
Ibero-American Systems for the Dissemination of Scholarly Journals: A Contribution to Public Knowledge Worldwide

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Abstract

A vast number of scholarly journals are edited in Ibero-America, together providing a rich picture of the scientific production in this region. However, these journals have traditionally not been part of the international scientific mainstream. Different solutions have been sought to increase their access and visibility, using existing information systems and creating new ones tailored to the region's needs as well as developing new electronic journals. An analysis of a sample of Latin American electronic journals highlights some features aimed at increasing their visibility. This article also presents the main features of 30 scientific Ibero-American online libraries and discusses their influence on editorial practices throughout the region. Some conclusions are drawn on the challenges and opportunities faced by journals as they seek to strengthen their presence on the international scene.

Keywords

Scholarly journals; Visibility; Online information systems; Ibero-America; Latindex

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Introduction

Twenty years ago, knowledge about scholarly journals published in Ibero-American countries was poor and scattered. A large number of databases existed (in paper version)¹ and a few abstracting services had been developed (notably CLASE and PERIODICA, produced by the Universidad Nacional Autónoma de México). However, these could do little to correct the very partial and selective picture of these journals provided by the international indexing and abstracting services.

This dearth of information was the main reason for the establishment, in 1997, of Latindex (www.latindex.org),² the Regional Cooperative Online Information System for Scholarly Journals from Latin America, the Caribbean, Spain, and Portugal. Nobody could guess in 1997 that one day, not so distant, the Latindex databases would contain the registers of more than 17,600 scholarly journal titles – nearly 15,500 of them active – a figure that increases by the day.

The purpose of this article is to provide an update on the Ibero-American information systems on scholarly journals and the main challenges and opportunities faced by these systems. We begin by presenting the dynamic universe of Ibero-American journals in all its richness and diversity, as seen through the lens of Latindex. We then provide a brief analysis of the presence of Ibero-American journals in international information services, whose coverage is in general modest compared to the more extensive coverage by the regional databases. We provide a succinct account of electronic publishing features, including the use of metadata by a sample of Latin American journals. Finally, we profile the major online libraries existing today in Ibero-America and briefly discuss their main characteristics.

Ibero-American journals: A world of knowledge

The analysis contained in this article is based to a large extent on information provided by Latindex, which offers the most comprehensive bibliographical account worldwide on Ibero-American scholarly journals. This information is contained in three databases with free online access:

- The Directory, a comprehensive inventory of journals from 30 countries in the region, in addition to a collection of European journals on Latin American studies. The Directory provides basic bibliographic data on each title, such as publisher, contact address, subject coverage, prices, frequency of publication, et cetera.
- The Catalogue, which contains a selection of those titles from the Directory that meet a minimum of previously agreed upon editorial standards. The Catalogue provides additional information on the individual profile of these journals.
- The Index of electronic journals, which provides in an organized way direct access to a growing collection of Ibero-American online journals offering full text articles.

The Latindex system functions as a network of national resource centres that analyze the journals produced in the respective countries. As of today there are 17 associated members, which explains why not yet all countries are fairly represented. This can be appreciated from Table 1, which shows the distribution of current (active) journal titles contained in the three databases by country of publication. Complementary information is obtained from ISSN International, with which Latindex has a fruitful

cooperation agreement. In addition, through an agreement with REDIAL (Red Europea de Información y Documentación sobre América Latina, www.red-redial.net/), information on journals on Latin American studies from 12 European countries has been incorporated into the databases.

Table 1: Distribution of active journal titles in the three Latindex databases by country of publication

| Country | Database | | |
|--|-----------|-----------|---------------------|
| | Directory | Catalogue | Electronic journals |
| Argentina | 2,086 | 291 | 403 |
| Bahamas | 3 | 0 | 2 |
| Barbados | 10 | 1 | 1 |
| Belize | 1 | 0 | 0 |
| Bolivia | 24 | 3 | 6 |
| Brazil | 3,739 | 947 | 761 |
| Chile | 1,661 | 274 | 213 |
| Colombia | 549 | 238 | 161 |
| Costa Rica | 186 | 49 | 90 |
| Cuba | 305 | 87 | 71 |
| Dominican Republic | 62 | 1 | 13 |
| Ecuador | 369 | 26 | 56 |
| El Salvador | 26 | 1 | 6 |
| Guatemala | 40 | 0 | 8 |
| Guyana | 2 | 0 | 0 |
| Haiti | 1 | 0 | 0 |
| Honduras | 9 | 0 | 1 |
| International organizations based in Latin America | 46 | 8 | 10 |
| Jamaica | 12 | 1 | 1 |
| European journals on Latin American studies | 48 | 1 | 17 |
| Mexico | 1,617 | 347 | 544 |
| Nicaragua | 11 | 1 | 3 |
| Panama | 39 | 2 | 6 |
| Paraguay | 21 | 1 | 12 |
| Peru | 243 | 82 | 54 |
| Portugal | 972 | 112 | 52 |
| Puerto Rico | 120 | 43 | 59 |
| Spain | 2,698 | 1,244 | 561 |
| Trinidad & Tobago | 10 | 0 | 0 |
| Uruguay | 157 | 6 | 58 |
| U.S. Virgin Islands | 1 | 0 | 0 |
| Venezuela | 354 | 174 | 102 |
| TOTAL | 15,422 | 3,940 | 3,271 |

Source: Latindex (www.latindex.org) [June 29, 2009].

The daily functioning of Latindex is essentially self-sustained through the in-kind contributions of the member institutions, which thereby show a high level of commitment to the work of the entire system. It is worth noting that the system was created and has consolidated itself on the basis of two widely extended practices in the region, namely the cooperative work and the free access to information and knowledge. These are two important assets that have benefited other regional initiatives, as described below.

To complete the global picture of this large collection of journals, additional statistical data are provided in Tables 2 and 3. Note that since some journals cover more than one knowledge area, there is a partial overlap in the numbers of Table 2.

Table 2: Distribution by knowledge area of journal titles in the three Latindex databases

| Knowledge area | Directory | Catalogue | Electronic journals |
|----------------------------|-----------|-----------|---------------------|
| Social Sciences | 9,907 | 2,568 | 1,924 |
| Medicine | 3,990 | 1,198 | 1,089 |
| Arts & Humanities | 2,796 | 667 | 466 |
| Natural and Exact Sciences | 2,725 | 719 | 544 |
| Engineering | 1,383 | 278 | 238 |
| Agricultural Sciences | 1,291 | 275 | 265 |
| Multidisciplinary | 663 | 170 | 137 |

Source: Latindex (www.latindex.org) [June 29, 2009].

In Table 3 the journals have been grouped according to their scope or nature: although almost 50% are primarily research journals, a large number of scholarly journals also target a wider audience, such as professionals, teachers, students, and the public at large. The comparatively low total number of titles in Table 3 is due to the fact that some compilation centres have not yet classified all their journals according to their nature. It is very likely that the research journals are overrepresented in this table, as these journals have traditionally received more attention from indexing specialists and are also more readily classified than the technical or science popularization journals.

Table 3: Distribution of titles by nature of the journal

| Scope or nature of the journal | Number of titles | Percent (%) |
|--------------------------------|------------------|-------------|
| Scientific research | 6,555 | 47.37 |
| Technical | 4,208 | 30.41 |
| Science popularization | 3,076 | 22.22 |
| TOTAL | 13,839 | 100.00 |

Source: Latindex (www.latindex.org) [June 23, 2009].

For entry into the Catalogue, every journal is assessed according to previously agreed upon quality parameters (33 for paper journals and 36 for electronic journals), which comprise peer review procedures, coverage in international indexing services, abstracts and keywords in more than one language, international editorial board, et cetera. The full set of editorial quality criteria is available online at www.latindex.org. As a result of the application of these criteria, a much more detailed picture of the characteristics

of the journals has been attained. Equally important, the Catalogue has become a useful reference for the editors themselves. By striving to get their journal qualified for inclusion into the Catalogue, editors make efforts to improve their quality and, as a result, their journal increases in recognition, visibility, and impact. Such efforts are supported by the Latindex system through expert advice as well as on-site and online training workshops tailored to the needs of the editorial community.

As the Latindex quality criteria have been shown to fairly represent the good journals of the region while also being in line with international standards, a number of institutions have adopted them for their own evaluation of academic performance (Aguirre, Cetto, Córdoba, Flores, & Román, 2006). This is of course an additional incentive for journal editors to comply with the Latindex standards.

According to a study made in 2007 on the basis of the information provided in the Catalogue (Flores, Penkova, & Román, 2009), some editorial standards are being increasingly adhered to by the journals, such as the inclusion of a table of contents, ISSN number, abstract, and instructions for authors. Major weaknesses, even among the journals selected for the Catalogue, continue to be the poor participation of external specialists in the refereeing process, the low frequency of and delays in publication, and poor presence in indexing and abstracting services. These and other shortcomings, to a large extent due to lack of resources and local support, reinforce each other and make it difficult to break the well-known vicious circle that besets the journals of the region – as is experienced by most non-mainstream journals around the world.

Ibero-American journals on the international information scene

Due to the support provided to journal editors by Latindex and other institutions in the region, those titles that have made it into the Catalogue are continuing to improve their quality and are increasingly being invited to take part in the international databases. However, the picture is not yet very satisfactory, as can be appreciated from Table 4, which lists the databases produced outside the region that index more than 100 Ibero-American titles. This list has been prepared with information provided by the database producers themselves, either directly or through their websites.

One can appreciate from these figures that the relative coverage of Ibero-American titles by international databases is highly variable, ranging from 1.01% (Scopus) and 1.07% (Medline) to 20.88% (Philosopher's Index) and 34.50% (HAPI). The absolute numbers are very small in all instances, Zoological Record being the database that scores highest, with 329 titles.

Table 5, in contrast, provides the number of titles contained in the databases produced in the region. Again only those databases having more than 100 registers are listed.

These databases are now available on the Internet, all on a free basis except for the Spanish ones ISOC, ICYT, and IME, which offer a free online version with limited information and a complete one on subscription. All the databases provide analytical registers of documents and links to the full text whenever possible, thus highly benefiting the end users by offering easy and well-organized access to the documents. As we shall see later, this is now also a feature of many online library collections in the region.

Table 4: Databases produced outside the region with more than 100 Ibero-American titles indexed

| Database | Database subject | Total number of titles | Ibero-American titles | Percent of total |
|------------------------|---|------------------------|-----------------------|------------------|
| ASFA | Aquatic sciences, Fisheries | 5,000 | 284 | 5.68 |
| Biological Abstracts | Biology | 5,000 | 238 | 4.76 |
| CAB Abstracts | Agriculture, Cattle | 11,000 | 181 | 1.64 |
| Chemical Abstracts | Chemistry | 9,000 | 191 | 2.12 |
| ERIC | Education | 14,000 | 205 | 1.46 |
| Francis | Social sciences | 2,700 | 165 | 6.11 |
| HAPI | Latin American studies | 600 | 207 | 34.50 |
| INIS | Atomic energy | 1,965 | 223 | 11.35 |
| Medline | Biomedicine, Public health | 10,372 | 111 | 1.07 |
| Pascal | Exact & natural sciences | 3,085 | 100 | 3.24 |
| Philosopher's Index | Philosophy, social sciences, humanities | 5,70 | 119 | 20.88 |
| PsycInfo | Psychology | 2,450 | 102 | 4.16 |
| Scopus | Multidisciplinary | 24,458 | 248 | 1.01 |
| Sociological Abstracts | Sociology | 1,900 | 105 | 5.52 |
| Tropag & Rural | Agriculture, Developing countries | 5,000 | 107 | 2.14 |
| Zoological Record | Zoology | 5,000 | 329 | 6.58 |

Sources: Latindex (www.latindex.org), websites of database producers, and Biblioteca Digital UNAM (Bidi UNAM; <http://bidi.unam.mx>) [June 22, 2009].

Table 5: Databases produced in Ibero-American countries with more than 100 titles indexed

| Database | Knowledge area | Total number of titles | Geographic coverage |
|--------------|------------------------------|------------------------|-------------------------------------|
| Clase | Social sciences & Humanities | 1,416 | Regional, Latin America & Caribbean |
| CubaCiencias | Multidisciplinary | 120 | National (Cuba) |
| ICYT | Science & Technology | 449 | National (Spain) |
| IME | Biomedicine & Public health | 189 | National (Spain) |
| IRENIE | Education | 228 | Ibero America |
| ISOC | Social sciences & Humanities | 1,329 | National (Spain) |
| LILACS | Biomedicine & Public health | 661 | Regional, Latin America & Caribbean |
| Periódica | Science & Technology | 1,499 | Regional, Latin America & Caribbean |

Source: Latindex (www.latindex.org) [June 22, 2009].

From online to electronic: A challenge for Ibero-American journals

In recent times the landscape of the scholarly journals published in the region has evolved in various ways: they are gaining in visibility, there is a growing number of titles of good quality, and they are gradually incorporating modern technologies into

their publishing and distribution processes. In the year 2000, a total of 130 titles could be accessed online; by June 2009, the corresponding figure had increased to 3,271, representing more than 21% of the current registered titles.

As can be appreciated from Table 1, in some countries electronic publishing is being actively pursued in comparison with journal publishing in general; this is the case notably in Costa Rica, Mexico, Paraguay, Puerto Rico, and Uruguay. In terms of knowledge areas, it is again the medical community that is taking the lead, as was the case in the past with regard to the creation of specialized thematic information services and the adoption of editorial norms.

When, however, one takes a close look at the editorial standards adopted by electronic journals, it is striking to see the poor compliance (about 55%; see Flores et al., 2009) with those norms that point to the use of specific electronic and online features, such as navigation and functionality and access to historical contents. In other words, “electronic” journals are still largely online digitalized versions of print-on-paper publications.

Two studies have been conducted recently to determine the extent to which electronic journals in Latin America are taking advantage of modern technologies to increase their visibility and their capacity to be retrieved through the major search facilities operating on the Web. These studies (Córdoba-González & Coto-Solano, 2008; Coto, Francke, & Córdoba, 2009) used samples of 125 and 123 titles, respectively, extracted from the index of electronic journals of Latindex but excluding titles covered by the virtual libraries such as Redalyc or SciELO, which already apply standard practices.

It was found that 35% of the journals had metadata within their pages and 50% offered search engines to their users. Very few articles in these journals (14%) use non-linear links to navigate between different sections of the article. Almost no journals (3%) featured multimedia contents, in line with the finding of 5% for university electronic journals produced in Spain (Zamora, Aguillo, Ortega, & Granadino, 2007). About one in every four articles (26%) had their references or bibliographic items enriched by links that connected to the original documents quoted by the author. The most common form of interaction was user-journal, by way of question forms (17% of journals) and new issue warnings (17%). A few, however (5%), had user-user interaction, offering forums and readership response to published articles.

The second study (Coto et al., 2009) revealed that the usage of metadata had increased from 35% to 45% in one year. Metadata are known to facilitate the retrieval of texts, improve the organization of the information, and support the administration of digital objects (Hert, Denn, Gillman, Sun Oh, Pattwell, & Hernández, 2007). Four levels were reviewed to explore the existence of metadata, as shown in Table 6. It is clear that the deeper the level, the lower the percentage. Moreover, as much as 85.4% use exclusively PDF files for the full-text articles, making it more difficult to find the metadata, when they exist.

On the other hand, 29.2% of the sample use content management systems (CMS) such as OJS, Joomla!, Lapacho, and others. Of these only 9% use OJS, notably the journals from Brazil, where already 500 journals are using this system. This is an important point, as many of these CMS promote the use of metadata by adopting the Dublin

Core norms. These international norms have 15 elements that describe the document's content and format. All of these make it easier to find an object through the web. In Latin America the use of Dublin Core is still limited, as can be appreciated from Table 7. The higher use of Dublin Core norms in Argentina and Costa Rica may be due to the existence of an editorial culture in these countries, along with its promotion through Latindex-sponsored training programs for editors.

Table 6: Number and percent of journals using metadata at four different levels (N=123)

| Cover page | | Table of contents | | Article presentation page | | Article in full text (HTML) | |
|------------|------|-------------------|------|---------------------------|------|-----------------------------|------|
| No. | % | No. | % | No. | % | No. | % |
| 122 | 99.2 | 100 | 81.3 | 35 | 28.5 | 33 | 26.8 |

Source: Coto et al., 2009.

Table 7: Usage of Dublin Core norms by country

| Country | Number of titles | % of usage of Dublin Core | Signification groups ($\alpha = 0.05$) |
|-------------|------------------|---------------------------|--|
| Argentina | 17 | 35.3 | B |
| Brazil | 23 | 17.4 | B C |
| Chile | 12 | 0.0 | C |
| Colombia | 11 | 9.1 | C |
| Costa Rica | 6 | 66.7 | A |
| Cuba | 6 | 0.0 | C |
| Ecuador | 2 | 0.0 | B C |
| Mexico | 28 | 3.5 | C |
| Peru | 3 | 0.0 | B C |
| Puerto Rico | 4 | 0.0 | C |
| Uruguay | 4 | 0.0 | C |
| Venezuela | 7 | 0.0 | C |

Note: Groups not connected by the same letter are significantly different.

Source: Coto et al., 2009.

Additionally, statistical occurrence of certain features that should be present in all articles of all journals, independently of their format – namely abstract, keywords, author affiliation, and date received/accepted – is presented in Table 8.

Again, the percentages shown in the second column are in line with the findings reported in Flores et al. (2009). We further observe how seldom these basic features are marked as <meta> (see Table 8) and even much less in two or more languages. This situation, however, coincides with results obtained from a study on European and North American journals (Francke, 2008), which leads us to conclude that the problem is not limited to Latin American journals.

Multilinguism is another constraint that these journals face, as indicated by the use of a language other than Spanish for titles (53.7%), abstracts (12.6%), keywords (7.4%), and text of articles (16%).

**Table 8: Occurrence of basic article features
in a sample of Ibero-American journals (N=123)**

| Article features | Articles with feature | | Multi-lingual | | Marked as <meta> | | Two or more languages marked as <meta> | |
|--------------------------|-----------------------|------|---------------|------|------------------|------|--|-----|
| | No. | % | No. | % | No. | % | No. | % |
| Title | 123 | 100 | 38 | 31.0 | 17 | 13.8 | 1 | 0.8 |
| Abstract | 103 | 83.7 | 80 | 65.0 | 9 | 7.3 | 2 | 1.6 |
| Keywords | 95 | 77.2 | 78 | 63.4 | 8 | 6.5 | 1 | 0.8 |
| Author affiliation | 105 | 85.4 | - | - | 5 | 4.1 | - | - |
| Date received / accepted | 55 | 44.7 | - | - | 4 | 3.3 | - | - |

Source: Coto et al., 2009.

Finally, the same study notes that 24% of the journals analyzed do not have their title on the cover page marked up as <title>. Only 29% mention it in the presentation pages (third level), and 42% include it on the page of the full article (fourth level). Since this is the element that the search engines look for most, it implies that probably only half of the content of the articles of the journals analyzed would be found.

The conclusion is that Latin American journals still exhibit a number of serious limitations in the use of electronic resources and techniques, with text being overwhelmingly linear and underlinked, email to the editors being the main means of contact, and multimedia being a scarce commodity, as well as the inclusion of <meta> at all levels in the journal. This pitfall is made worse by a lack of knowledge of the standards and by the additional costs involved in the manipulation of metadata (not so much in equipment and software as for training and deployment of human resources).

This deficiency leads to problems for the journals, as they are not readily found by search engines nor do they offer additional access options for the readers. Much work still needs to be done to achieve normalization of Latin American electronic journals and assignment of high-quality metadata. Apart from cost-intensive efforts – both in human resources and equipment – such as marking in XML, there are other options to achieve quality in electronic journals, or just simplify the hard work of the editors. Among these options are content management systems that – like OJS – are of no cost. But these resources require wider dissemination and the proper training of journal editors to maximize their usefulness.

One way for Latin American journals to overcome the deficiencies mentioned has been the use of online libraries, which apply norms and extensively use metadata in their articles, as shown in the following section.

Online libraries: A window of opportunity for Ibero-American journals

As we approach the end of the first decade of this century, Ibero-America has seen the rise of various portals or online libraries of journals with different aggregated services, which altogether accumulate a considerable number of titles, issues, and full text articles. An ongoing research project (Alonso-Gamboa & Russell, 2009) has so far identified 30 collections, listed in Table 9, from which the following general features are extracted:

- The libraries analyzed have in general adopted the philosophy of open access, aiming to augment the visibility of Ibero-American publications; from the identified collections only one operates by subscription. This practice is in line with the historical tradition of public access to knowledge characteristic of the region, as mentioned above.
- Public universities continue to play an important role in the construction of these portals, although it has been noted that national science and technology organizations have become increasingly active. Along with universities they produce 18 out of the 30 analyzed libraries. Only two are promoted by private organizations.
- At least one-third of these collections work on a cooperative basis, not only with the editors, but also among the institutions in charge of organizing and compiling the information.
- Eighteen collections offer contents of journals with different thematic areas, whilst 12 are dedicated to a single discipline. From the latter, 10 cover specifically journals on health sciences, biomedicine, and related areas. This again shows the important role played by Latin American biomedical editors in the promotion of electronic journal publishing.
- The collections are of recent date, with only six of them having gone into operation having been established before 2000.
- The retrospective coverage of contents varies, but on average these sites offer issues from 1997 onwards.
- Several portals state as their objective the provision of instruments for the digital preservation of journals. However, apart from a few cases, notably a Mexican law journal that is available from its first edition published in 1948, so far projects for retrospective digitalization have not yet been identified, probably due to the financial investment required.
- These collections usually apply a selection process for the inclusion of journal titles, following various validation methodologies. Twenty-four out of the 28 collections explicitly state the selection criteria. Accordingly, the readers can expect to obtain results of a good quality. A number of these portals, like Dialnet, eRevistas, Redalyc, and some of the SciELO sites have based the inclusion of journals on the criteria of the Latindex Catalogue.
- A preliminary figure indicates that about 1,700 different titles are currently available on these portals, with over half a million full text articles. Such availability certainly did not exist before 1997.
- The total sum of titles taken from Table 9, even excluding the large Biblioteca Virtual en Salud (BVS), is 3,047, indicating a strong tendency to duplicate titles. There are, however, important gaps as well. The 1,700 titles available in full text through these portals represent barely 55% of the total electronically supported titles identified in the region, and about 13% of the total of current (paper and electronic) titles registered by Latindex.
- As the portals increasingly incorporate electronic publishing features, their aggregated values become diversified. The bibliometric tools stand out, as well as the electronic editing services for journals using various platforms – mainly OJS, as mentioned earlier, but also other support services for editors, librarians, scientists, and the wider public.

Table 9: Ibero-American online libraries

| Online library | URL | Publisher (Country) <i>Type</i> | Main features |
|-----------------------------------|---|--|---|
| Artemisa en línea | www.artemisa.org.mx | Instituto Nacional de Salud Pública (Mexico) <i>Governmental</i> | Titles: 45 Full text articles:13,357 Subject: Health sciences Access: Free |
| Biblioteca Jurídica Virtual | www.bibliojuridica.org | Instituto de Investigaciones Jurídicas, UNAM (Mexico) <i>University</i> | Titles: 37 Issues: 919 Full text articles: 20,251 Subject: Law Access: Free Oldest issue: 1948 |
| Biblioteca Virtual en Salud (BVS) | www.virtualhealthlibrary.org./php/index.php | Organización Panamericana de Salud; Organización Mundial de la Salud <i>Intergovernmental</i> | Subject: Health sciences Access: Free Starting year: 1998 Oldest issue: 1982 Consists of various databases, i.e. LILACS, REPIDISCA, MEDLINE, Biblioteca Cochrane, SciELO, ADOLEC, Desastres |
| DIALNET | http://dialnet.unirioja.es | Universidad de la Rioja (Spain) <i>University</i> | Titles: 441 (full text, in their own servers; 1,118 titles through links) Subject: Multidisciplinary Access: Free Starting year: 2001 Oldest issue: 2003 |
| e-Journal | www.ejournal.unam.mx | Dirección General de Servicios de Cómputo Académico, UNAM (Mexico) <i>University</i> | Titles: 25 Issues: 805 Full text articles: 8,991 Subject: Multidisciplinary Access: Free |
| e-revist@s | www.erevistas.csic.es | Instituto de Estudios Documentales sobre Ciencia y Tecnología (Spain) <i>Governmental</i> | Titles: 382 Full text articles: 94247 Subject: Multidisciplinary Access: Free Starting year: 2004 Oldest issue: 2005 |
| Hemeroteca Virtual CANTARIDA | www.index-f.com/hemeroteca.php | Fundación Index (Spain) <i>Research institution</i> | Titles: 17 Full text articles: 5,095 Subject: Infirmary Access: Subscription Oldest issue: 1986 |
| Imbiomed | www.imbiomed.com.mx/1/1/catalogo.html | Editorial Proyectos Enmanuel S.A. de C.V. (Mexico) <i>Private</i> | Titles: 207 Issues: 5,421 Subject: Health sciences Access: Free, upon registration Starting year: 1998 Oldest issue: 2000 |
| Latindex – UCR | www.latindex.ucr.ac.cr | Universidad de Costa Rica <i>University</i> | Titles: 53 Full text articles: 1,830 Subject: Multidisciplinary Access: Free Starting year: 2007 |

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|---|---|---|--|
| Medigraphic. Literatura Biomédica | http://medigraphic.com/inicio.htm | Medigraphic Literatura Biomédica (Mexico) <i>Private</i> | Titles: 87 Issues: 1,929 Subject: Health sciences Access: Free |
| PePSIC (Periódicos Eletrônicos em Psicologia) | http://pepsic.bvs-psi.org.br/scielo.php | Biblioteca Virtual en Salud – Psicología (BVS-Psi); Asoc. Brasileña de Editores Científicos de Psicología (ABECiP) (Brazil) <i>Professional society</i> | Titles: 79 Issues: 698 Subject: Psychology Access: Free Oldest issue: 1979 |
| Portcom (Portal de livre acesso à produção em ciências da comunicação) | www.portcom.intercom.org.br | Intercom-Sociedade Brasileira de Estudos Interdisciplinares da Comunicação; Portcom – Rede de Informação em Ciências da Comunicação dos Países de Língua Portuguesa (Brazil) <i>Professional society</i> | Titles: 81 (from Brazil and Portugal only) Subject: Communication science Access: Free Starting year: 2002 Oldest issue: 1997 |
| RACO (Revistes Catalanes amb Accés Obert) | www.raco.cat/index.php/index | Consorti de Biblioteques Universitàries de Catalunya and other Catalanian academic institutions <i>University, professional societies</i> | Titles: 251 Full text articles: 92,149 Subject: Multidisciplinary Access: Free Starting year: 2006 |
| Redalyc | http://redalyc.uaemex.mx | Universidad Autónoma del Estado de México <i>University</i> | Titles: 550 Full text articles: 115,346 Subject: Multidisciplinary Access: Free Starting year: 2002 Oldest issue: 1993 |
| Red CLACSO | www.biblioteca.clacso.edu.ar | CLACSO (Argentina) <i>Regional organization</i> | Titles: 97 Full text articles: 10,931 in their own servers; >150,000 through links Subject: Social sciences Access: Free Starting year: 1998 Oldest issue: 2003 |
| SciELO – Argentina | www.scielo.org.ar/scielo.php | Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET); Centro Argentino de Información Científica y Tecnológica (CAICYT) (Argentina) <i>Governmental</i> | Titles: 55 Issues: 568 Articles: 7,670 Subject: Multidisciplinary Access: Free Starting year: 2004 Oldest issue: 2000 |

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| SciELO – Bolivia | www.scielo.org.bo/scielo.php | Universidad Mayor de San Andrés; Programa de Investigación Estratégica en Bolivia, Universidad Católica Boliviana; Asociación Boliviana de Editores de Revistas Biomédicas; Viceministerio de Ciencia y Tecnología <i>University, Governmental, Professional societies</i> | Titles: 7 Issues: 33 Subject: Multidisciplinary Access: Free Starting year: 2008 |
| SciELO – Brasil | www.scielo.br/scielo.php | Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP); Biblioteca Virtual em Saúde (BIREME); Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) (Brazil) <i>Governmental</i> | Titles: 222 (current: 198; non-current: 24) Issues: 7,152 Subject: Multidisciplinary Access: Free Starting year: 1997 Oldest issue: 1967 |
| SciELO – Chile | www.scielo.cl | Comisión Nacional de Investigación Científica y Tecnológica (CONICYT) (Chile) <i>Governmental</i> | Titles: 81 Issues: 1,780 Articles: 1,8196 Subject: Multidisciplinary Access: Free Starting year: 1997 Oldest issue: 1983 |
| SciELO – Colombia | www.scielo.org.co/scielo.php | Colciencias, OPS y Universidad Nacional de Colombia <i>Governmental, University</i> | Titles: 68 Issues: 667 Subject: Multidisciplinary Access: Free Starting year: 2004 Oldest issue: 2001 |
| SciELO – Costa Rica | www.scielo.sa.cr/scielo.php | BINASSS (Costa Rica) <i>Governmental</i> | Titles: 9 Issues: 206 Full text articles: 3,100 Subject: Biological and health sciences Access: Free Starting year: 2000 Oldest issue: 1995 |
| SciELO – Cuba | http://scielo.sld.cu/scielo.php | INFOMED (Cuba) <i>Governmental</i> | Titles: 29 Issues: 921 Subject(s): Agriculture, Health sciences Access: Free Starting year: 2001 Oldest issue: 1993 |
| SciELO – España | http://scielo.isciii.es/scielo.php | Biblioteca Nacional de Ciencias de la Salud (Spain) <i>Governmental</i> | Titles: 40 Issues: 1,022 Subject: Health sciences Access: Free Starting year: 2001 Oldest issue: 1997 |

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| SciELO – México | www.scielo.org.mx/scielo.php | Dirección General de Bibliotecas (DGB-UNAM); Centro de Información para Decisiones en Salud Pública (CENIDSP); Instituto Nacional de Salud Pública (INSP) <i>University, Governmental</i> | Titles: 34 Issues: 374 Articles: 4,292 Subject: Multidisciplinary Access: Free Starting year: 2003 Oldest issue: 2001 |
| SciELO – Paraguay | http://scielo.iics.una.py/scielo.php | Universidad Nacional de Asunción (Paraguay) <i>University</i> | Titles: 3 Issues: 17 Subject: Health sciences Access: Free Starting year: 2009 Oldest issue: 2005 |
| SciELO – Perú | www.scielo.org.pe/scielo.php | CONCYTEC, Universidad Nacional Mayor de San Marcos, and OPS (Peru) <i>Governmental, University, Intergovernmental</i> | Titles: 28 Issues: 361 Subject: Multidisciplinary Access: Free Starting year: 2004 Oldest issue: 1984 |
| SciELO – Portugal | www.scielo.oces.mctes.pt | Observatorio da Ciencia e do Ensino Superior (Portugal) <i>Governmental, Research institution</i> | Titles: 27 Issues: 341 Subject: Multidisciplinary Access: Free Starting year: 2004 Oldest issue: 2000 |
| SciELO – Uruguay | www.scielo.edu.uy/scielo.php | Hospital de Clínicas (Uruguay) <i>University</i> | Titles: 7 Issues: 88 Subject: Health sciences Access: Free Starting year: 2005 Oldest issue: 2000 |
| SciELO – Venezuela | www.scielo.org.ve/scielo.php | SINADIB, Ministerio de Ciencia y Tecnología MCT; FONACIT; Centro Nacional de Tecnología de Información (CNTI) (Venezuela) <i>Governmental</i> | Titles: 46 Issues: 803 Subject: Multidisciplinary Access: Free Starting year: 2000 Oldest issue: 1999 |
| Sistema Eletrónico de Revistas da UFPR | http://ojs.c3sl.ufpr.br/ojs2/index.php/index/index | Universidade Federal do Paraná (Brazil) <i>University</i> | Titles: 39 Subject: Multidisciplinary Access: Free, upon registration Oldest issue: 1984 |

Note: SciELO sites are listed individually, as they have different features.
Source: Alonso-Gamboa & Russell (2009).

Conclusions

Ibero-America as a cultural region has provided in the past decade a fertile ground for initiatives aimed at strengthening its scholarly journals and increasing their visibility and access. It is therefore not entirely surprising to see regional projects flourish, such as Latindex, which has developed into a full-fledged online resource offering the most comprehensive information ever on scholarly journals published in the region. Further, the creation of a set of quality parameters for inclusion of titles into the Latindex Catalogue has resulted in a documented improvement of editorial practices.

By accomplishing their objective to make the best journals of Ibero-America known to a wider audience, Latindex along with other regional information systems have become a much-needed complement to the international databases, which generally provide meagre coverage of these journals. The increase in visibility that these regional systems provide has also resulted in a growing number of titles being indexed by the international databases.

Adoption by Ibero-American journals of electronic publishing tools has also contributed to their increased visibility and access. Although one can see progress by the day, these journals are still seriously limited in their use of the most advanced electronic resources and techniques. Much work still needs to be done to achieve normalization of the scholarly electronic journals and assignment of high-quality metadata.

One way to overcome some of the deficiencies of Ibero-American electronic journals has been the development of online libraries based on a common methodology, which apply norms and further an extensive use of metadata. Development of these collections has greatly benefited the electronic journals, by offering the end user an increased access to full text articles, mostly for free, in addition to aggregated services.

In recent years, some major universities of the region have become concerned by their place in international rankings that are based on the presence of the institutions' journals in international indexing services, notably Scopus. This has driven universities to create online journal repositories and to promote the adoption of certain editorial features that facilitate the inclusion of journals in such indexing services.

As a result of this drive, in the near future the landscape of online collections in the region will likely change considerably – and also the competitiveness and international visibility of scholarly Ibero-American journals will likely be enhanced. It is hoped that these institutional efforts will be accompanied by policies that ensure the sustainability of the journals and promote their use by authors for the publication of good-quality work. This would be a valuable development to help transform the above-mentioned vicious circle into a virtuous one.

NOTES

1. For a comprehensive account of these databases, see Barberena (1992).
2. For historical background on the establishment of Latindex, see Cetto & Alonso-Gamboa (2009); Cetto, Alonso, & Rovalo (1999); Flores, Penkova, & Román (2009); and the historical documents posted on www.latindex.org.

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