

# EXPLOITING NATIONAL RESOURCES: SERIALS IN SPAIN

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*In reviewing the provision of serials literature in Spain the authors note the improvement between 1975 and 1990 but point to the changing academic scene and funding difficulties which require increased co-operation. The lack of union catalogues has been a major obstacle to improved co-operation and a general improvement in services using Spanish collections. Lack of standardisation in automated systems has in turn been a major obstacle to the creation of union catalogues. This problem is now being addressed through the application of international standards, and initiatives to encourage co-operation and the integration of bibliographic databases for serials are progressing.*

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## Introduction

The aim of this paper is to offer a general view of the state of the art of serials literature in Spain and of the library processes involved, from bibliographic control to access to information. In this short space of time it is not easy to convey all the changes which have occurred in the Spanish library scenery over recent years. In spite of the problems to which we shall refer, we can classify the general situation as being satisfactory and constantly advancing. Above all, however, we want to concentrate on the areas of most concern, and on those matters which are providing the focus for our work.

## Serials collections

### Overview

In Spain there are fifty-one universities and a hundred research centres grouped as CSIC, Consejo Superior de Investigaciones Científicas (The National Institution for Research). In addition there are other research centres associated to health services, public works, etc.

The better documented part of our paper refers to universities and CSIC. The directors of the libraries of both universities and CSIC, meet at the 'Conference of Directors' which has recently started publishing statistical series about its centres. We can assume that these libraries represent more than 80 per cent of the whole library activity. Most of the figures shown here refer to these institutions.

The total amount of money invested in subscriptions in 1994 was 3,916 million pesetas, that is £20 million approximately, which corresponded to 90,157 subscriptions. To this figure, we must add an important number of publications obtained by exchange or donation, but their scientific value is not very relevant. These data come from the Anuario Estadístico de las Bibliotecas Universitarias y Científicas.

Only a few of the universities are private, and in the public ones there is a very limited amount of private funding, so we may

estimate that almost all the budget for serials acquisition in Spanish libraries comes from the Government, either central or regional.

#### *Distribution among institutions*

After two decades of a general increase in the number and quality of scientific institutions, we are now facing the birth of new universities. We have at this moment, a number of universities with many years, or centuries of existence, well established, with many students and perhaps with rigidities in the allocation of their budgets. On the other hand, we have some young universities, with fewer students and in some cases without a well established subscriptions policy.

CSIC, with 446 million pesetas, is the institution with the highest investment in scientific periodicals in 1994, followed by the

Universidad de Barcelona with 275 million pesetas.

#### *What is the situation in the universities? What changes may occur in the near future?*

In Spain, only one numerical measure of serials provision has been published. It refers to the ratio "number of serials to number of students" in universities. This standard was established by a working party set up in 1986 by the Dirección General del Libro y Bibliotecas. A minimum of one subscription to every ten students was recommended (a ratio similar to those of other countries). The total number of students in Spain is 1.3 million, so the actual ratio is 0.07, below standard, but not far from it.

Of course, users maintain the pressure on libraries in order to improve the ratio. They demand more subscriptions. But let us take a

*Table 1: Ratio of subscription to students*

University	students	subscriptions	ratio	University	students	subscriptions	ratio
uned	135581	1585	0.01	upco	2083	234	0.11
upva	29006	927	0.03	urll	7892	895	0.11
uclm	26100	988	0.04	urv	9559	1025	0.11
ucm	121253	4307	0.04	ugi	8164	957	0.12
ualm	11289	565	0.05	ujcs	7295	853	0.12
uhu	11081	582	0.05	ulc	20951	2527	0.12
upsa	5143	308	0.06	ull	21737	2632	0.12
use	66632	4285	0.06	upv	55831	6439	0.12
ual	28692	2050	0.07	ust	37538	4422	0.12
uov	38515	2712	0.07	ucar	8321	1048	0.13
uvi	19081	1319	0.07	uco	15765	2018	0.13
uam	34437	2586	0.08	upe	31394	4000	0.13
uba	74255	5830	0.08	uab	35592	5168	0.15
uca	22287	1680	0.08	ucn	12121	1800	0.15
upgc	20135	1556	0.08	ucx	18608	2849	0.15
uri	4634	378	0.08	uva	36400	6000	0.16
uza	43082	3569	0.08	udl	7756	1373	0.18
uah	16493	1549	0.09	uja	12273	2200	0.18
ubu	9704	886	0.09	uib	13801	2600	0.19
umu	34388	3000	0.09	upna	8556	1775	0.21
uveg	63893	6000	0.09	una	15233	5552	0.36
usa	31249	3201	0.10	upf	5138	300	00.58
ugr	56829	6500	0.11				

more detailed look at the situation. The table<sup>(1)</sup> gives the number of students and number of subscriptions in each university. The ratio of these two values varies from a minimum of 0.03 to a maximum of 0.58.

This range may be normal, but the table shows that the majority of the big universities have low values. It is probable that these universities have not increased the level of funding in line with the increase in number of students.

In fact, the situation is even worse. We could expect a rise of 3% in funding (this is the expected growth of the national economy). On the other hand, we have an increase of more than 11 per cent in serials prices every year<sup>(2)</sup>. For 1996 the increase of 11% announced by subscription agencies, together with a conservative budgetary policy (peseta fluctuation), cause libraries to assume 15% higher costs. That is, they will have 12% fewer serials in 1997.

#### *How research is being affected by the state of serials collections*

All surveys on scientific production show a steady increase over the last twenty years. As an example, we have taken figures from a scientific-technical field with general publications aimed at the world scientific community. Since fields like agriculture or geography may depend, in part, on local publications, we have worked out an example on chemistry<sup>(3)</sup>. We noted the proportion of papers from Spanish authors, working in Spanish institutions, listed in a general database like Chemical Abstracts. In 1975 the value was 0.49% of the total of papers in the database, increasing to 1.21% in 1990. This is a strong growth. The truth is that Spanish science was at a very low level and in this 20 year period heavy investment in scientific infrastructure has been made. Nevertheless, according to figures, we must conclude that researchers have had adequate access to information.

*Which are the publications containing this information, and how have academics/researchers had access to them?*

Accepting a correlation between serials where a group of researchers currently publish and the serials they need to read, we conclude that in Spain we need 80% of foreign serials. This is the proportion of articles in chemistry by Spanish authors published in foreign serials and listed in Chemical Abstracts over those published in Spanish serials, listed or not in Chemical Abstracts. Good: the composition of our collections maintains this proportion between national and foreign publications (mainly from North America, Britain and the Netherlands). Collections have been formed as a consequence of very careful decisions, year after year. There are seminars about collection development, and staff in libraries are well trained to do it. Cancellations, especially, are made only after exhaustive and accurate analysis. <sup>(4)</sup> We may conclude that as a whole, the structure of the nation-wide collection is as good as possible, given that we apply independent policies in each institution.

Another positive aspect is the increase in use of secondary literature and bibliographic databases, both on-line and CD-ROM. There has been major investment money and effort in this area. In general, our researchers have good access to information. As a consequence, our country requests a large number of documents from foreign centres, mainly the British Library Document Supply Centre and OCLC.

A deficiency in the Spanish system is its poor capability in providing researchers with the document that they need. We have the CINDOC, an organisation within CSIC, acting as a national centre for scientific document supply. CINDOC relies on its own collection and its links to back-up libraries. In the last few years universities have increased their activity, creating library networks and union catalogues, as we are to see in the second part of this paper. However, this is not enough. In Table 2 below, we see the total number of documents supplied by Spanish libraries<sup>(5)</sup>. It represents only 456 per 100,000 inhabitants, in contrast with at least five countries in Europe with more than 400,000 transactions per 100,000 inhabitants. I think that this is our weakest point and we must concentrate our best efforts on it in the near future.

Table 2: ILL transaction by library type

Library type	Documents supplied
National library	12727
Public libraries	1320
University libraries	70095
CINDOC	46110
Special libraries	36240
Other	12985
Total	179477

### Bibliographic control of serials

Spain ranks high in the publishing world, being one of the countries with the largest volume of publications. As far as serials are concerned, some 3,000 new titles are published a year. The majority of them appear in the yearly publication *Bibliografía Española. Publicaciones periódicas* edited by the National Library.

I will refer to the National Library's catalogue to give an idea of the volume of Spanish serials. This catalogue offers more than 50,000 bibliographic records created according to the Spanish Cataloguing Rules<sup>(6)</sup> and the IBERMARC<sup>(7)</sup> format. The process of converting the National Library's serials catalogue, which is nearly finished, will enable us to offer more than 80,000 titles electronically.

We will continue to use USMARC for holdings records, and we are planning to develop and publish the corresponding IBERMARC format for this type of record. This is of vital importance at present because it is closely linked to the automated control of acquisitions, the preparation of union catalogues, the exchange of bibliographic information, and the bibliographic control of microform collections. At the moment, the application of the MARC format for holdings is one of the focal points of the work of the librarians dealing with serials publications. However, the IBERMARC format is still not in full use and there are other bibliographic formats in use. There has been a gradual and growing concern about standardisation on the Spanish library scene, and at the moment the

new automated library management systems available on the market offer the possibility of storing and exporting bibliographic information in the IBERMARC format. This will allow collaborative systems to be set up for the exchange of bibliographic information and for co-operative cataloguing. Several steps have been made in this direction amongst the Spanish libraries (for example, the agreement between the National Library and Castilla-Leon Library), but they are mainly concerned with the cataloguing of monographs.

The next step must undoubtedly be the exchange of bibliographic records of serials. The general trend of automating library processes has meant a tremendous increase in the accessibility of catalogues. University and science libraries are accessible via INTERNET and, together with the National Library, offer more than 40 OPACS, which is completely changing access to bibliographic information and is likewise speeding up the introduction of new computer technology for the benefit of interaction.

### Union catalogues

An analysis of the state of union catalogues of serials in Spain shows a difficult, though encouraging, situation. To date, the only national union catalogue published has been the Union Catalogue of Serials in Spanish Libraries<sup>(8)</sup>, started in 1971 and finished, after several updates, in 1979. Between 1985-1986, and as a result of collaboration between the Ministries of Culture and Education, working parties were set up and they gathered the necessary data for the re-launching of a national union catalogue. However, this catalogue was only partially published, i.e. the section on medicine in 1988<sup>(9)</sup>. This does not mean that Spain's National Library - the institution in charge of the union catalogue, abandoned its work at that time. In fact, from then until now, several important objectives have been achieved, namely the computerisation of all files making up the catalogue and the standardisation of all records according to the IBERMARC format. This automation process has made the next version of the Catalogue on CD-ROM possible, as well as the development

of a specific module enabling on-line access and updating of the Spanish Union Catalogue of Serials within the National Library's automated system (ARIADNA). We predict that this phase will be completed by the end of the year (1996).

I would like to emphasise that one of the fundamental reasons for the imbalance in the Union Catalogue of Serials stems from the process of computerising Spanish libraries. Basically, the process has been characterised by a lack of standardisation both in the structure and encoding of bibliographic records and holdings, and in the exchange mechanisms (ISO 2709), which has caused costly conversion and homogenisation of records. The fact that the IBERMARC format is still not in full use means that the conversion costs for a single format are very high, in terms of human and financial resources, aside from slowing down any union catalogue. As long as this situation continues, the preparation of a union catalogue on a national scale, or of any other catalogue, by attempting to overcome the environment defined by a particular library managing system, will be very difficult. As a result, it has only been possible to develop union catalogues on a lesser scale than a national one, restricted to the coverage of each of the bibliographic formats in use or those specialising in a specific subject. Proof of all of this is that union catalogues belong to universities and to the network of the Consejo Superior de Investigaciones Científicas.

The inclusion of the union catalogue in ARIADNA will benefit from other planned applications, such as the access via Z39.50. In fact the application of SR/Z39.50 standards will enable distributed union catalogues to be set up, and this is the direction in which several libraries are moving, as is the case with the participation of the Unidad de Coordinación de Bibliotecas del Consejo Superior de Investigaciones Científicas in establishing a SR/Z39.50 European gateway (EUROPAGATE).

Below is a brief outline of the contents of the main Spanish union catalogues:

#### ARCANO:

- data base on architecture in which 38 libraries participate;
- 3.000 titles of serials;

- data collected in 1991;
- uses ISSN description; does not use MARC;
- uses a diskette; cannot export or transmit.

#### *Spanish Union Catalogue of Serials*

- has 100,000 titles and 340,000 holdings belonging to 1,300 libraries;
- uses ISSN description and MARC format;
- holdings: level 3 of ANSI Z39.44;
- complies with ISO 2709; can export and transmit;
- at the end of 1996 it will be included in the national database and will be published on CD-ROM.

Linked to this catalogue is the database Directory of Spanish Libraries which has about 9,000 records and is accessible online via the National Library's computer system. At the end of 1996 this database will be structured according to X500 standard.

#### *Consejo Superior de Investigaciones Científicas*

- has 40,000 titles belonging to its 90 libraries;
- is updated by means of forms and online;
- ISSN description, does not use MARC format;
- exports in ASCII;
- published on paper and CD-ROM, and in the future only on CD-ROM.

#### *National Union Catalogue of Serials in the health sciences*

This catalogue is an example of the collaboration between the libraries specialising in health sciences (university and hospital libraries etc.) and is the result of the initiative and dynamism of these libraries in covering information needs. Their preparation has given rise to the publication of union catalogues on a regional scale (for example, Madrid, Galicia, Balearic Islands, Andalucía, Extremadura, etc.).

- ISSN description; exports on ASCII;
- the update in 1996 is going to be published on CD-ROM.

**DOCUMAT**

- 2,612 titles belonging to 77 mathematics libraries;
- ISSN description; does not use MARC format and cannot export.

**MECANO**

- 7,000 titles in the technical and engineering libraries of various universities;
- ISSN description; does not use the MARC format and exporting is difficult;
- it is distributed on diskette.

**REBIUN (Red de Bibliotecas Universitarias - Network of University Libraries)**

- 28,000 records of serials of university libraries included in the REBIUN network;
- the bibliographic records are in the MARC format; the records of the different libraries are converted to CATMARC, however, they can be output in other formats;
- it can transmit by tape or by FTP;
- it complies with the ISO 2709 and can export in MARC, ASCII or labelled.

**RIDA**

- 5,000 titles on agrarian technology;
- does not use the MARC format and cannot be exported;
- database in Microis;is;
- its update is being prepared for 1996;
- publication on paper, also distributed on diskette.

As you can see there are numerous initiatives which need the encouragement and collaboration of interested parties to maintain progress.

The Spanish Serials Group, a group of professionals linked to the world of serials (publishers, distributors, librarians, etc) is active in this sphere. The Group's recent meetings have been on the topic of the control of serials holdings and the co-ordination of existing union catalogues. On the 24 April 1996, a seminar on Union Catalogues of Serials was held in the National Library, organised by the GER. Its aim was to find out about the state of the different Union Catalogues of Serials in use in Spain and,

above all, to discuss the possibilities of co-operation between them. This seminar was planned during a previous meeting of the Spanish Serials Group on the application of the IBERMARC format to holdings for serials.

Several of the conclusions from these meetings clearly show what Spain's needs are in this respect. The most important is that which has already been mentioned, i.e. the lack of standardisation, because although all the catalogues use ISSN description, in very few cases is the ISO 2709 or the MARC format applied. With respect to the content of the extracts, different criteria are followed, and there is no generally accepted standard. The aim of future meetings is to set the minimum information requirements, the standards to be applied and the information exchange mechanisms with which to achieve co-ordination of the different catalogues.

**Inter-library loan**

The information given below is taken from a study<sup>(10)</sup> carried out at the beginning of 1995 on the suggestion of the Asociación Española de Archiveros, Bibliotecarios, Museólogos y Documentalistas (ANABAD) and subsidised by the Ministry of Culture. Firstly, the introduction of the inter-library loan in Spain is constantly on the increase, at a rate of at least 20,000 transactions annually, providing a ratio of 456 loans for every 100.000 inhabitants. Despite the growth in recent years, it is essential to increase awareness of the importance of inter-library loan and to extend it to all types of libraries. The majority of inter-library transactions loans involve supplying copies of articles from serials, which is consistent with the high costs of the subscriptions and the large number of titles available on the market. Dependency on foreign sources to satisfy the requests is excessively high, approximately 25% of the requests have to be satisfied by foreign libraries. For this reason, improving access to bibliographic holdings in Spanish libraries is a requirement for all types of libraries. On the other hand, the demand from foreign libraries is low, excessively low, given the volume and quality of the collections, especially in the field of Social Sciences and Humanities.

The most widely used means of locating documents are the printed union catalogues. However, the constant growth in the use of CD-ROM and OPACs or Internet is greatly aiding the task of location, and consequently increasing the number of loans, thereby generally improving the quality of services and reducing the dependency on foreign libraries. In a parallel fashion, the introduction of automated managing systems and electronic document supply systems (CASIAS) is totally changing the profile of these services, notably by improving their handling, reducing the response times, and increasing the number of transactions. An example of this concern is the participation of Spanish libraries and other institutions in the European Commission DGXIII project for electronic document supply, FASTDOC (Fast Document Ordering and Document Delivery) for the electronic distribution of chemistry articles. Servei de Biblioteques de la Universitat Autònoma de Barcelona, la Universitat Politècnica de Catalunya, el Institut Químic de Sarrià, el Servei de Biblioteca i Documentació de la Universidad Ramon LLull and Biblioteca de la Universitat Rovira i Virgili are all participating.

One of the most significant conclusions of this study is the need, recognised by the Spanish libraries, to establish a National Loan System which, by taking full advantage of the existing bibliographic resources, means cheaper costs and a reduction in response times. There is no doubt that this National Loan System must be based, on the one hand, on the existence of a National Union Catalogue, and on the other, the introduction of all the relevant international standards, from the OSI for the ILL (ISO 10160/1) to the standardised payment systems, such as that designed by IFLA to simplify payments (vouchers) and which is at an experimental stage. This is, naturally, the National Library's area of responsibility.

### Cooperation

We have previously mentioned several of the library networks functioning in Spain, however, there are big changes taking place because the recently set-up Conferència de Directores de Biblioteques Universitaries y Científicas

(Conference of Directors of University and Science Libraries) is working to unify the two existing university library networks in Spain, RUEDO (Red de Universitaria Española Dobis-Libis) and REBIUN (Red de Bibliotecas Universitarias). One of the first results has been the agreement on inter-library loans between the Spanish university and science libraries. The state public libraries meanwhile are using the PROINRED network.

Clearly, greater co-ordination between the Spanish libraries at an institutional level is needed. Sometimes this lack of co-ordination, and therefore of co-operation, is replaced by the work of professional associations or work groups such as the above-mentioned Spanish Serials Group.

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