

OPEN ACCESS IN ITALY

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5.1 OPEN ACCESS IN ITALY: AN OVERVIEW

In Italy the OA movement has mainly pursued a "bottom up approach". Librarians, IT professionals, senior researchers, early adopters in individual universities and research centres have been actively involved in promoting awareness on OA issues, in implementing repositories, in planning projects, writing policies, developing tools. Initially, the academic institutional hierarchies failed to take any clear stand on the issue.

No specific national funding has been allocated for open access initiatives and in most cases the implementation of the Open Archive was financed with ordinary budget expenditures.

In a limited number of cases (i.e. University of Cagliari, University of Naples Parthenope, University of Sassari, and University of Trieste) the repositories were successfully funded under regional spending.

To date neither the government nor the Ministry of Education and Research have made any recommendations on this matter or provided any funding. Parliament has made no stand on the issue.

An important breakthrough, however, was marked by the conference on open access to scholarly literature held in Messina on November 4-5, 2004, promoted and organised by the Library Committee of the Italian Council of Rectors (CRUI), in collaboration with the University of Messina.

During this conference more than 30 academic institutions agreed on the principle of open access to scholarly literature, and signed the "Messina Declaration" in support of the Berlin Declaration on open access to knowledge in

the Sciences and Humanities. This is the first institutional action on the part of Italian university rectors to support OA.

This event helped foster the awareness of open access issues and has boosted interest in open archives and related technologies for a more effective dissemination of scholarly content.

Since the Messina Declaration 74 out of 80 Italian universities have signed the Berlin Declaration.¹³ By signing this Declaration these universities have committed themselves to achieve the goals set by the University of Southampton at the Berlin 3 open access Conference: a) to implement a policy to require their researchers to deposit a copy of all their published articles in an open access repository, b) to encourage their researchers to publish their research articles in open access journals where a suitable journal exists and provide the support to enable that to happen.

Following the Messina Declaration in 2006 the Conference of Italian Universities Rectors (CRUI) decided to create a working group on OA as part of the CRUI Library Committee. This decision was a significant step in promoting and supporting OA in Italian universities both in political and practical terms. Subsequently the activities of the CRUI OA Working Group led to the publication of the *Linee guida per il deposito delle tesi di dottorato negli archivi aperti*, October 2007 (Guidelines on depositing doctoral dissertations in open access repositories). Evidence of the impact of these guidelines has been the wide adoption of thesis mandates among Italian universities (see 5.4.3).

Later, in April 2009, the CRUI OA Working Group also published the following three guidelines:

- *Raccomandazioni su open access e la valutazione dei prodotti della ricerca scientifica* (Recommendations on OA and research evaluation) (<http://www.crui.it/HomePage.aspx?ref=1782>).
- *Riviste ad accesso aperto: linee guida* (Guidelines for OA journals) (<http://www.crui.it/HomePage.aspx?ref=1789>).
- *Linee guida per gli archivi istituzionali* (Guidelines for institutional repositories) (<http://www.crui.it/HomePage.aspx?ref=1781>).

¹³ Signatories of the Berlin Declaration can be found at (<http://oa.mpg.de/openaccess-berlin/signatories.html>).

The recommendations on OA and research evaluation seek to link the development of IRs with the research assessment process. Hence in Italy some IRs have been implemented with the function of CRIS (see paragraph 5.4.1). The CRUI guidelines recommend OAI-PMH compliant CRIS, possibly by adopting an open source software, encourage the depositing of full text research outputs, and suggest a minimum set of metadata to be adopted.

The Guidelines for OA journals foster the transition of scholarly journals from toll access (TA) business models to OA business models for those journals which are publicly funded, recommend the adoption of open source software for their publication (e.g. Open Journal System or Hyperjournal) (see 5.2.2), as well as foster the experimentation in OA journals of new peer review forms, i.e. soft peer review, social peer review.

The goal of the Guidelines for institutional repositories is to give repository managers suggestions on how to implement IRs: from the technical, organizational and legal challenges, policies to support action's repository, promotion and advocacy issues, to the economic viability of a repository.

To foster further OA advancements in Italy a very interesting bottom-up initiative was launched on 9 April 2008: the Italian wiki on open access (http://wiki.openarchives.it/index.php/Pagina_principale). The wiki is managed by a group of Italian experts on open access. Only member of the wiki working group can

The screenshot shows the home page of the Italian wiki on open access. At the top, there are navigation links: voce, discussione, modifica, cronologia, and a login button 'Entra con il tuo accesso'. The main heading is 'Pagina principale'. Below this is a large banner for 'OPEN ACCESS WEEK' with the dates 'Open access Week 2010: 18 - 24 ottobre' and the website 'openaccessweek.org'. To the left of the main content is a navigation menu with links like 'Pagina principale', 'PLEADI', 'openarchives.it', 'Ultime modifiche', 'Una pagina a caso', and 'Aiuto'. Below the navigation menu is a search bar with 'Vai' and 'Ricerca' buttons. Further down is a 'strumenti' section with links like 'Puntano qui', 'Modifiche correlate', 'Carica un file', 'Pagine speciali', 'Versione stampabile', and 'Link permanente'. The main content area below the banner is titled 'Il Wiki sull' Open Access in Italia - Benvenuti' and contains a welcome message and an index of links.

Il Wiki sull' Open Access in Italia - Benvenuti [modifica]

Benvenuti nel wiki italiano sull'Open Access. Lo scopo di queste pagine è quello di offrire un unico punto di accesso alle principali informazioni sull'Open Access, partendo dallo scenario internazionale, ma con particolare attenzione alla realtà italiana. L'idea di fondo è che la conoscenza dei reali vantaggi, dei propri diritti e degli strumenti innovativi a disposizione possa far crescere la consapevolezza e orientare le scelte, per una comunicazione scientifica sempre più efficace. Lo strumento wiki - pur non essendo configurato per la scrittura condivisa - offre a tutti la possibilità di individuare i propri percorsi di ricerca in una modalità più destrutturata, insieme alla facilità di interazione e di espressione delle diverse voci, professionalità ed esperienze. L'indice affianca a una panoramica generale, che comprende le definizioni, la storia, l'ABC e la sitografia, pagine più specifiche sulle strategie di pubblicazione, sui possibili modelli economici, sulle questioni legali connesse al diritto di proprietà intellettuale. La sezione dedicata ai diversi attori nel

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Fig. 5.1. Home page of the Italian wiki on open access

insert news and update pages. The aim of the wiki is to offer a one stop shop to the main concepts of the OA movement, to foster sharing knowledge of Italian projects and best practices, to promote OA initiatives in Italy.

The wiki TOCs include: OA definitions, history of the movement, the green road and the Italian mandates (see 5.4.3), the gold road and OA journal business models, the OA and the intellectual property rights, FAQ on OA and OA resources in the different disciplines. The wiki working group also maintains a rich bibliography of articles in Italian or translated in Italian on open access (http://wiki.openarchives.it/index.php/Bibliografia_in_lingua_italiana).

The wiki has become very popular in Italy since its publication on the web.

The conjoint advocacy action of the CRUI OA working group, of the wiki OA working group, of the entire community of Italian academic librarians community devoted to OA and faculty early adopters yielded a considerable number of initiatives this year alone: (http://wiki.openarchives.it/index.php/Open_access_Week_-_2009) hosted by Italian universities during the OA week (19-23 October 2009), culminating in the first Italian open access conference day (<http://host.uniroma3.it/biblioteche/page.php?page=Programma>) on 23th October in Rome. The OA conference day was hosted by the University of Roma Tre, organized in collaboration with CASPUR, an Italian interuniversity supercomputing consortia, and AIDA, the Associazione italiana of Documentazione Avanzata.

Apart from promotion and advocacy current projects in favour of open access in Italy embrace:

- a. OA journals and monographs;
- b. Infrastructure and services provided by supercomputing consortia;
- c. Institutional repositories and disciplinary based repositories.

5.2 ITALIAN PEER-REVIEWED JOURNALS

According to Ulrich's periodicals directory 334 active peer-reviewed scholarly journals were published in Italy in 2009. 97 of these are indexed in the Journal Citation Reports.

According to the Web of Science in Italy in 2008 41,736 articles were published by researchers affiliated to Italian institutions. According to Scopus

in the same year 46,000 articles were published by researchers affiliated to Italian institutions. It should be kept in mind that italian-language journals are underrepresented both in WOS and Scopus.

Table 5.1. Articles published by researchers affiliated to Italian institutions by year

	2008	2007	2006	2005	2004	2003	2002	2001
Total (WoS)	41,736	34,675	33,794	33,371	29,177	29,892	27,304	26,719
Total (Scopus)	46,000	43,811	40,649	35,731	33,218	33,170	30,143	31,255

Updated: 04/08/2010

In Italy the need for a solid infrastructure for producing, promoting, and disseminating Italian culture electronically is strongly perceived.

Most of the scholarly publishing in Italy is managed by medium size commercial publishers and small publishing houses, both of which are financially supported by universities; therefore moving to the electronic version or even taking a further step and embrace open access should not be too difficult. For various reasons the situation is at standstill, or to be more precise, is very slow to change.

A project called District Architecture for Networked Editions (DAFNE) was launched by the Universities of Padua, Florence, and Bologna, and the Central National Library of Florence, together with Casalini Libri and other partners, to build an infrastructure for e-publishing. The project unfortunately ended in 2002. This infrastructure is currently used by the University of Padua to test the peer reviewing process using Zope, an open source CMS software.

Few Italian universities run e-presses (University of Florence, University of Lecce, University of Bologna, Polytechnic of Milan and a few others) and mainly do so in cooperation with commercial publishers. Some of their journals and monographs are available open access (see paragraph 5.2.1 and 5.3).

In most universities electronic publishing is not centrally coordinated. Often single departments take the initiative to publish a journal electronically and make it available on the web.

Therefore there is an unmanaged presence of scholarly journals freely accessible on the web. Most of these journals cannot be considered OA according to the “standard definition” as they are not compliant with OAI-PMH standards

or to any other standard, peer reviewing is not always performed, generally authors do not retain copyright, the rights being transferred to the publisher and, furthermore, the technological infrastructure and technical quality of the journals are not exceptionally high.

However, there are some signs of change and new OA journals, compliant to OAI-PMH and to the BOAI definition of open access have begun to emerge in the last years.

5.2.1 Italian OA journals

According to the Directory of open access Journals (DOAJ) 131 OA peer-reviewed journals are published in Italy (<http://www.doaj.org/doaj?func=indJournals&hybrid=&query=italy>). Unfortunately not all the Italian open access journals are registered in DOAJ. In some cases this may be because, as mentioned, a journal does not fulfil all the necessary requirements to be strictly defined OA. This is the case of the successful journal *Hystrix*: the Italian journal of mammalogy (<http://www.italian-journal-of-mammalogy.it/>) which adopts a one year content embargo. In other cases it might be a publisher's choice i.e. the case of the two social sciences OA journals published by Il Mulino (Bologna): *Aedon* (<http://www.aedon.mulino.it/>) and *Sociologica* (<http://www.sociologica.mulino.it/main>).

The great majority of Italian OA journals is published by universities, academic departments, university presses or with the contribution of university funds.

Among the university presses the Firenze University Press publishes 12 OA journals, followed by the University of Lecce, Coordinamento SIBA, that publishes 8 titles, and by the University of Milan (6 titles).

Among the publishers PAGEPress (Pavia) publishes 15 OA journals all in the medical field.

The great majority of Italian OA journals belong to Humanities (strictly 51 titles). The remaining journals are in Agriculture, Biomedicine, Civil Engineering, Computer Science, Diplomats, Forestry, Ethnology, Ecology, Earth Science, Law, Mathematics, Physics, Psychology, and Social Sciences.

The dominance of OA journals in the Humanities is not surprising.

In Italy many journals in Humanities are published by universities rather than by for-profit publishers. Doubtless the adoption of the OA model is

an easier choice for the universities as all costs are covered by public funds. Moreover the open access model is very attractive for humanists since it provides broader dissemination and fosters the internationalisation of research outputs in Humanities.

Almost all OA Italian journals are multilingual. A fair number of them have an international editorial board i.e. *Acta Otorinolaryngologica italica*, *The African Physical review*, *Artifara*, *Basic and Applied Myology*, *Biblica*, *Capsula Eburnea*, *Cromhos*, *Erasmus Law and Economics Review*, *eSamizdat*, *Ethnorema*, *Etica & Politica/ Ethics & Politics*, *European Diversity and Autonomy Papers*, *The European Journal of Comparative Economics*, *European Journal of Legal Studies*, *European Journal of Histochemistry*, *European Papers on the new Welfare*, *Haematologica*, *Heart International*, *Gastroenterology Insights*, *Idee*, *iForest*, *Ignaziana*, *Infectious Disease Reports*, *Information Philosophica*, *International Journal of Spatial Data Infrastructures Research*, *International Journal of Speleology*, *InTRAlinea*, *Invertebrate Survival Journal*, *Italian Journal of Engineering Geology and Environment*, *The Italian Journal of Pediatrics*, *Italian Labour Law e-journal*, *JCOM*, *JLIS.it*, *JOP*, *Journal of Formalized Reasoning*, *Journal of Infection in Developing Countries*, *M@gm@*, *Montesquieu.it*, *Music & Anthropology*, *Neuropsychological Trends*, *Nephrology reviews*, *Note di Matematica*, *Orthopedic Reviews*, *Pediatric Reports*, *Philomusica on-line*, *PsychNology Journal*, *PoS*, *Psychofenia*, *Rare Tumors*, *Rheumatology Reports*, *Ricerche di Pedagogia e Didattica*, *Segni e comprensione*, *Snippets*, *Storicamente*, *TeMA*, *Transitional Waters Bulletin*, *Transitional Waters Monographs*, *Web Journal on Cultural Patrimony*.

28 journals have applied creative commons licenses.

The most used software for publishing an OA journal in Italy is Open Journal System.

5.2.2 Open source software for OA journals

In 2004 the Dipartimento di Scienza della Politica (Department of Political Science) of the University of Pisa developed in collaboration with public and private sponsors an open source software which handles the complete journal publishing process and it is fully compliant to OAI-PMH.

This software is called “Hyperjournal” (http://association.hjournal.org/index_en.html).

In 2005 the HyperJournal Association was founded as a no-profit organization, whose goals are to promote, care for and help the circulation of scientific, artistic and cultural heritage, supporting the free use of the intellectual production.

5.3 OA MONOGRAPHS IN ITALY

In Italy the number of scholarly OA monographs is slowly increasing.

Some university presses, faithful to their mission of supporting academic research and teaching, publish OA monographs.

The ESE Salento University Publishing of the University of Lecce has published 240 OA e-books to date.

The Firenze University Press (FUP) has a catalogue of 460 monographs. 120 of these titles are OA (<http://www.fupress.com/openaccess.asp>). The FUP is also an active partner of the European project Open Access Publishing in European Networks (OAPEN) (<http://www.oapen.org/>).

Edizioni PLUS of the University of Pisa authorizes OA e-publishing in author website (about 60 OA e-books).

The University Presses of Bolzano and Trieste publish OA books with POD.

The UniTN Eprints repository of the University of Trento has recently signed an agreement with the Department of Social Sciences of the same university. All monographs published in print by faculty of the Department are also deposited in OA in the UniTN repository. So far there are 47 OA monographs in the repository (<http://eprints.biblio.unitn.it/view/department/scienzeg.html>).

A handful of for profit Italian publishers are also experimenting OA publishing models for monographs in combination or not with print on demand.

CLUEB in Bologna has many OA books and is partner in SHARE-TEC.

The Polimetrica publisher's catalogue includes more than 50 OA monographs.

In 2008 Polimetrica also launched a very interesting project : Libri Gratuiti in Ateneo/Free Books at your University (http://www.polimetrica.com/?p=p_24&iPage=4). The publisher set a proposal to Italian Rectors and faculty to publish OA scholarly books with the formula print on demand: each scholarly book will be published in two editions: a printed edition, available on the market, and an electronic edition, freely available through the web.

Each electronic edition is covered by copyright, which stipulates how these works may be used. In 2010 Polimetrica is also going to launch a new Project: Open Textbooks whose goal is to develop a web Portal to publish e-textbooks in OA + POD.

The LED edizioni (<http://www.ledizioni.it/>) is also adopting a OA + POD model in 2010 for publishing scholarly monographs.

5.4 INSTITUTIONAL REPOSITORIES AND DISCIPLINARY BASED REPOSITORIES IN ITALY

5.4.1 Institutional repositories

Since 2001 the implementation of digital OA repositories in Italy has steadily increased.

Generally speaking, in each university it is the library that usually takes the initiative to select, evaluate and install the institutional repository with the support of the ICT group. Therefore any attempts to gain the Rector's or the Senate's approval, institutional repository planning, policy strategies, metadata creation, selection of a classification scheme, training, promotion, copyright help-desk are all handled by the library in cooperation with researchers, early adopters and IT staff.

The different types of digital content deposited include refereed e-pre-print/post print articles, conference proceedings, teaching material, doctoral theses, working papers, technical notes and, in some cases, digital objects related to cultural events held by the universities (recordings of *lectio magistralis*, of the rector's academic year opening lecture, lectures given by, etc.).

To date in Italy 59 repositories have been implemented 55 are listed in OpenDOAR as operational repositories, 4 more repositories (i.e. the Eprints repository of the University of Ferrara, the repository of the University of Macerata, the repository of the University Parthenope of Naples, the repository of the University of Palermo) have been very recently implemented and are not yet registered in OpenDOAR.

42 out of the 59 are university institutional archives. Out of the 42 archives 3 repositories are implemented by individual university departments (i.e. the Dipartimento di Fisica e Astronomia, University of Catania, Catania, the

Dipartimento di Scienze del Linguaggio, Università Cà Foscari, Venice, and the Dipartimento di Matematica, Politecnico di Milano, Milan).

Some universities (Bologna, Milan, Padua, Pisa, and Trento) have implemented more than one repository.

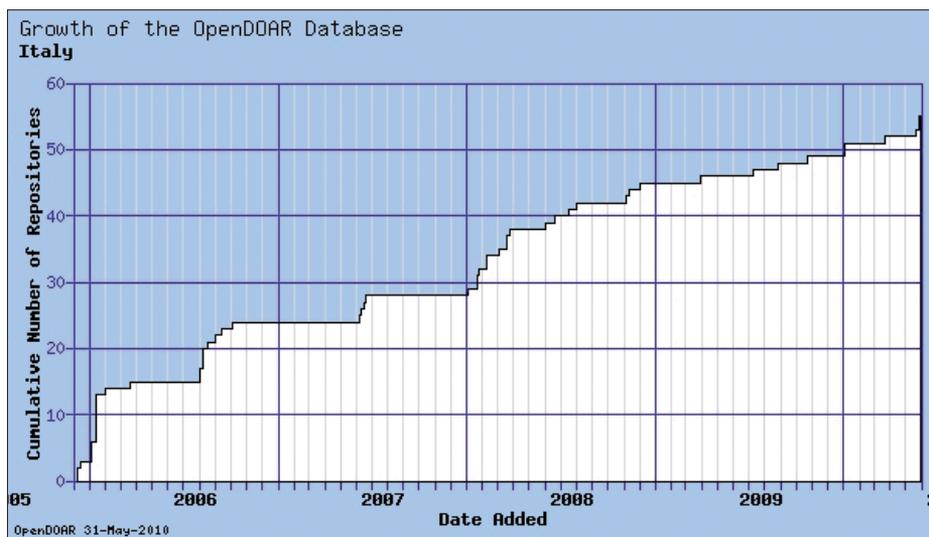


Figure 5.2. Italian repositories growth (source: OpenDOAR)

The remaining repositories belong to different typologies of research centres: the Istituto Superiore di Sanità (ISS) = the Italian National Health Institute, the Consiglio Nazionale delle Ricerche (CNR) = National Research Center,¹⁴ the Istituto Nazionale of Geofisica e Vulcanologia (INGV) = the National Institute of Geophysics and Vulcanology, the Istituto Italiano di Medicina Sociale (IIMS) = Italian Social Health Institute, the Scuola Superiore della Pubblica Amministrazione Locale (SSPAL) = The Higher School of Public Local Administration, the Abdus Salam International Centre for Theoretical Physics, and a handful of other research centres.

¹⁴ The National Research Center covers 107 institutes all over Italy. It maintains a centralised archive PUMA (<http://puma.isti.cnr.it/index.php?langver=>) while the institutes manage their own local repositories.

Among the main Italian research centres ISS, INGV, CNR, and the Istituto Nazionale di Fisica Nucleare (INFN)= the National Institute of Nuclear Physics all have implemented an open access repository to date.

The INFN IR dates back to 1954 and it has been recently made available in electronic format (<http://www.lnf.infn.it/sis/preprint>). The INFN researchers work in the context of nuclear and high-energy physics, where the free circulation of preprints is standard procedure since well before the WWW was invented at CERN. In the high-energy physics community, scientific papers are submitted to arXiv, the well-known international repository. The INFN has signed the Berlin Declaration, and joined very early the SCOAP3 consortium, the new OA financing model for high energy physics journals (<http://scoap3.org/>). The SCOAP3 consortium aims to define a new financial model where the principles of OA meet the commercial needs of the free market of publishers, as well as the imperative necessity of rigorous peer-review. The INFN and the SCOAP3 consortium have been key players in the full support to OA given by all experiments at the LHC accelerator (CERN, Geneva Switzerland), whose copious production of OA scientific papers will dominate the scenario of high-energy physics in the next decade: “We strongly encourage the usage of electronic publishing methods for our publications and support the principle of open access publishing, which includes granting free access of our publications to all. Furthermore, we encourage all collaboration members to publish in easily accessible journals, following the open access paradigm”.

The European University Institute, the American University of Rome and the FAO also maintain archives located in Italy, though strictly speaking they are not Italian institutions.

A very interesting case study is the repository of the Gruppo Frattura italiano (http://www.gruppofrattura.it/index.php?option=com_frontpage&Itemid=1).

It serves both as a repository, but also as a platform to publish the OA journal: *Frattura ed Integrità Strutturale* (see paragraph 4.1). In the near future we will probably see more cases of “mixed repositories”, where the differences between repositories and journals blur, reinforcing the idea that self-archiving and the publication in OA journals are complementary strategies to open access.

Two institutional repositories are planned to be launched over the next months, e.g. at the University of Piemonte Orientale and at the Istituto Agrario San Michele all’Adige.

5.4.2 Repositories content

In December 2009 the total number of items archived in Italian repositories was 200,872. A typical research repository in Italy contained 3,652 items as assessed in December 2009.¹⁵

The number and the types of items deposited varies hugely among the installations and is not really comparable.

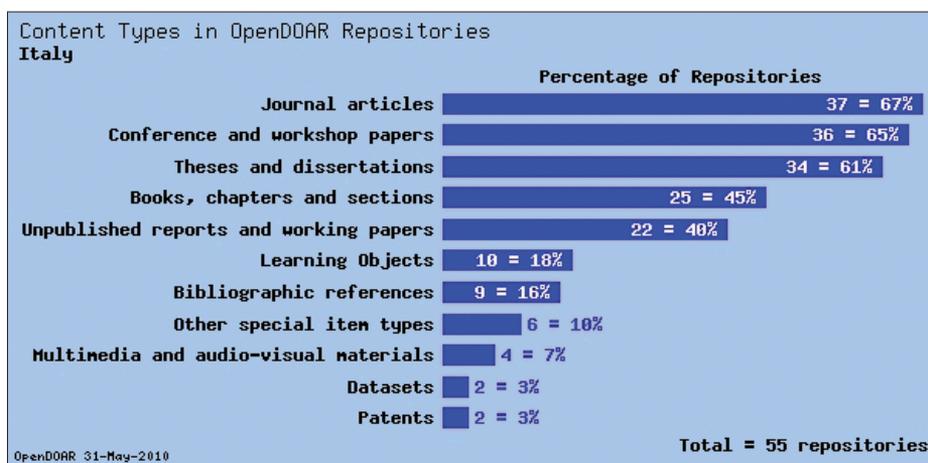


Figure 5.3. Content types in Italian repositories (source: OpenDOAR)

Some Italian repositories only contain a limited area of academic output: either doctoral dissertations (i.e. Padua@Thesis, one of the two archives of the University of Padua, PADIS of the University “La Sapienza”, Rome, DocTA of the Cattolica University in Milan, ETD University of Pisa, and Unithprints PhD, university of Trento) or didactic material (the DSpace Archive of the University of Parma and Armida, University of Milan). The majority of repositories continue to contain more metadata than accessible full-text papers, though it is their intention to provide wider access to their institutional academic output. In two cases, i.e. AIR of the University of Milan and

¹⁵ According to Maurits van der Graaf, “The European Repository Landscape 2008: i Inventory of digital repositories for research output”, AUP, 2009 in 2008 the mean number of items archived in a research repository in Europe was 8,545.

the Bicocca Open Archive, Bicocca University, Milan the choice was made to devote the repositories to the Current Research Information System and only where possible to add the full-text article to the metadata records.

In OpenDOAR among the Italian repositories E-Lis is also listed, the well-known subject-based repository for library and information science (see paragraph 5.4.4).

In Italy the most used OA software is Eprints (29 installations) followed by Dspace (17 installations). The latter however is by far the most used software by academic institutions. There are also two CDSInvenio installations (Messina, La Sapienza, Rome) and one VT ETD (Electronic Thesis and Dissertation Archive, University of Pisa).

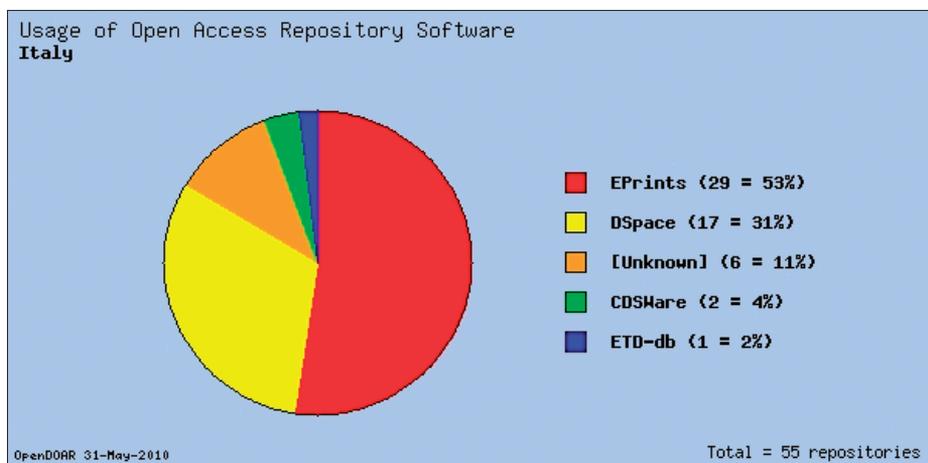


Figure 5.4. Usage of Open Access software in Italian repositories (source: OpenDOAR)

5.4.3 OA mandates in Italy

To date in Italy we register two institutional mandate policies, i.e. the one of the National Health Institute and the one adopted by the Libera Università Internazionale degli Studi Sociali Guido Carli (LUISS), and one soft Institutional mandate adopted in 2010 by the University of Sassari.

The mandate of the Italian National Health Institute (<http://dspace.iss.it/dspace/handle/2198/352>) was the first mandate in Italy. It was signed by Enrico Garaci, President of the ISS, on 23 January 2008 and states:

“All scientific works produced by ISS staff must be transmitted in electronic format (author’s final copy, after peer-review: “post-print”) to the Publishing Activities Unit of ISS, at the moment of acceptance for publication. This Unit will immediately make them available on the ISS Intranet. The metadata will also be made available on the Internet, via DSpace.ISS and, after the publisher embargo period has expired, the full texts will be made available too. During the embargo period, individual works can be requested from their authors through an automated function of DSpace”

The LUISS adopted its institutional mandate in February 2010.

In July 2010 Telethon (<http://www.telethon.it/Pagine/homepage.aspx>), the second most important Italian charity, will adopt a Funder mandate. Following this mandate by the date of 2010 all research articles funded by Telethon should be deposited in UK PubMedCentral or published in an open access journal by adopting the author-pays model. The costs of the option author-pays will be funded by Telethon.

To encourage self-archiving an increasing number of Italian universities have succeeded in adopting a thesis mandate upon the publication in October 2007 of the *Linee guida per il deposito delle tesi di dottorato negli archivi aperti/ Guidelines on depositing doctoral dissertations in open access repositories of the CRUI Working Group on open access* (see paragraph 5.1).

Currently 22 Italian universities have adopted a thesis mandate. An updated list of these Universities can be found on the Italian wiki on open access (http://wiki.openarchives.it/index.php/Applicazione_delle_linee_guida). The number of Thesis mandates is fast increasing in Italy.

5.4.4 Disciplinary based repositories

With reference to discipline-based repositories, E-Lis on library and information science is worth a mention. E-Lis is the first international e-server implemented in 2003 for the deposit of documents in library and information science (LIS). It is hosted at CILEA (Milan), one of the two Italian interuniversity supercomputing consortia. E-Lis relies on the voluntary work of Library and information science experts from a wide range of backgrounds from 33 different countries.

In December 2009 E-Lis has reached the remarkable number of 10,000

items deposited. This number is growing daily. E-Lis accepts published or unpublished documents in scientific or technical areas related to library and information science in any language and format.

5.5 INFRASTRUCTURE AND SERVICES PROVIDED BY SUPERCOMPUTING CONSORTIA

The two publicly funded interuniversity supercomputing consortia CASPUR, based in Rome, and CILEA, based in Milan, have developed, within the AEPIC project, a joint programme aimed at providing Italian universities with technical support for implementing and/or hosting open archives and OA journals creation.

5.5.1 PLEIADI

Within the framework of the AEPIC, CASPUR and CILEA have also been working on a project to implement an Italian national platform to provide central access to digital contents deposited in the Italian open archives. The platform, PLEIADI (<http://www.openarchives.it/pleiadi/>) (stands for Portal for Italian Electronic Scholarly Literature in Institutional Archives), was launched at the Messina Conference.

The goal of this initiative is to offer the Italian academic and research community solutions to some of the problems that are arising in the OA world regarding locating and retrieving OA full text scholarly documents, the need for metadata harmonization, lack of awareness of existing OA data providers, as well as the need for better integration between OA and commercial resources. At the same time PLEIADI aims to promote awareness of OA issues in Italy, to contribute to the debate on OA and to the advancement of technical knowledge and expertise in this field by offering its forum as an arena for information exchange among the OA community members (from university and research centres policymakers, researchers, IT people, librarians, students, press, etc.).

The platform allows federated search on the different Italian open archives as long as they are OAI-PMH compliant. It also provides the end-user with a personalized environment offering several services of high interest to the researcher and to his/her work, and it aims at keeping the end-users abreast

Figure 5.5. PLEIADI

with what is going in the OA realm and contributing to his/her awareness and support of OA. Personalised services include users profile creation, alerting services, search and citations savings, personalized news services (news, forum, RSS).

The PLEIADI platform is composed of a two-tiered architecture. Under the visible portal layer, there is a complex infrastructure of service providers.

PLEIADI offers a federated search interface and a series of user-centred services that supplement the platform offer. It is possible to identify several functional blocks in the portal architecture:

- a search & retrieval area, encompassing the Z39.50 connection with the harvester and a sorter module for retrieved documents. This area manages search performance in the Italian archives. Two search modules have been designed, simple and advanced, the latter encompassing different search fields, filtering functionalities, search results sorting, search history savings, search savings, etc.;
- a personalized area, comprising user's front-end, multi-language support and authentication/authorization system. This area represents the personalized environment where the user creates a personal profile, activates different features from language selection, alerting services related to news, FAQ, forum, search savings, citation savings;

- an information area, based on news, forum and RSS blocks, together with FAQ, useful links and document sections. This area aims at collecting and disseminating information on OA issues, at the same time keeping track of and registering all Italian open archives;
- an e-content management area, with an intuitive content management engine, this area handles all the website contents and web presentations through an intuitive and simple-to-use graphic interface;
- a log & stats area, for useful statistical information on search activities and access to documents in open archives. This area has not yet been implemented.

PLEIADI as a service provider performs a series of back-end activities designed to discover, retrieve, access open access content from all Italian open archives. Metadata related to OA content are harvested from institutional or disciplinary repositories (data providers), where they are deposited by authors according to their affiliation or scientific interest.

Once harvesting, filtering, harmonization and indexing activities have been performed, a new collective database becomes available and searchable via HTTP and Z39.50. Its availability through the Z39.50 interface enhances the opportunity for the OA content to be exposed and searched by the various federated searching tools. The Z39.50 interface allows the integration of open-access archives, journals with other information sources, such as the library catalogue and bibliographic references from databases and commercial publishers, that constitute the traditional core of information.

5.5.2 SURplus

In 2007 CILEA also developed SURplus (<http://www.cilea.it/index.php?id=SURplus>), a suite of software modules to collect and organize data on research activities and output at institutions. SURplus is interoperable with legacy systems: a business intelligence application gathers data from different modules, turns them into organized information (e.g. connecting publications to research groups and structures, connecting research projects to budgets), provides reports, metrics, statistics and predictive analysis tools. One main component of this architecture is the institutional repository for research outputs, where open access to publications is supported by the technical infrastructure.

To date the SURPlus software has been implemented by fourteen universities, 13 in Italy plus the Hong Kong University. Four Italian universities out of the 14 (University of Milan, Milan Bicocca University, University of Palermo, University of Tor Vergata, Rome) have adopted the complete SURPlus software suite.

5.6 FUTURE CHALLENGES AND CONCLUSIONS

In Italy the future of the open access movement should be closely connected to a national funded planning strategy. However, such a strategy is totally lacking at the moment. Hence, this renders the long term sustainability of what are mainly voluntary driven OA initiatives (i. e. PLEIADI) somewhat uncertain. As previously written a very significant step both in political and practical terms in promoting and supporting OA in Italian universities was the decision by CRUI to create the OA working group in 2007. The four guidelines published to date by the CRUI OA working group, notably the Guidelines on depositing doctoral dissertations in open access repositories, are having a practical impact on the successful development of the Italian universities' repositories.

As far as the research output dissemination is concerned the most effective strategy in Italy is certainly the connection between the repositories and the current Research Information System, both at institutional and national levels. All OA initiatives and strategies to be supported will need a strong position statement and a collaborative programme from Italian policy makers, i.e. from the ministries potentially involved in the OA action: the Ministry for the Research and the University System (MIUR), the Environmental and Cultural Ministry (MiBAC), the Ministry for the Public Administration and Innovation, and the Health Ministry (MS). The statement should reinforce the idea of the importance of open access for the economic and social development of the country, for the competitiveness of its entrepreneurship and for the citizens well-being. In combination with such a position statement an open access funding strategy is absolutely necessary in Italy in order to foster the participation of Italian repositories' infrastructure in european research projects.

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