

Report of the Dialogue Sessions “Café Mimir Andino”

“Management and information systems for the development of research in universities”

Virtual Forum co-organised by ASCUN, OBREAL GLOBAL and the EU-LAC FOUNDATION

27 July 2021

Time: 10:00 am (Colombia time) // 15:00 CEST

Agenda



Conversatorios
Cafés Mimir Andino

Gestión y sistemas de información para el desarrollo institucional de la investigación en las universidades

Pablo De Castro
Bibliotecario de promoción de acceso abierto en la Universidad de Strathclyde, Glasgow y Miembro de la junta de euroCRIS y líder del grupo de trabajo de interoperabilidad CRIS / IR Sistemas de información de investigación actual, Nijmegen, Países Bajos

Modera: Dr. Enrique Vera Vicerrector de Investigación Universidad Pedagógica y Tecnológica de Colombia

27 de julio de 2021 8:00 COT - 15:00 CEST

Transmisión: www.youtube.com/AsociacionColombianadeUniversidades
zoom Registro : <http://bit.ly/CafésMimirAndino4>

The Dialogue sessions “Cafés Mimir Andino”

From June to August 2021, the European Union-Latin America and the Caribbean International Foundation (EU-LAC Foundation), OBREAL Global Observatory (OBREAL Global) and the Colombian Association of Universities (ASCUN) jointly organized the **“Cafés Mimir Andino: Strategies to promote research and innovation in universities”**.

The virtual dialogue series was designed to serve the project’s partner universities and especially their research leadership. The objectives of this activity were:



- Exchange ideas about the implementation of research management and the model developed in the framework of the Mimir Andino Project;
- To offer a space for networking among leaders in research management;
- Promote bi-regional and international dialogue, relating the themes of the dialogues to different political, economic and social contexts.

Each session featured one or two experts from Europe and/or Latin America who shared reflections and examples on a specific topic; a research and innovation management leader associated with the Mimir Andino Project moderated the space and addressed questions to the expert(s); a group of rectors and vice-rectors from Andean Universities attended the dialogue and were invited to share ideas and experiences, and articulate additional questions to the guest expert.

Initial Statements

Dr Pablo de Castro, Open Access Promotion Librarian at the University of Strathclyde, Glasgow, England. Physicist and expert in open access and research information workflows and management systems. Coordinator of the OPEN AID 2020 Gold open access pilot in Europe. Coordinator of the association of European research libraries based in The Hague. Technical secretary of the non-profit association EUROCRIS.

Dr De Castro began his intervention “Management and Information Systems for the Institutional Development of Research in Universities”, indicating that the main purpose of this intervention was to define and analyse the Research Information Management Systems, their usefulness and relevance.

Following this order of ideas, Dr De Castro emphasised that Research Information Management Systems - commonly identified by the acronym CRIS, *Current Research Information System* - are currently considered the most widely used systems in scientific research. They can be defined as a database or other information system that allows storing, managing and exchanging context metadata, for all research activity funded by a funding agency or conducted by an organisation dedicated to research. In other words, CRIS is a system that captures all the scientific activity that is being carried out in a society, including aspects around the researchers, their profiles, the topics of work, their publications and patents, the results of the research, funded projects of which they are part, as well as the collaborations of the university with other institutions, number of doctoral students working at the university, the titles of their projects, their supervisors, equipment that the university has, among others. However, not all implementations are 100%, as there may be subsets of these entities that are reflected in a system, but according to Dr De Castro, the goal of a CRIS is to try to capture as much data as possible in relation to the activity that takes place in an institution.



In order to offer a deeper explanation, Dr De Castro shared the article [7 things you should know about Institutional Repositories, CRIS Systems, and their Interoperability](#) of his authorship, published in October 2014 by the Confederation of Open Access Repositories (COAR). In this article, Dr De Castro explains the relationship between institutional repositories, which are the most frequently available platforms in universities today, and CRIS systems, as well as to determine the similarities and differences between them and their interoperability capacity.

Although CRIS systems have the objective of projecting and disseminating the scientific production of an institution, for example, around doctoral theses, software production, patents or data sets, as well as making projects known to the public. According to Dr De Castro, this is not the main objective of a CRIS, - unlike a repository, which is intended to disseminate the scientific output of a university. Therefore, a CRIS system is rather an internal tool that is used for decision making in universities. In this sense, the aim of a CRIS system is not so much description as internal analysis, which can also be offered externally.

According to Dr De Castro, the [CERIF Model \(The Common European Research Information Format\)](#), understood as the Common European Format for Scientific Information Management, underlies the CRIS systems. This model is composed of a set of core or fundamental entities that allow the harmonised and standardised description of the concepts that are part of the overview of scientific activity. There is a set of three core entities:

1. person-researcher;
2. organisation, university, department or school (the affiliation of the researcher);
3. funded projects, namely the projects within the institution in which researchers participate with their affiliations. In addition, these projects can be funded by external agencies or by the university.

These core entities are interconnected with each other and connected at the same time to a series of additional secondary entities such as: occupation, patents, dataset, type of research, among others. In this sense, all the information is connected to each other, so that, for example, it is possible to obtain reports on all the publications that are being produced in the institution, based on the same type of research or based on the same type of data, as long as all the elements are in the system. It should be noted that this is another fundamental difference with institutional repositories, since CRIS systems do not focus as much on full-text archives but rather on meta-data.

Dr De Castro also stressed that the CERIF system is available to interested parties, since one of the main assets of euroCRIS is the promotion of a standard model that allows the exchange of information and aggregation of information contained in its CRIS system.

On the other hand, euroCRIS disposes of a directory of CRIS systems ([Directory of Research Information System - DRIS](#)) which currently contains 900 entries from around the world, mostly from institutional systems. This means that CRIS systems are usually operated by universities or research centres. Furthermore, there are also different types of CRIS systems:



- International CRIS systems, which compile information from universities or institutions in different countries;
- CRIS systems for funding agencies - useful for agencies or public entities that fund research, as they would have at their disposal a database that includes information on all the projects they are funding, for example, the universities they are contributing to, the profile of the researchers, the publications or results of these projects, among others.

Additionally, Dr. De Castro outlined that the regional, national or international CRIS systems are usually fed by the information contained in the Institutional CRIS systems. As an example, the FRIS (*Flanders Research Information System*), which is the regional CRIS system of Flanders, Belgium, and to which institutions, universities or research centres in the area export their information, thus allowing the analysis of the research performance of a region as a whole.

In addition, Dr De Castro pointed out that CRIS Systems are being used in different parts of the world, in particular Europe and India, and a map with an extensive list of countries and cities where CRIS are currently in use can be seen through DRIS. In Latin America and the Caribbean there is a list of 27 CRIS systems currently in operation, e.g. seven in Mexico, six in Peru, five in Colombia.

Moreover, Dr De Castro indicated that it is important to highlight that CRIS systems in Latin America are growing, and he shared [a study conducted by the Latin American Council of Social Sciences \(CLACSO\)](#) which highlights CRIS systems and their usefulness in improving evaluation systems. Furthermore, Dr De Castro stressed that this study proposes the usefulness of a Latin American CRIS, - a system which would be based on the institutional and national CRIS of the various countries that would collaborate and share data from their systems.

Specifically, Dr De Castro pointed out that, in Colombia, the [CRISCol](#) project is being developed which involves several universities around the construction of a national platform, and that it would obtain data from the ministries, universities associations and funding agencies at the national level, and of course, from the universities involved. Similarly, the [PeruCRIS](#) project developed in Peru by the Council for Science, Technology and Innovation (CONCYTEC), seeks to build a national CRIS system for the whole country, which would feed off the institutional CRIS systems. This project is funded by the World Bank.

CRIS systems are useful in four fundamental areas:

1. Research assessment;
2. Research administration;
3. Open Science implementation;
4. Data analysis (Business intelligence).

All the data that are entered into the CRIS platform allow for evidence-based decision making. To illustrate this, Dr. De Castro pointed out that the National Agency for Research and Development of Chile (ANID) undertakes comparisons between the research fields that are being published at national and regional level and the most productive economic sectors of GDP in the country, to determine the degree of alignment between scientific production and economic production, which is a valuable tool of analysis for national agencies, whether for promotion, support or funding of science.



Questions and dialogue with the moderator Dr Enrique Vera, Vice-rector of research and extension of the Universidad of Pedagogy and Technology of Colombia

In Colombia, the Ministry of Science has a platform that is being strengthened, known as CvLAC for researchers and GrupLAC for research groups. However, these platforms have not yet been able to articulate strategies to have a common repository or database of open science among Colombian universities. Taking into account the above, how to facilitate the process of adaptation or transition of the current systems of the Ministry and the universities to a CRIS type system?

According to Dr De Castro, the PeruCRIS project can offer suggestions on how to proceed with a transition strategy from the available infrastructure to a more consolidated CRIS infrastructure. For this, however, interoperability would need to be safeguarded, the same of which has two fundamental sections:

1. Technical interoperability; which implies that the available systems can exchange information with each other and share some kind of standard, in order to take advantage of the information that each of them contains.
2. Human interoperability; which implies a fluid communication and consensus between the different parts of the system, regarding governance, decision making and objectives, since, in order for the platforms to interoperate with each other, people must do it first.

What are the most important criteria that universities throughout Latin America should consider when selecting a technology or information systems provider?

According to Dr De Castro, several important aspects must be taken into account when it comes to making choices regarding of technology. The first of them refers, in general, to teamwork. In this sense, it is important to take into account the inputs or the points of view of universities that are already operating a particular system, who can give feedback to the working groups on the advantages and disadvantages of the software in question.

Dr De Castro argued that there were three options in the search to implement a CRIS platform:

1. Commercial Partnership, which implies the availability of budget and human capacity to operate the implementation of the CRIS system, the creation of all the profiles, information collection, etc. This option, although the fastest and most efficient, may not be the most beneficial for all institutions.
2. Expansion of the Tspace-based institutional repository data model that are in place in the country, to allow the incorporation of additional information in areas such as projects, research data, patents. This option allows for independence from external entities, and at the same time allows for in-house development and training of computer science professionals to enrich the country. Example: [PeruCRIS](#).
3. Develop an in-house platform, not necessarily based on pre-existing systems, but designed and built according to the specifications of each university for its own platform. For example, this was the methodology used by the Universidad Javeriana, in Colombia.



EuroCRIS collaborated with CAPES (Coordination of Higher Education Personnel Training) in Brazil in the construction of the postgraduate information system, very effectively, especially with the Sucupira platform. How does the collaboration continue and which lessons can be taken to the Andean countries?

Dr De Castro indicated that in the framework of the EuroCRIS collaboration with CAPES, a EuroCRIS seminar was held to organise the collaboration. Currently, Brazil, together with Peru, are the only two countries in Latin America that have projects to build CRIS of national scope. In the case of Brazil this is called BrCRIS. However, in Brazil it is difficult to build a platform or system that can be useful for the entire country as a whole because of its vast territory and its federal structure. For its part, the Lattes Curriculum System, the base for the construction of BrCRIS, is being used in the same way in Colombia, which demonstrates how systems designed for one country can be used in another.

Dr De Castro also pointed out that the construction of infrastructure often starts with the collection of data on people, researchers and institutions. However, it is much more difficult to get information about projects, since these are often managed by third parties which, although close to the ministry or universities, must be made aware of the importance of such data to be incorporated along with the information of researchers and institutions, so that they can be connected with each other.

Can ORCID (Open Research and Contribution ID) be considered as such a software?

According to Dr De Castro, ORCID has a very similar structure to a CRIS system, in that it takes a person as a starting point or point of contact, and collects information around their publications, funding, affiliations, etc. In this sense, ORCID is aligned with the CRIS system, but it is not one. Dr De Castro also indicated that ORCID is often used as a starting point for building CRIS infrastructure. For example, the first version of the Ukrainian national CRIS system included the information contained in ORCID from Ukrainian researchers.

Will the system allow the creation of a network of networks including the different Latin American countries?

Dr De Castro focused on a quote from the before mentioned CLACSO report which analyses the potential of CRIS systems to receive diverse forms of knowledge production and to promote new modalities of evaluation. The report suggests the idea of a network of networks; that is, a network of collaboration across multiple countries in the region. In this sense, information from institutional repositories grouped by countries in national networks is successively transferred to Latin American environments, which is then transferred to *OpenAire*, the infrastructure that gathers and integrates the metadata of the institutional repositories of any university in an integrated country. On the other hand, for data- and evidence-based decision-making, the fundamental levels of information gathering are (1) institutional, of each university or research centre, and (2) national, for government level decision-making.

In Colombia, the Ministry of Science requires researchers to provide information and each university guarantees the veracity of this information. From your experience and point of view, what would be the best governance model in such a system?

According to Dr De Castro, there are different levels of governance and each institutional portal has



one. Each university decides who manages its system in collaboration with the internal services or units involved, for example, IT, computing, libraries, among others, and how it should be managed. Universities thus oversee governance rules and practices at the institutional level. Rectors' offices generally decide which solution is implemented. In the networks, there are usually working groups that address various issues related to the interoperability of information, i.e. for there to be a portal that collects information stored on institutional platforms, there must be a very strong agreement between the institutions and the government department that operates at the regional level, on the type of data and technical standards to be used for their exchange. This type of governance is usually steered by the relevant government department, which creates working groups with representatives from universities and research groups to reach consensus.

Information about the Mimir Andino Project

With a duration of 4 years (2018-2022), the Mimir Andino Project is primarily designed to assist and encourage partner universities in South American (and specifically Andean) countries to better understand the status quo of their research management approaches, from performance and evaluation to management structures and effectiveness.

The project provides them with a research management model that helps universities to achieve their research and innovation objectives with respect to national and regional development. Consequently, the partner universities share experiences in order to build and strengthen capacities on the organisation and management of innovation and research, and understand their current models, principles and standards. Knowledge transfer is also key among the South American partners, who share common geographical, economic and scientific interests and are eager to deepen their regional cooperation and integration in higher education and research.

Links of interest

Video of the Webinar in Spanish: <https://www.youtube.com/watch?v=VoieMSEsvJA>

Pablo De Castro: "7 things you should know about institutional repositories": <https://www.coar-repositories.org/news-updates/7-things-you-should-know-aboutirs/>

CERIF model: <https://eurocris.org/services/main-features-cerif>

Directory of CRIS Systems (DRIS): <https://dSPACECRIS.eurocris.org/cris/explore/dris>

CRIS systems in Latin America: <https://www.clacso.org/herramienta-1-los-sistemas-cris-su-potencialidad-para-visibilizar-diversas-formas-de-produccion-e-impulsar-nuevas-modalidades-de-evaluacion/>

"PeruCRIS": <https://perucris.concytec.gob.pe/>



DATA: <https://dataciencia.anid.cl/>

Colombian universities registered in euroCris: Pontificia Universidad Javeriana, Universidad de Medellín, Universidad de Ibagué, Universidad del Rosario; see:

https://dSPACECRIS.eurocris.org/simple-search?location=orgunits&query=&rpp=50&sort_by=score&order=desc&filter_field_1=orgunitcountry&filter_type_1=contains&filter_value_1=colombia

Example of Univ. of Medellín - PURE: <https://investigaciones-pure.udem.edu.co/>

Case study of institutional CRIS system at Universidad del Rosario (Colombia), presented on 24 June 2021 by María Lucía Lizarazo at the Annual VIVO 2021 Conference: <http://hdl.handle.net/11366/1801>

This webinar was organised in the framework of the activities of the Mimir Andino Project (<http://mimirandino.org/>).

The organisers of the webinar and their representatives, Dr Oscar Domínguez González, Executive Director of ASCUN, Dr Adrián Bonilla of the EU-LAC Foundation, and Dr Ramón Torrent of the Obreal Observatorio Global, thank the participants for their contributions and assistance.

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