

OPEN ACCESS IN SPAIN

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7.1 INTRODUCTION

The history of open access (OA) in Spain goes back to the beginning of 2000 and includes pioneering steps in the creation of repositories, adhesion to international initiatives and dissemination of open access through journals, conferences and specialized user groups.

The first open access repository was TDX (Tesis Doctorals en Xarxa or Online Doctoral Theses), created by the Consortium of Academic Libraries of Catalonia (CBUC) in 2001 for the archiving of doctoral theses. Spain was

TDX Tesis Doctorals en Xarxa

Què és?
Cerca
• TDX
• Global
Estadístiques
Novetats
PMF
Intranet
Contactar ✉
Català | English | Gallec

Autoria _____
Directoria _____
Títol _____
Universitat Totes les universitats
Departament _____
Materia _____
Paraules clau _____
Text lliure _____
Any de defensa Qualsevol
 Distingir entre majúscules i minúscules

CERCAR >

Participants
Universitat de Barcelona
Universitat Autònoma de Barcelona
Universitat Politècnica de Catalunya
Universitat Pompeu Fabra
Universitat de Girona
Universitat de Lleida
Universitat Rovira i Virgili
Universitat Oberta de Catalunya
Universitat Ramon Llull
Universitat de Vic
Universitat Internacional de Catalunya
Universitat Abat Oliba CEU
Universitat de les Illes Balears
Universitat de València
Universitat Jaume I
Universidad de Cantabria
Universidad de Murcia
Universidad de Oviedo

Coordinao
CECA
DU
Col·laboració
AART
IDL TD
Patrocini
Generalitat de Catalunya
Recollit en

Figure 7.1. TDX

also very active in the creation of the E-LIS thematic repository in 2003. Since 2006 the number of repositories has shown sustained growth, rising from 12 to the present 62 to 65 (62 in BuscaRepositorios, 63 in OpenDOAR, 65 in ROAR).

In 2008, Recolecta –the Spanish harvester of academic information– was created by FECYT (Spanish Foundation for Science and Technology) and Rebiun (Spanish University Libraries Network). The aim of the project is to promote and coordinate an integrated network of digital repositories for open access, and the dissemination and preservation of Spanish scientific output. Also, Recolecta works on the development of services and functionalities developed on this output (statistics, evaluation, citation, etc.) and also for the interoperability of repositories (standards, protocols and international guidelines). Recolecta is the first approach on the national level to coordinate the infrastructure of Spanish repositories and its relationships with the international development of the global repository infrastructure.

Two major international initiatives have marked Spain's adoption of open access. In 2003, the Ministry of Education, Culture and Sport of the Canary Island government was the first Spanish institution to sign the Berlin Declaration, and in 2004 the University of Barcelona became the Spanish representative and an active promoter of the Creative Commons licenses.

The importance of open access as a subject of study in Spain is shown in the publication of several monographic issues of specialized journals (*El profesional de la información* and *BiD* published monographic issues in 2005 and 2008), in the holding of specific conferences (in 2005 REBIUN dedicated the Fifth Workshop to repositories, 2006 marked the beginning of the OS-REPOSITARIOS workshops, of which four have been held, and the 5th International Conference on Open Repositories took place in Madrid in July 2010), and in the creation of user groups and blogs dedicated to open access and repositories (such as the OS-REPOSITARIOS list, created in 2006, and the open access blog of the Community of Madrid).

The present report is of a descriptive nature. It is divided into three sections: scientific journals, repositories and policies. It uses international information sources in addition to national ones to facilitate comparison between countries.

7.2 SCIENTIFIC JOURNALS

The main sources used to obtain quantitative data on Spanish journals were the journal directory of the Spanish National Research Council (CSIC) covering Spain, Latindex covering Latin America, the Caribbean, Spain and Portugal, and the international directories Ulrich's and DOAJ. Other useful sources for obtaining an overview are the studies by Adelaida Román (2005) and Julia Osca et al. (2008), and the study of university scientific journals by Abadal (2007). Though wherever possible we offer data from more than one source to ensure the highest level of reliability, the quantitative data we provide must be considered approximate.

In addition to the scientific journals published in Spain, which are the focus of this section, there are of course a large and increasing number of Spanish authors publishing in international journals. According to the Web of Knowledge (Thomson-ISI), the number of Spanish documents published in international journals covered by Web of Science rose from around 11,000 in 1990 to around 58,000 in 2008. In SCIMAGO Journal and Country Rank the number of Spanish documents covered in 2008 was around 52,000 (<http://www.scimagojr.com>). Spain's share of scientific production rose from 1.77 % in 1995 to 2.44 % in 2002 and almost 3 % in 2006, to place it in tenth position in the international ranking, according to Thomson Scientific for the period 1996-2006 (Moya, 2008, p. 57) and the ninth position for the period 2000-2010. The figures provided by Scimago Journal Rank with data from Scopus, which contains a larger number of journals, are similar.

The figures on the total number of scientific journals published in Spain vary considerably according to the source: 2,014 titles in Ulrich's, 2,281 in the CSIC directory and 2,822 in Latindex.

Unlike in the leading markets (the United States, the United Kingdom, the Netherlands and Germany), commercial publishers are responsible for less than a quarter of the titles in Spain. The remaining three quarters are published by non-profit publishers depending on universities, public research centers, scientific societies and professional associations.

It should also be noted that the degree of concentration of journals in publishers is low in both the commercial and the non-profit sectors.

The Social Sciences and the Humanities are the predominant subjects

Table 7.1. Type of publishers of scientific journals

Publishers	Journals	Percentage
Universities	773	34.78
Royal academies and professional associations	535	24.07
Commercial publishers	485	21.82
Public administration	256	11.52
Other research organizations	118	5.31
CSIC	49	2.20
International organizations	6	0.27
Unknown	59	2.58
Total	2,281	100.00

Source: CSIC directory

covered by the journals, as shown in the following table. Biomedicine, Experimental Sciences and Technology are the most globalized fields (i.e. Spanish authors publish in international journals).

Table 7.2. Thematic distribution of scientific journals

Area	Titles
Biomedicine	236 (10.34%)
Social Sciences and Humanities	1,738 (76.19%)
Science and Technology	307 (13.45%)
Total	2,281

Source: CSIC

One of the ways of measuring the quality rating of the journals is indicated by their presence in the WoK and Scopus. The Web of Science database includes 165 Spanish journals (January 2010) that form part of the ISI Science Citation Index, distributed as shown in table 7.3. It needs to be mentioned that, during 2009, 37 new Spanish journals were covered in the Journal Citation Report of Thomson Reuters, being 53 in 2008. This means that Spanish scientific coverage in this index rose 70 % in one year (<http://www.accesowok.fecyt.es>).

The Scopus database (<http://info.scopus.com/>), produced by the Elsevier group, includes a total of 257 Spanish scientific journals. Latindex offers a selective catalogue of scientific publications according to 33 quality criteria.

Table 7.3. Spanish journals in the citation index

Web of Science database	Titles
Science Citation Index Expanded (SCIE)	74
Social Science Citation Index (SSCI)	40
Arts & Humanities Citation Index (A&HCI)	38
SCIE + SSCI	3
SSCI + A&HCI	9
SCIE + SSCI + A&HCI	1
Total	165

Source: Rodríguez Yunta 2010

According to this catalogue, 1,365 quality scientific journals, representing 42.6% of the total, are currently published in Spain.

Ulrich's indicates that 860 Spanish journals (42.3% of the total) are accessible online. The DOAJ directory includes a total of 293 open access digital journals published in Spain. Ulrich's directory includes 271 open access scientific journals published in Spain (13.3% of the total of 2,032). The organizations responsible for these journals are distributed as follows:

Table 7.4. Publishers of Spanish open access journals

Publishing organization	Percentage
Public research centers	14.29
Private companies	8.16
Scientific societies	22.04
Universities	46.12
Other	9.39
Total	100.00

Source: DOAJ

The copyright policies and self-archiving conditions of the journals are provided by the Dulcinea database (<http://www.accesoabierto.net/dulcinea/>), created in 2008 with a similar structure to that established by SHERPA/RoMEO. At present Dulcinea contains information on copyright policies and self-archiving conditions of 809 Spanish scientific journals. Self-archiving is permitted by 76.15% of the journals, with the following options: pre-print (0.98%), post-print (81.90%) and pre-print i post-print (17.10%).

Figure 7.2. Dulcinea

Table 7.5. General data on active Spanish scientific journals

Journals	Online	Online and OA	JCR	JCR and online	JCR and OA
2,032	860	271	56	46	18
Peer-reviewed					
300	203	81	39	34	11
Non-peer-rev.					
1,732	657	190	17	12	7

Source: Ulrich's.

7.3 REPOSITORIES

In recent years there has been an increase in both the number of institutional repositories and the number of digital objects deposited in them. According to the BuscaRepositorios directory, 62 repositories –most of them being less than 3 years old– have been implemented since TDX was created in 2001.

In this section, the sources consulted were the BuscaRepositorios, OpenDOAR and ROAR directories. A complete report was also drawn up from surveys of the managers of Spanish open access institutional repositories (Melero et al, 2009).

The number of Spanish repositories is 63 according to OpenDOAR, 62 according to BuscaRepositorios and 65 according to ROAR. Universities and research centers are predominant among the institutions that have created repositories, with 43, representing 69.3% of the total. Special mention should be made of the role played by the CBUC, which has created 5 repositories,

Figure 7.3. BuscaRepositorios

8.06% of the total. The vast majority of repositories are fairly new, with 35.48% being created in the last 2 years, and 74.19% in the last 4 years.

Table 7.6. Year of creation of Spanish repositories

Year	Repositories
2001	1
2004	2
2005	5
2006	8
2007	12
2008	12
2009	19
2010	3

Source: BuscaRepositorios

Journal articles and theses are predominant among the documents included in the repositories, though learning objects have risen to 14% of the total.

Dspace is clearly the predominant technology platform, far ahead of the others with half the installations.

Finally, there are two service providers. In 2006 Hispana (<http://hispana.mcu.es/es/inicio/inicio.cmd>) was created by the Ministry of Culture and in 2008 Recolecta (<http://www.recolecta.net>) was created jointly by the Spanish

Table 7.7. Type of documents included in the repositories

Type of document	Percentage
Articles	38 (60.31%)
Theses	35 (55.55%)
Chapters and books	28 (44.44%)
Conference proceedings	18 (28.57%)
Unpublished working papers	14 (22.22%)
Multimedia and audiovisual	13 (20.63%)
Learning objects	9 (14.28%)
Patents	4 (6.34%)

Source: OpenDOAR

Table 7.8. Programs used

Program	Installations
Dspace	37
CDSWare	2
Eprints	3
DigitTool	2
Fedora	1
Html	1
OAICat	0
OJS	1
Unknown	8

Source: OpenDOAR

Academic Library Network (REBIUN) and the Spanish Science and Technology Foundation (FECYT) to, among other projects related to repositories and open access, harvest the metadata of Spanish repositories.

7.4 POLICIES

Open access policies pursue two main objectives: to help researchers to archive their publications in repositories and to encourage them to publish in open access journals. Mandate policies are clearly the most effective. However, one must also consider service creation, communication and dissemination,

RECOLECTA
Recolector de ciencia abierta

Inicio
Buscador
Sherpa/Romeo
Documentación
Equipo
Grupos de Trabajo
Contacto
Administradores de Repositorios

MISIÓN

Desarrollar las herramientas para hacer efectivos los principios de la Comisión Europea en su "Comunicación sobre la Información Científica" y las subsecuentes "Conclusiones de Competitividad del Consejo Europeo sobre la Información Científica en la era digital". Estos principios promoverán y extenderán la adopción de la política de Acceso Abierto que conducirá hacia la difusión global y transparente de los resultados de la información científica financiada con fondos públicos tal y como se establece en las "Directrices para el Acceso Abierto del Consejo Científico Europeo" (ERC) y el "Proyecto Piloto Open Access" lanzado bajo el 7^{PM} por la Comisión Europea.

OBJETIVOS

Impulsar, apoyar y coordinar el desarrollo cohesionado de la red interoperable de repositorios digitales para el acceso abierto, difusión y preservación de los resultados de la investigación científica en España, así como desarrollar servicios y funcionalidades de valor añadido sobre los resultados de esta investigación para los investigadores y el público en general.

La dimensión global de los nuevos procesos de investigación y comunicación científica en la era digital requieren el desarrollo de una infraestructura de apoyo a estos procesos también global; por ello, RECOLECTA coordinará la agenda nacional con el desarrollo internacional de la infraestructura global de repositorios digitales científicos como parte integrante del Espacio Europeo de Investigación.

Por lo tanto, las actividades de RECOLECTA se centrarán en los siguientes temas:

- Repositorios digitales científicos: herramientas de apoyo para su creación, desarrollo y sostenibilidad.
- Servicios: recolector, estadísticas, evaluación, citas, etc.
- Movimiento "Open Access"
- "e-ciencia"
- Infraestructura(interoperabilidad): estándares, protocolos y directrices internacionales
- Infraestructura (organización): herramientas de comunicación
- Innovación: investigación y desarrollo de proyectos
- Participación en Proyectos europeos
- Mediación y punto de encuentro de los diferentes agentes implicados en la creación de la red internacional de repositorios científicos: bibliotecas, editores, Instituciones, Agencias de financiación de la investigación, responsables políticos.

Figure 7.4. *Recolecta*

economic incentives and institutional coordination. We will use these categories to present the main actions carried out in Spain at present.

Unlike the factors dealt with in the previous sections, open access policies are not well-known and little global information is available on them. Therefore, the actions presented below are not intended to be an exhaustive list but merely to show the main lines and most active players at present.

7.4.1 Mandates (regulation)

There are currently three mandates for open access dissemination of publicly-funded research outcomes:

- The universities of the Community of Madrid (the Complutense University, the Carlos III University, the Rey Juan Carlos University and the University of Alcalá) jointly with the Spanish National University for Distance Education (UNED) and the CSIC (Comunidad, 2008). It made obligatory to provide open access to the outcomes of research funded by these universities grants.
- The Principality of Asturias (Principado, 2009). This mandate has a very broad scope, since it involves all of the regional government councils.
- The Polytechnic University of Catalonia (UPC, 2009). This is the most

important mandate. It requires that academic and research staff employed by the university deposit their academic publications in its own institutional repository.

The provisional draft bill of the Science and Technology Law (España, 2010) includes a section on open access to science (Chapter III. Dissemination of scientific and technological outcomes and culture. Article 36. Open access dissemination) which encourages the creation and development of repositories and open access dissemination of publicly-funded research outcomes. Furthermore, in the framework of the Inter-University Council of Catalonia, the Catalan universities have approved a document expressing their support for open access through several measures (dissemination, mandates, etc.) that will be put into practice in the period 2009-2011.

7.4.2 Provision of services

Platforms to disseminate scientific journals

The aim of these platforms is to give visibility and access to Spanish journals. Examples are RACO (<http://www.raco.cat>), Scielo España (<http://scielo.isciii.es/scielo.php>), e-Revistas (<http://www.erevistas.csic.es>) and RECYT (<http://recyt.fecyt.es/>).

Offices providing advice on open access and licenses

Units or offices (normally forming part of larger services) offer dissemination and advice on open access and the legal aspects of publishing and depositing of research articles. Three examples are the Open Knowledge Office (University of Salamanca) (http://oca.usal.es/index.php?option=com_content&task=view&id=100&Itemid=1), the Knowledge Dissemination Office (University of Barcelona) (<http://www.bib.ub.edu/serveis/odc/>) and the Intellectual Property Service (SEPI) of the Polytechnic University of Catalonia (<http://biblioteca.upc.es/sepi/>).

7.4.3 Communication and dissemination

Institutional campaigns

Most universities and research centers (e.g. the University of Barcelona, the Polytechnic University of Catalonia, the University of Alicante and the CSIC)

have carried out promotion campaigns, normally related to the setting up of a repository or the approval of regulations on open access. However, no campaigns have been aimed at informing publishers of the characteristics and possible advantages of the open access model.

Conferences and seminars

Since about 2007 conferences on a variety of subjects have included sessions on open access (e.g. Fesabid). There is a national conference on repositories (OS-REPOSITORIOS), and specific seminars of many universities (e.g. Córdoba, Girona and Valencia) have dealt with the subject.

7.4.4 Economic incentives

Budget allocations based on open access objectives

The criteria for allocating budgets to departments, research institutes, etc. include aspects related to open access, particularly the number of documents in repositories. The Polytechnic University of Catalonia offers an example of this.

Direct grants for self-archiving in repositories

In the last few years the University of Alicante has awarded direct grants to departments and research groups according to the number of documents deposited in the institutional repository (<http://www.boua.ua.es/pdf.asp?pdf=654.pdf>), (<http://www.boua.ua.es/pdf.asp?pdf=1102.pdf>).

Institutional subscription to OA portals

Several Spanish academic and research libraries support portals such as BioMedCentral (with 13 supporter members) and PLOS. Payment per publication can be made individually, but institutions can also pay a collective fee so that their authors can publish their individual projects at a lower cost.

7.4.5 Institutional coordination

Establishment of joint policies and actions

The policies adopted by consortia and groups of organizations are more effective than those of isolated organizations. Examples of this are:

- The agreement of the universities of the Community of Madrid.
This led to the approval of several mandates (e.g. the Juan Carlos I University and the Carlos III University of Madrid) explained before.
- The agreement of the Inter-University Council of Catalonia (CIC).
Promoted by the CBUC and approved by the CIC, this agreement establishes a mandate from 2011 (the universities must specify the conditions).

Adhesion to declarations and manifestos

The Berlin Declaration is perhaps one of the most emblematic in favour of open access. In early 2009 as many as 25 Spanish institutions –mainly universities and research centers– had signed it.

7.5 CONCLUSIONS

7.5.1 Journals

The number of spanish scientific journals is high (nearly 3,000 titles). Furthermore, a large number of spanish authors publish in international journals. Commercial journal publishers are a small part of the total amount (22 %). About 40% of the journals are digitized and 15% are open access. It is important to increase both of these figures. Due to the type of publishers involved (75% are non-commercial) it should not be too difficult to progress towards open access if sufficient information is provided on its advantages.

7.5.2 Repositories

The data presented above, and particularly the number and rate of creation of repositories, indicate that Spain is progressing in the creation of infrastructures that facilitate open access. Universities have been the major promoters of repositories: over five of the spanish public universities now have one and many are developing one.

The health sector, which represents 40-50 % of all science publications, has so far been left out of this progress. No Spanish hospitals or public health organizations as yet have repositories (although there are advanced projects in Asturias and Andalucía). Furthermore, with the exception of those belonging to the CSIC, no public research organizations have repositories.

The content of the existing repositories must now be increased, but this will depend largely on the institutional policies that are adopted.

7.5.3 Policies

Few policies are in place and they are not very strict. It is good news that there will be a section on open access in the future Science Law, but it will be of little use if open access is not fostered by research evaluation agencies. There is a great deal of awareness and drive among information and documentation professionals, but as yet researchers show little awareness and initiative with regard to depositing, demanding repositories and promoting changes in the journals in which they publish or sit on expert committees.

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