate a database that would allow the making of catalog cards to be sent together with the books to each library of the Public Libraries National Network. The BIBLIOS database was also reproduced on compact disc and it was sent to public libraries to support the cataloging of locally acquired materials (Martínez-Arellano, García López & Briceño Gómez 1992).

With regard to CDS/ISIS, Flores and Rodríguez Reyes (1991, 185-186) state:

This system was developed by UNESCO and it is a microcomputer version for the ISIS system prepared by the International Organization of Labor and for MINISIS developed by the Canada IDRC . . . this is an information retrieval system specifically created for bibliographic and textual information management and its distribution is free. Because this system does not require standardization in cataloging records, its use in Mexican libraries has brought about countless problems.

Garduño Vera (1996, 179) reported in 1995 that the number of users of these various systems were as follows: LOGICAT in 357 libraries, SIABUC in 200, Microbiblos in 20, and Microisis in 464. Also, in 1988, LIBRUNAM became the first catalog produced on compact disc. Armendáriz Sánchez (1996) noted in a paper presented at the XXVI Mexican Conference on Library Science that a large number of libraries from 1990 to 1995 produced their catalogs on compact disc.

At present, large libraries, including the UNAM General Direction for Libraries, have opted for the acquisition of integrated systems instead of continuing the development of their own local systems. This decision eliminates the need for expensive local development and specialized human resources. For example, many large libraries in Mexico are currently using the ALEPH system.

### ***CENTRALIZATION AND UNION CATALOGS***

In Mexico, as in other libraries throughout the world, librarians have come to realize that centralization of cataloging and classification can result in a shorter time for performing these activities, cost reduction, and elimination of duplicate work. In proposing the establishment of a National Bibliographic

Centre, for example, Ocampo (1957, 179) emphasized these advantages of centralized cataloging.

Likewise, when discussing cataloging activities at the National Autonomous University of Mexico, Zamora Rodríguez (1957, 255) pointed out:

The centralized cataloging process was initiated at the UNAM in the year 1927 by the Libraries Technical Department [which in 1966 became the General Direction for Libraries]. By 1954, when the Technical Processes Department was created as an integral part of the Central Library, its main functions were to select, to acquire, to register, to classify, and to catalog all the bibliographic material acquired by the Central Library and the 40 departmental libraries at the University.

Zamora Rodríguez was among the first advocates of a UNAM centralized cataloging system, the most important in the country taking into account the number of libraries in the system. He continues:

When in 1954 the Technical Processes Department of the Central Library began the classification and cataloging of its collections, as well as the works that UNAM acquired for its 40 departmental libraries, we immediately noticed that the work was of a great significance for library science in Mexico; thus this work had to be planned and developed in such a way that it should satisfy not only current needs of university libraries but also future ones. (Zamora Rodríguez 1957, 258)

Indeed, the UNAM union catalog eventually became the most important and the most influential for cataloging activities throughout Mexico. LIBRUNAM was produced on microfiche in 1981 and, for easier access by Mexican libraries, on compact disc in 1988. Because a large number of Mexican libraries do not have enough librarians with proper training to carry out cataloging and classification activities, the development of centralized activities at UNAM meant that for many libraries, particularly those of the state universities, LIBRUNAM would become the main tool to support cataloging and classification. A study carried out by Martínez Arellano (1990) to test LIBRUNAM's value as a support for cataloging bibliographic materials in state university libraries yielded these findings: A sample of 440 titles held by eighteen state universities was collected and searched in LIBRUNAM. Sixty-six percent (294 titles) of the sample was found in LIBRUNAM. At present LIBRUNAM can be accessed through the Web page of General Direction for Libraries at: <http://www.dgbiblio.unam.mx>.

Another union catalog that has been significant for Mexican libraries is the one at the National Library of Mexico. Similar to other national libraries, the National Library of Mexico has among its objectives the conservation and dissemination of national bibliographic production. Addressing this point, Escamilla González (1980, 115) states:

Bibliographic control of Mexican publications has been for a long time of great interest to the National Library of Mexico and for its researchers and librarians. In January/February 1967, the library started the task of compiling the Mexican contemporary bibliography, with the intention of publishing it bimonthly and including in it monographs published in Mexico. Since then, fascicles were published every two months until its publication was delayed in 1978.

Since 1967 the National Library of Mexico has edited and distributed its collection of cataloging records in the publication *Bibliografía Mexicana* [*Mexican Bibliography*], which, according to Quiroga, Juárez, Ramos, Zahar and Flores (1987, 319-320) has had three periods:

1. In 1958 the current national bibliography began to be published with the title *Bibliographic Yearbook*, of which seven numbers were published, the last one for 1964. Each yearbook has an average of 5,000 cards representing printed monographic works for each year. The great majority of these works are published in the Federal District.
2. In 1967 the publication changed its name and periodicity. Since then, it has been called *Mexican Bibliography*; and its frequency was bimonthly until 1978. One purpose of this change in frequency was to speed up publication without waiting to gather everything together to edit a yearbook.
3. Since 1979 the change has been radical. The periodicity of fascicles continued being bimonthly until the second fascicle of 1981. The number of cards varies. In 1979 there were 500; the first two bimonthly periods of 1980 contained 700 cards; the third, 800; the fourth, fifth and sixth, 1,000. And since 1981 the *Mexican Bibliography* has been monthly, with each fascicle including 750 cards on average.

The *Bibliografía Mexicana* serves as an auxiliary bibliographic tool for cataloging materials published in Mexico. However, it must be remembered that the bibliography does include only a small percentage of all materials published in Mexico. Furthermore, the delay in publication meant that materials published in one year did not appear until the next year's issue. As a result,

backlogs developed (Martínez Arellano 1982a). There were attempts to automate the *Bibliografía Mexicana*, but they were not successful. Publication was suspended by the end of the 1980s.

### FINAL CONSIDERATIONS

The present article has shown the evolution of cataloging and classification in Mexico during the twentieth century. One of the main problems that Mexican libraries have faced is a scarcity of librarians adequately prepared to catalog and classify their collections. Although schools of library science have been established since mid-century and that number has increased by six in recent years, the number of students is still insufficient to meet the demands of libraries, not only for cataloging and classification but also for other library activities. The lack of librarians is more acute in the states since many of them prefer to work in Mexico City. Thus, libraries in the states have become dependent on using LIBRUNAM as a cataloging and classification source for organizing their collections; nevertheless, the problem of organizing local collections continues, and there are cataloging and classification backlogs in many Mexican libraries.

Moreover, it has not yet been possible to create union catalogs at a national level, which would, of course, support cataloging and classification. The challenge for Mexican librarians and libraries in the twenty-first century will be to develop union catalogs. Likewise, the continuation of *Bibliografía Mexicana* as an important union catalog should be resumed. Automation offers many advantages and possibilities for developing the union catalogs that the country requires.

Although many Mexican libraries use AACR2, it remains necessary for catalogers to strive for better interpretation of cataloging standards. Moreover, it is necessary to promote the expansion of manuals for the same purpose. Additionally, it is important to increase the participation of Mexican catalogers in international meetings and to expand their involvement on committees that discuss AACR. There should also be increased involvement in activities relating to DDC and LCC, the two major classifications in Mexico.

Finally, one of the major problems for organizing bibliographic materials in Mexican libraries has been the lack of a subject headings list to cover local language features and other local needs. Therefore, another challenge for Mexican librarians in the twenty-first century should be the generation of that subject headings list. To accomplish this task, automation and information technologies offer many advantages and opportunities that should be used jointly with the experience of large libraries.

## REFERENCES

- Abell Bennett, Roberto. 1975. Aplicación de la clasificación de la Biblioteca del Congreso en bibliotecas mexicanas: basada en la ponencia del Prof. Pedro Zamora [Application of the Library of Congress classification in Mexican libraries: based on the paper of Professor Pedro Zamora]. In VI Jornadas Mexicanas de Biblioteconomía: *Integración del servicio nacional bibliotecario* [VI Mexican Conference on Librarianship: *Integration of the national service*], 320-324. México: Asociación Mexicana de Bibliotecarios.
- \_\_\_\_\_. 1988. *Manejo y aplicación de la clasificación de la Biblioteca del Congreso de Estados Unidos a la historia: clases C, D y E-F* [Management and application of the Library of Congress Classification in History: Classes C, D, and E-F]. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- \_\_\_\_\_. 1989. *Manual para el manejo y aplicación de la clasificación del Congreso a la geografía, antropología y recreación: clase G* [Manual for Management and Application of the Library of Congress Classification in Geography, Anthropology, and Recreation: Class G]. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- \_\_\_\_\_. 1992. *Manual para el manejo y aplicación de la clasificación del Congreso al Derecho Europeo, subclases KJ-KKZ* [Manual for management and application of the Library of Congress Classification in European Law: Class KJ-KKZ]. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- Abell Bennet, Roberto, and María Luisa Garza Avalos. 1989. *Memoria de las cuatro reuniones nacionales sobre la normalización del uso en México del sistema de clasificación de la Biblioteca del Congreso de Estados Unidos (LC)* [Proceedings of the four national meetings on normalization for use of the Library of Congress Classification (LC)]. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- Adelman, A., and S. Ortega Salazar. 1995. *An international students guide to Mexican universities*. México: Secretaría de Educación Pública.
- Armendáriz Sánchez, Saúl. 1996. La producción de información compactada: seis años de edición de CD-ROMs en México [The production of compact information: six years of CD-ROM production in Mexico]. In XXVI Jornadas Mexicanas de Biblioteconomía: *Memorias* [XXVI Mexican Conference on Librarianship: *Proceedings*], 103-114. México: Asociación Mexicana de Bibliotecarios.
- Chávez, Tobías. 1957. Clasificación y reclasificación [Classification and reclassification]. In Primeras Jornadas Mexicanas de Biblioteconomía, Bibliografía y Canje: *Informe final* [First Mexican Conference on Librarianship, Bibliography and Exchange: *Final report*], 230-234. México: Asociación Mexicana de Bibliotecarios.
- Chávez Campomanes, María Teresa. 1957. Unificación de las normas de catalogación [Unification of cataloging norms]. In Primeras Jornadas Mexicanas de Biblioteconomía, Bibliografía y Canje: *Informe final* [First Mexican Conference on Librarianship, Bibliography and Exchange: *Final report*], 244-248. México: Asociación Mexicana de Bibliotecarios.
- Datschkovsky, Raisa. 1957. Encabezamientos de materia [Subject headings]. In Primeras Jornadas Mexicanas de Biblioteconomía, Bibliografía y Canje: *Informe final* [First Mexican Conference on Librarianship, Bibliography and Exchange: *Final report*], 235-238. México: Asociación Mexicana de Bibliotecarios.



- Díaz Mercado, Joaquín, and Atenógenes Santamaría. 1945. Tres sistemas de clasificación: ponencia presentada al III Congreso Nacional de Bibliotecarios [Three classification systems: paper submitted to the III National Congress of Librarians]. In M. M. Hardman [i.e., Herdman]. *Clasificación Bibliográfica Decimal: manual compendiado del Instituto Internacional de Bruselas: manual preliminar [Decimal Bibliographic Classification: abridged manual of the International Institute of Brussels: preliminary manual]*. México: Antigua Librería Robredo.
- Escamilla González, Gloria. 1976. *Reglas de Catalogación Angloamericanas, texto norteamericano: capítulo 6, monografías publicadas independientemente, incluye capítulo 9, reproducciones fotográficas y de otra índole y está revisado de acuerdo con la International Standard Bibliographic Description (monografías) [Anglo-American cataloging rules, North American text: chapter 6, separately published monographs, incorporating chapter 9, photographic and other reproductions, and revised to accord with the International Standard Description (monographs)]*. México: UNAM, Instituto de Investigaciones Bibliográficas.
- \_\_\_\_\_. 1979. *Interpretación catalográfica de los libros [Cataloging interpretation of books]*. México: UNAM, Instituto de Investigaciones Bibliográficas. Reimpreso en 1987.
- \_\_\_\_\_. 1980. Las servicios de la *Bibliografía Mexicana* a los usuarios [Services of the Mexican Bibliography to the users]. In XI Jornadas Mexicanas de Biblioteconomía, "El usuario": memorias [XI Mexican Conference on Librarianship, "The user": proceedings], 107-121. México: Asociación Mexicana de Bibliotecarios.
- \_\_\_\_\_. (1981). *Manual de catalogación descriptiva [Manual of descriptive cataloging]*. México: Consejo Nacional de Ciencia y Tecnología. Reprinted in 1988 by the Instituto de Investigaciones Bibliográficas.
- \_\_\_\_\_. 1985. El sistema de autoridades de la Biblioteca Nacional de México dentro del marco del sistema internacional de la IFLA [The authorities system of Mexico's National Library in the framework of the IFLA international system]. In II Coloquio de Investigación Bibliotecológica: *Memorias*, ed. E. Morales Campos [II Colloquium of Library Science Research: *Proceedings*]. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- Flores, Gustavo, and Víctorico Rodríguez Reyes. 1991. Proyecto Colima [Colima Project]. In XXI Jornadas Mexicanas de Biblioteconomía: *Memorias* [XXI Mexican Conference on Librarianship: *Proceedings*], 177-193. México: Asociación Mexicana de Bibliotecarios.
- García López, Carlos. 1999. El trabajo de control de autoridad en línea de la Dirección General de Bibliotecas de la UNAM. [Online authority control work at UNAM General Direction for Libraries]. In *Control Bibliográfico Universal: el control bibliográfico en América Latina y el Caribe hacia el tercer milenio*, ed. R. Garduño [Universal Bibliographic Control: bibliographic control in Latin America and the Caribbean near the third milenium], 216-230. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- García López, Carlos. 2000. Technical processes and the technological development of the library system in the National Autonomous University of México. *Cataloging & Classification Quarterly* 30, no. 1: 73-90.
- Garduño Vera, Roberto. 1996. Uso de tecnologías de la información en el control bibliográfico [Use of information technologies in bibliographic control]. In

- XXVI Jornadas Mexicanas de Biblioteconomía: *Memorias* [XXVI Mexican Conference on Librarianship: *Proceedings*], 175-186. México: Asociación Mexicana de Bibliotecarios.
- Garza Avalos, María Luisa. 1979. Introducción a la clasificación de Ciencias: Clase Q en el sistema de la Biblioteca del Congreso de Estados Unidos [Introduction to the Science classification: class Q of the Library of Congress system]. Thesis (licentiate) in library science, Escuela Nacional de Biblioteconomía y Archivonomía.
- Iguíniz, Juan. B. 1954. Apuntes para la enseñanza de la biblioteconomía en México [Notes for teaching of librarianship in México]. *Boletín de la Escuela Nacional de Bibliotecarios y Archivistas* 2(3-4): 13-17.
- Lira Luna, Daniel. 1999. Gloria Escamilla González: principal traductora, principal promotora de las Reglas de Catalogación Angloamericanas, ahora en su 2ª edición revisada, 1988, con modificaciones de 1993 [Gloria Escamilla González: main translator, main promoter of the Anglo-American Cataloging Rules, now in its 2nd. revised edition, 1988, with 1993 modifications]. *Liber: Revista de Bibliotecología* 1(1): 17-22.
- Martínez Arellano, Filiberto Felipe. 1979. Algunos problemas en el manejo y aplicación del sistema de Clasificación L. C. en materiales latinoamericanos [Some Problems in the management and application of L.C. Classification in Latin American materials]. Thesis (licentiate) in Library Science, Escuela Nacional de Biblioteconomía y Archivonomía.
- \_\_\_\_\_. 1982. LIBRUNAM como apoyo a las actividades de catalogación y clasificación en las bibliotecas mexicanas [LIBRUNAM as a support tool for cataloging and classification in Mexican libraries]. *Ciencia Bibliotecaria* 5(1): 38-43.
- \_\_\_\_\_. 1982a. Análisis del uso de la *Bibliografía Mexicana* en el Departamento de Procesos Técnicos de la Dirección General de Bibliotecas de la Universidad Nacional Autónoma de México [Use analysis of the *Bibliografía Mexicana* in the Technical Processes Department of the General Direction for Libraries, National Autonomous University of México]. In XII Jornadas Mexicanas de Biblioteconomía: *Memorias* [XII Mexican Conference on Librarianship: *Proceedings*], 53-62. México: Asociación Mexicana de Bibliotecarios.
- \_\_\_\_\_. 1987. *Ampliación a la parte de instituciones educativas de México (LE7-9) dentro de la clasificación de la Biblioteca del Congreso de los Estados Unidos* [Expansion to the section for Mexican education institutions (LE7-9) in the Library of Congress Classification]. México: UNAM. Centro Universitario de Investigaciones Bibliotecológicas.
- \_\_\_\_\_. 2000. Library science education in México. *Journal of Education for Library and Information Science* 41(2): 147-157.
- Martínez Arellano, Filiberto Felipe, and Roberto Abell Bennet. 2002. Manejo y aplicación de las tablas para el Derecho Latinoamericano en el Sistema de Clasificación L.C. [Management and application of tables for Latin American Law in L. C. Classification]. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas. [Also available on compact disc].
- Martínez Arellano Filiberto Felipe, and Carlos García López. 1989. *Manual de codificación para catalogadores* [Codification manual for catalogers]. México. UNAM, Centro Universitario de Investigaciones Bibliotecológicas.

- Martínez Arellano, Filiberto Felipe, and Alejandro Ramírez Nieto. 1990. The data banks of the General Direction of UNAM Libraries. In NIT 90, 3rd International Conference New Information Technology: *Proceedings*, ed. C. Chen, 209-216. West Newton, Mass.: MicroUse Information.
- Martínez Arellano Filiberto Felipe, Carlos García López, and Jorge Briseño Gómez. 1992. Los procesos técnicos en las bibliotecas mexicanas: situación general en 1991 [Technical processes in Mexican libraries: general situation in 1991]. In *La bibliotecología en el México actual y sus tendencias [Library science in the current México and its trends]*, 105-132. México. UNAM, Dirección General de Bibliotecas.
- Morales Campos, Estela. 1984. Estudio comparativo de los códigos de catalogación más usados en México [Comparative study of the cataloging codes more used in México]. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- \_\_\_\_\_. 1988. *Educación bibliotecológica en México 1915-1954 [Library science education in México 1915-1954]*. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- Ocampo, María Luisa. 1957. La necesidad del establecimiento de un centro bibliográfico nacional [The necessity for the establishment of a national bibliographic center]. In *Primeras Jornadas Mexicanas de Biblioteconomía, Bibliografía y Canje: Informe final [First Mexican Conference on Librarianship, Bibliography and Exchange: Final report]*, 177-180. México: Asociación Mexicana de Bibliotecarios.
- Ornelas, C., and D. C. Levy. 1991. México. In *International higher education: an encyclopedia*, ed. P. G. Altbach, 943-945. New York: Garland.
- Quijano Solís, Alvaro, Pilar Maria Moreno Jiménez, and Reynaldo Figueroa-Servín. 2000. Automated authority files of Spanish-language subject headings. *Cataloging & Classification Quarterly* 29, no. 1-2: 209-224.
- Quiroga, Luz Marina, Aurora Juárez, Martín Ramos, Juana Zahar, and Gerardo Flores. 1987. Una nueva etapa en la historia de la *Bibliografía Mexicana*: su automatización [A new era in the history of the *Bibliografía Mexicana*: its automation]. *Boletín del Instituto de Investigaciones Bibliográficas* 2 (Época 1): 319-344.
- Rodríguez Gallardo, Adolfo. 1996. Vasconcelos y las bibliotecas [Vasconcelos and the libraries]. In Mesa Redonda "Las Bibliotecas en la Vida de México de Carranza a Nuestros Días" [Round Table "Libraries in the Life of Mexico's from Carranza to the Present Day"]. Mexico: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- \_\_\_\_\_. 1998. Hacia la recuperación humanística del bibliotecólogo [Toward the humanist recovery of the librarian]. Doctoral thesis, Universidad Nacional Autónoma de México.
- Salas Estrada, Eduardo. 1983. Pedro Zamora Rodríguez: apuntes para la biografía de un bibliotecario eminente [Pedro Zamora Rodríguez: notes for the biography of an eminent librarian]. In XIV Jornadas Mexicanas de Biblioteconomía: *Memorias [XIV Mexican Conference on Librarianship: Proceedings]*, 19-20. México: Asociación Mexicana de Bibliotecarios.
- Solís Valdespino, Ofelia (1980). El Colegio de Bibliotecología y Archivología [The College of Library and Archive Sciences]. (Licenciate thesis, Universidad Nacional Autónoma de México).

- Solís Valdespino, Ofelia. 1984. La problemática del asiento de autores personales, nombres geográficos, autores corporativos y títulos uniformes en cinco unidades de procesos técnicos en la Ciudad de México. [*The problems of entry of personal authors, geographic names, corporate authors, and uniform titles in five technical processing units in México City*]. México: UNAM, Centro Universitario de Investigaciones Bibliotecológicas.
- Tecuatl Quechol, María Graciela Martha. 2000. Los Bibliotecarios del Distrito Federal: una análisis social [Federal District librarians: a social analysis]. Master's thesis in libraru science, Universidad Nacional Autónoma de México.
- Unión Panamericana. 1957. Compilación de una lista al español de ecabezamientos de materia para uso en la organización de bibliotecas [Compilation of a Spanish subject headings list for use in the organization of libraries]. In Primeras Jornadas Mexicanas de Biblioteconomía, Bibliografía y Canje: *Informe final* [First Mexican Conference on Librarianship, Bibliography and Exchange: *Final report*], 239-243. México: Asociación Mexicana de Bibliotecarios.
- Vela de la Sancha, Juan. 1983. Bases teórica-practicas para la revisión y corrección del catálogo de materias: el caso de El Colegio de México [Theoretical-practical foundations for review and correction of the subject catalog: the case of El Colegio de Mexico]. Thesis (licentiate) in library science, Escuela Nacional de Biblioteconomía y Archivonomía.
- Zamora Rodríguez, Pedro. 1957. Catálogos central y en depósito: bases para su organización [Centralized and union catalogs: foundations for their organization]. In Primeras Jornadas Mexicanas de Biblioteconomía, Bibliografía y Canje: *Informe final* [First Mexican Conference on Librarianship, Bibliography and Exchange: *Final inform*], 254-260. México: Asociación Mexicana de Bibliotecarios.
- \_\_\_\_\_. 1975. Sistemas de clasificación de bibliotecas académicas, bibliotecas especializadas y bibliotecas públicas grandes [Classification systems of academic libraries, specialized libraries, and large public libraries]. In VI Jornadas Mexicanas de Biblioteconomía: integración del servicio nacional bibliotecario [VI Mexican Conference on Librarianship: integration of the national service], 306-319. México: Asociación Mexicana de Bibliotecarios.

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