Lenus: from healing God to Health Repository

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ABSTRACT

Institutional repositories (IRs) represent a new wave of electronic library growth and collection development. At first IRs proved popular in academic institutions but increasingly they are gaining momentum in other types of organisations. This article examines the definition and purpose of IRs and explores their application in the Irish health library sector. Particular focus is given to 'Lenus' (named after the Celtic God of Healing) the Irish Health Repository – a national resource developed and managed at the Regional Library & Information Service (RLIS), HSE, Dr. Steevens' Hospital.

Keywords

Institutional Repositories; Open Access; Digital libraries; Collection Development; Health Science Libraries, Ireland

The librarian collecting electronic resources is not a harvester of cultivated crops but a hunter and gatherer of wild fruits and other treasures (Rioux, 1997)

LENUS IS A NATIONAL INITIATIVE designed to provided access to both current and archived Irish health research. Launched in February 2009, it is a repository in its infancy but showing significant potential to become a key resource for Irish health researchers. This article explores the evolution of Lenus against the backdrop of a changing Irish health landscape, the development of the open access movement and institutional repositories in Ireland.

Some common definitions of IRs locate repositories specifically within academic environments, most often either university or higher education institutions. (Crow, 2002, Lynch, 2003). Others, such as Mark Ware, offer a broader definition:

"An institutional repository is defined to be a web-based database (repository) of scholarly material which is institutionally defined (as opposed to a subject-based repository); cumulative and perpetual (a collection of record); open and interoperable (e.g. using OAI-compliant software);[1] and thus collects, stores and disseminates (is part of the process of scholarly communication). In addition, most would include long-term preservation of digital materials as a key function of IRs. (Ware, 2004)"

The primary function of an IR is to capture and make available an organisation's explicit knowledge in electronic format. Typically IRs are web-based and Open Access (OA).

Open Access

The key concept of Open Access is that documents (and other data and media) are made freely available online with or without limited copyright and licensing restrictions by authors. The two most common ways of making works openly accessible are via OA journals or OA repositories. In recent years institutions and funding bodies have increasingly issued "open access mandates" requiring researchers and academics to deposit their works in an open access repository. The Faculty of Arts and Sciences at Harvard University shook the academic world when it issued an OA mandate in February 2008 requiring faculty to allow the university to make their scholarly output freely available online. The previous year (2007), the UK Medical Research Council published a policy and guidance document on OA. The UK Wellcome Trust issued a position statement in the same year. In Ireland most funding bodies now have an Open Access Mandate or position statement including Science Foundation Ireland (SFI), the Health Research Board (HRB), the Higher Education Authority (HEA) and the Irish Research Council for Science, Engineering and Technology (IRCSET). These mandates support making publicly funded research freely accessible in an open access repository.

Institutional Repositories – a global phenomenon

IRs have been in existence in libraries since the mid 2000s. They emerged first in the academic library sector with large institutions such as the Massachusetts Institute of Technology and the University of California leading the way. The National Institutes of Health in the US has operated PUBMED Central, an archive of biomedical and life sciences literature, since 2000.[2]

Institutional repositories are widespread and numerous with exponential growth recorded worldwide (see OpenDOAR)[3]. There are mailing lists, blogs and even conferences devoted to

IRs. The Directory of Open Access Repositories, OpenDOAR, currently has over 1,400 listings and the Registry of Open Access Repositories (ROAR) lists 1,396 repositories.[4] Both directories list twelve Irish IRs. Ten out of the twelve represent universities or Institutes of Technology, the other two are health science libraries (HSE Lenus and RCSI epubs).

In Ireland universities have also paved the way for the establishment of IRs. NUI Maynooth first launched ePrints in 2003 and was the first Irish university to host an institutional repository.[5] In 2005 the Regional Library & Information Service (RLIS) at HSE in Dublin launched Hyperion which was an Irish Health Publications Archive (IHPA): it was essentially an early form of an institutional repository. Trinity's TARA (Trinity Access to Research Archive) followed in 2006,[6] then UCD's Research Online the following year.[7] The All-Ireland electronic Health Library (AIeHL) made available in 2007 by the Institute of Public Health in Ireland is also worth noting as it has a public

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health focus.[8] It is not an institutional or cross-institutional repository but it does harvest content from a selection of interoperable websites including at the time the IHPA. Between 2007 and 2009, a further eight IRs in Ireland emerged. As noted above, there are two in Irish health libraries.

The Research Cycle

The primary focus of this article is to set the scene for the HSE RLIS input into the IR structure and open access progress in Ireland. The cycle of research is not restricted to academic institutions and research funding bodies. Organisations such as government departments, health agencies, the Health Service Executive etc., have an input into the research cycle in other ways. For example, HSE publications and policy implementation, often lead to further research or are a direct result of research. Many of the key reports of the HSE form the basis of how health services are structured in Ireland. Official reports, or those undertaken by task forces and independent groups, often highlight the need for further research in other areas. *Vision for Change* is a key document about mental health services and policy in Ireland. It is frequently quoted by mental health workers across the country as one of the landmark documents in their profession. One of its recommendations is a call for research and for dissemination of that research:

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1 OAI – Open Archives Initiative. "Open" in the OAI context refers to machine interoperability.
2 http://www.pubmedcentral.nih.gov/
3 Growth of the OpenDOAR database http://www.opendoar.org/index.html accessed June 22nd 2009.
4 ROAR http://roar.eprints.org/
5 http://eprints.may.ie/
6 http://www.tara.tcd.ie/
7 http://irserver.ucd.ie/dspace/
8 http://www.aiehl.org/

Recommendation 19.2: "The HIQA should put mechanisms in place to carry out systematic evaluations on all forms of interventions in mental health and this information should be widely disseminated."[9]

Similarly the recent Monageer Inquiry has amongst its recommendations a call for a review into familicide[10] which will lead to research in this area.

It is important that non-academic organisations with an input into the research cycle maintain and make accessible their intellectual output. In the case of the HSE the RLIS as previously noted set up a digital archive in 2005. The content of this archive was migrated to the new "Irish Health Repository" (Lenus) so it is interesting to explore how, and in what context, the archive evolved.

Organisational restructuring

The organisational structure of the Irish health service has been shaped and reshaped many times. Following the *Health Act, 1970*, Ireland was divided into eight Health Boards; the Eastern Health Board covered the eastern part. The East of Ireland always presented an imbalance due to the high population density. Just one health board – the Eastern Health Board (EHB) – was responsible for this region up until 1999. The Eastern Regional Health Board then replaced the EHB and a further three area health boards and a shared services organisation were established. A further fifty-two health agencies existed in Ireland at that time. The founding of the Health Service Executive (HSE) in 2005 saw seventeen of these agencies abolished, including five in the East alone. The HSE was now a national health executive with a new structure of four regions.

Why is this restructuring important and how is it relevant to institutional repositories? Apart from the administrative, financial and managerial burden posed by restructuring, there was also a real and immediate threat of the loss of corporate knowledge. In the East alone, three Area Boards and two health authorities each with their own set of publications, their own websites and their own Board minutes were abolished. The rest of the country had an additional seven health boards, all with their own publications, websites etc. to add to the mix. When these Boards were disbanded so too were their secretariats. The secretariats as part of their function, maintained all board minutes and publications. Libraries did and do exist in these areas but do not always have access to a full suite of Board publications.

Preserving corporate knowledge

Despite these structural overhauls, libraries in the HSE escaped restructuring and the RLIS remained responsible for the "region" of the counties Dublin, Wicklow and Kildare. In 2005, the challenge was primarily to rescue the corporate knowledge of the five organisations in this area and secondly those of the other

seven areas. A successful case was made convincing management of the benefit of investing in digital archiving software and having the library head up this project. Funding was granted and the Hyperion system was purchased in 2004. A project team was assembled with an array of tasks assigned to each member. The team consisted of librarians and representatives from the Communication Department and the Department of Public Health in the HSE East.

Irish Health Publications Archive Project

This project involved scanning and downloading publications from websites before they were dismantled, making partnerships with various communications departments who traditionally held the "publications function" of these organisations, contacting secretariats for copies of Board minutes and others to see if scanning was an option. Approximately 1,000 documents were scanned, converted to OCR and output in PDF format. These, together with documents born digital, were catalogued and a metadata entry was recorded in the Hyperion System. The full text file was attached to each record and made available via the library OPAC. The next concern was finding a home on the Web for the system. The parent organisation of the RLIS was the Eastern Health Shared Services (EHSS), whose website was replaced by the HSE. Getting a link – any link – on the HSE website was not an option at the time.

Hence the staff of the RLIS was instrumental in the establishment of the HSE Libraries Online website (http://www.hselibrary.ie) which provided a web presence for the IHPA in 2006. The IHPA was well received by the Irish health library community with much positive feedback received via the HSLG discussion list and other informal conversations. Similarly health workers found one access point most useful and a good resource for those "hard to find" publications.

For all the positives there were an equal amount of negatives, particularly in the last two years of the project. Technology had moved on and institutional repositories were springing up in Ireland in other institutions. Meanwhile, the supplier of Hyperion (Sirsi Corporation) was undergoing its own restructuring in a merger with DYNIX and product development came to an abrupt halt as a result. This meant that Web 2.0 tools were not a feature and the interface was seriously deficient both cosmetically and in user-friendliness. Pop-ups were a new feature of Internet Explorer which caused endless frustration for users when they clicked on a full text file. Added to this the search engine was, at best, creaking so a solution was needed and needed fast.

A time for change

Due to staffing considerations, a somewhat whittled down project team was reinstated. A project kick-off meeting devoted one day to determine where we were, where we wanted to be and how we might get there. Most importantly as a team, we took a critical look (using SWOT analysis) at the IHPA and were determined to do things better the next time, given the opportunity. One of the main findings of this day was that we did not adequately include our users in the design, content and function of the IHPA. There were many reasons for this –

mainly the limited time available. This was corrected by several means: a user survey was circulated to other HSE librarians in the country and opinions were sought from other health librarians. The response, as anticipated, was that, Yes, the HSE needed an Institutional Repository. In addition, a call was made for HSE staff to participate in a focus group for research. The response to the call was positive. Staff were interested in research: many of them produce publications for the HSE and are actively publishing research in many prominent journals. The call generated enough interest for two sessions to be held for the focus group. A day was spent with the group determining what replacement would be found for the IHPA, what their needs as researchers were, what the content of the IR should include and feedback on three systems. Questionnaires were completed by the group on each of the systems and test scenarios were conducted where dummy files were uploaded. The researchers rated each system in terms of ease of use, flexibility, user-friendliness and how likely they were to use them to upload their research. This day proved invaluable as a real insight into the needs of researchers on the ground. The feedback was gathered and scrutinised. The overall winner was BioMed Central's Open Repository system. BioMed Central is a pioneer of the Open Access Movement and was the first OA publisher. The new system was put in place during the autumn of 2008 and by the end of the year the content from the IHPA was successfully migrated.

The birth of Lenus

Much time was given to the branding of the new system which emerged as another weakness during the SWOT analysis of the IHPA. Traditionally marketing is not an area where libraries tend to excel and the RLIS is no exception. A call and competition (sponsored by BioMed) to name the new repository was announced on the HSLG and HEANET (LIR) discussion lists. In the end the name chosen did not make the mark as the domain name was taken. After further procrastination a name was chosen with the help of a communications expert in the HSE and Lenus (taken from the Celtic God of healing) was born. Lenus the Irish Health Repository was successfully launched in February 2009.

Content and purpose of IRs

At the time of writing, there is only one other IR in an Irish health library – that of the Royal College of Surgeons in Ireland (RCSI). The e-publications@RCSI (http://epubs.rcsi.ie) is an open access institutional repository of research and scholarly output of the Royal College of Surgeons in Ireland.[11] The repository aims include the dissemination of the research of the RCSI and related research following the Open Access mandate. This is not dissimilar to the aims and objectives of other Irish Institutional Repositories. Lenus differs from other Irish IRs both in content and purpose. Firstly, it serves as more of a cross-institutional repository. In fact, there is purposely no mention of "institution" in its name as this implies a restriction

on content. Publications are collected not only from the HSE and former health boards but also from the Department of Health and Children and many of the Irish health agencies. These are primarily official publications, HSE staff theses and grey literature. In the future it is envisaged that journal articles will also make up the core of the content. It is important that these types of publications are collected in one searchable system as the alternative would be to search a myriad of organisational websites, some of which no longer exist. The inclusion of former health board publications as well as HSE publications is important because this is effectively what makes up the intellectual output of the HSE. Secondly, a researcher does not have to be a HSE staff member to submit research to

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Lenus. The criterion for inclusion is that the research is done by a person while in Ireland on a health topic. This makes the content of Lenus uniquely Irish and uniquely related to health.

Lenus serves as a central access point for any researcher interested in, for example, the historical beginnings of the Irish health system, how and why it was structured and restructured, how it was and is managed, how it evolved and how it functions today. In fact, it has been very useful in doing the research for this article. It could be argued that a search engine such as Google could provide the same output with perhaps better search capabilities but as mentioned some of the websites no longer exist. Lenus is OAI compliant and registered which means that Google can harvest information from Lenus and if Google is used to search for any reports on Irish healthcare then Lenus provides many search results. On a related point in the IHPA, a full MARC record was recorded for every digital object which was then displayed in the OPAC. With Lenus, the role of the OPAC is increasingly less important as an access point as Google indexing picks up LENUS deposits from the repository.

Rationalisation

The job of harvesting content is on-going and labour intensive. The changing structure of the health system in Ireland does not make this any easier. In October 2008, the Minister for Health and Children, Mary Harney, announced a "major rationalisation" ▶

9 *Vision for Change: Report of the Expert Group on mental health policy.* Dublin: Stationery Office, 2006: 206.

10 "Monageer Inquiry". 2008. Recommendation 8.26. p.151.

Available at http://www.dohc.ie/publications/pdf/monageer_inquiry.pdf?direct=1

11 http://www.rcsi.ie/index.jsp?1nID=93&tpID=103&tnID=1513

of the health sector involving the amalgamation of fifteen agencies. The programme for rationalisation is time-tabled for completion by 2011. What is to become of the websites, publications and libraries of the agencies involved? In the meantime the RLIS will proceed in capturing what is viable from a staffing point of view. In the not too distant future the vision of Lenus is to be a repository where content will be submitted directly by health agencies and authors. Indeed, this has already begun to happen with some health organisations directly submitting content for inclusion. In many ways, we are learning to run before we can walk but with the advances in web technology and the commitment of health organisations in Ireland to Open Access, surely IRs represents a real and viable future for health libraries?

The future

One of the next key challenges for the Lenus repository is to gather momentum within the HSE to issue a position statement on Open Access. At present deposits are encouraged by the library or from the bottom up. Once an OA mandate or similar is in place, HSE employees will be encouraged from the top down to deposit works into Lenus. In theory this should result in some sizeable contributions. Forming partnerships with other similar organisations has proven most beneficial. The RLIS has formed a partnership with HERA – Norway's Electronic Health Library's open research archive for hospitals and other Norwegian health institutions. This has been very helpful in exchanging policies and stages of development. Norway has a strong open access mandate at national level which is something towards which Ireland should strive. Another challenge is to maintain standards in Lenus that ensure interoperability with other systems. Irish Universities Association (IUA) libraries, funded under the SIF initiative, are working towards developing a national research portal harvesting content from institutional repositories. A pilot phase is scheduled for completion in the first quarter of 2010. Developing a partnership with Irish universities to include Lenus in this rollout will be a key objective for the future.

One of the objectives is that Lenus develops beyond a repository or "cardboard box" against which Dorothea Salo (University of Wisconsin IR manager) warns. (Salo 2009) The vision is that it may be used as a collaborative tool for researchers. This will be facilitated with technical updates in the future. Finally during the summer of 2009 a reconvening of the researcher focus group will be held to take stock of how Lenus is being received by researchers in the HSE. Feedback on this will inform future pathways for Lenus. The repository will remain an integral piece of the library's service offering and involving users on the ground at regular intervals will assist in keeping the focus relevant to their needs.

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Recommended Reading

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