



Report of the Dialogue Sessions “Cafés Mimir Andino”

“Scientific recognition and incentives for the researcher’s career”

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

13 July 2021

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

Agenda

**Conversatorios
Cafés Mimir Andino**

Reconocimiento científico e incentivos para la carrera del investigador

Dr. Adrián Bonilla
Director Ejecutivo de la Fundación EU-LAC;
ex Secretario de Educación Superior, Ciencia, Tecnología e Innovación, SENECYT, Ecuador.

Dra. Sarah de Rijcke
Profesora Asociada y Directora Adjunta del Centro de Estudios de Ciencia y Tecnología (CWTS), Universidad de Leiden, Los Países Bajos.

Modera:
Dr. Alfonso Parra, Vicerrector CTI de la Universidad Antonio Nariño, Colombia

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

Transmisión: www.youtube.com/AsociacionColombianadeUniversidades

zoom Registro : <http://bit.ly/CafésMimirAndino3>

Mimir Andino ASCUN ASOCIACIÓN COLOMBIANA DE UNIVERSIDADES Cofinanciado por el programa Erasmus+ de la Unión Europea OBREAL EU-LAC EU-LAC Foundation Fundación EU-LAC

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 organised 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 Sarah De Rijcke, Professor for Science, Technology and Innovation Studies, Scientific Director of the Centre for Science and Technology Studies (CWTS), Leiden University, The Netherlands

Dr Sarah de Rijcke introduced her intervention by presenting the key arguments of the article by Philip Ball, [Science must move with the times](#), published on November 5, 2019 in the magazine *Nature*. In it, Ball describes how science has evolved, giving greater relevance to teamwork, internationalising its scope and seeking the achievement of its social contract by confronting global issues and existential urgencies, such as climate change and pandemics. Additionally, Ball highlights changes in the way science is approached and research is communicated; reflecting on the importance and validity of papers and monographs, and on their capacity to cover the results of current research. And, likewise, questioning whether the evaluation and credit systems currently in place take into account the diversification of roles in research.

In this sense, and focusing on the evaluation for the recruitment and promotion in the academic career - from a partial context and perspective, due to its geographical location - Dr. de Rijcke noted that, in recent years, concern about the misapplication of metrics has intensified, as it contributes to pressure on researchers, deepens problems of comprehensiveness and reproducibility, reduces the diversity and purposes of research missions, leads institutions to focus on similar strategies and priorities or on incremental work, and places great emphasis on simplistic measurements and metrics, as well as on individual rather than collaborative outcomes.

Thus, Dr de Rijcke proposed a series of initiatives that suggest that responsible evaluation and diagnosis systems should be based on existing efforts that seek to improve the way in which scientific outputs or results are evaluated. In particular, the prioritisation of a qualitative rather than quantitative approach, the use of indicators with broader coverage and impact in comparison to “the Journal Base Metrics”.

Dr de Rijcke also suggested that these evaluation systems should give value to all scientific research activities and be more inclusive with the types of results, activities, disciplines, and career stages taken



into account during the evaluations (for example: societally relevant activities, evidence of impact and knowledge exchange).

Dr Adrián Bonilla, Executive Director of the EU-LAC Foundation and former Secretary of Higher Education, Science, Technology and Innovation, SENECYT, Ecuador

According to Dr Bonilla, it seems pertinent to inquire into the role of science, technology and innovation, and how these are constructed and taught in Latin American and Andean societies, highlighting certain axes that currently span across scientific research: digital transformations, environment and sustainable development, and health.

Likewise, Dr. Bonilla stated the existence of an environment characterised by technological changes, which contrary to “what it should be”, have reproduced gaps in access to knowledge, as well as other lacunae of social and economic nature. In this sense, the advance of technology has not necessarily implied an improvement in the living nor working conditions of the majority of the population. Moreover, instead of promoting the construction of resilient communities, the sustainable diversification of productive, creative, and cultural practices, or an appropriate management of ecological, biological, and material resources, technology has led to an increase in social inequalities between and within countries.

Similarly, according to Dr. Bonilla, the purpose of science can be none other than the detection and satisfaction of the needs of people and societies. That is, the search for knowledge and technology that allows people to live better, in line to the capacities and needs of their own regions and societies. Relevance is then the axis that allows valuing quality scientific knowledge. In other words, the quality of scientific research cannot depend on its registration index or its publication, but rather on the impact that it generates in the environment that makes it possible to conduct it. Furthermore, if we take into account that it is the environment that usually finances research, and that publications are generally conditioned by their environments, the possibility of science carried out in Latin America and the Caribbean being published in other regions is quite reduced, since it does not respond to their needs.

Questions and dialogue with the moderator Dr Alfonso Parra, Vice Rector S.T.I, Universidad AntonioNariño, Colombia

Professors respond to stimuli conditioned to the systems of their regions. In addition, the teaching career is characterised by its long duration, and is sometimes carried out in different universities, within and outside the country. Over the course of a professor's career, metrics regarding contributions to education, the impact of their work, or leadership help them move up the career ladder. What is your opinion of the professor's career and the individual metrics used? What should the measurement metrics for lecturers look like?

According to Dr de Rijcke, measurements regarding the advancement of professors within the career system depend to a great extent on the conditions of the sector in which they are located. According to her perspective, in Latin America and the Caribbean, there seems to be less mobility in comparison to European colleagues. Thus, professors tend to remain in the same university throughout their careers, which implies, in a certain sense, an impulse to competition and individualism, and in turn, gives less



relevance to other aspects of research, such as teamwork, contributions to society, or the reduction of knowledge gaps.

In this sense, with a deeper insight into how to make use of responsible indicators and measurements, which include elements of social relevance or Open Research in their analysis; in a context where professors are evaluated with respect to several activities at the same time - teaching, research and relevance - and where excellent results are expected equally in all of them, for Dr de Rijcke it is necessary to consider the profiles of each person, research group or university, and to evaluate based on those indicators that match their strategies or missions. This in turn, would allow for the diversification of metrics, without losing the ability to include strict and relevant criteria.

Taking into account the above elements, and the integrality of metrics in the evaluation of professors in Latin America, in your opinion, should this integrality be continued, or should precise guidelines be defined in order to evaluate them according to each trajectory?

According to Dr Bonilla, it is convenient to define the quality criteria in the process of scientific research, emphasising that these are linked to the relevance of the research with respect to the needs of the society where it is developed. In Latin America in particular, the requirements for promotion in the professional career depend to a great extent on the degree level and experience or seniority in the academic system. However, there is a perceived devaluation of the importance of teaching. Most professors seek to focus only on research, since they consider both aspects of the academic career as independent activities, when in reality they are intrinsically linked; the researcher is naturally a professor and vice versa.

Following this order of ideas, in the exercise of teaching, the hourly volume and quality of the classes should be recognised according to the feedback from the students. While, in research, quality should be evaluated based on the academic process, without making publication the only indicator. For this, it is necessary to understand the process of scientific research as an integral process, not fragmented, and to produce indicators that make it possible to identify how research impacts society. In this sense, it is convenient to make use of the indicators of innovation in applied sciences: implementation, applicability, return to society, production of technology, and the recognition and dissemination of useful knowledge to people, including knowledge in the humanities and social sciences.

Taking up the elements of Dr Sarah de Rijcke's presentation regarding the widespread production and writing of knowledge nowadays, which is however directed towards few people, and relating it to the emphasis given to the individual over collaboration, how can group incentives be generated and scientific reading encouraged? What are the prospects for the future?

According to Sarah de Rijcke, it is convenient to promote the evaluation of leadership and related skills during the formal evaluation of the professional career of a professor or researcher, since leadership skills allow a focus on collaboration and, among other things, to analyse how a person contributes and guides a team. Taking into account that evaluations usually focus on individual objectives and that there are no metrics that allow a team to be evaluated as a whole, Dr de Rijcke proposes to highlight in publications the contributions of each member to the achievement of results, and depending on each discipline, placing less emphasis on first and last authorship.

On the other hand, Sarah de Rijcke mentioned the perceived change in funding agencies, as well as in some institutions and universities, as they have started to include narrative CVs during evaluations. In these, applicants are asked to describe the focus of their research and frame the results and collaborations in relation to it. In addition to providing a context for the research, the narrative approach moves away from the sometimes disadvantageous practice of focusing solely on individuals and publications.

Dr de Rijcke also suggested looking at how evaluation committees are made up and including members with different skills, knowledge and at varying career stages, in order to engage in a broader discussion and to allow for the inclusion of diverse topics, such as the role of teams and collaboration. This would be a non-quantitative measure of evaluation and give a new perspective to the decision making and debates that are sought to be implemented.

For his part, Adrián Bonilla proposed diversifying the composition of committees, implementing more flexible criteria and promoting a comprehensive and diverse evaluation of research and researchers. He also clarified that the final publication, although useful and relevant, cannot be the only indicator of quality.

Dr Bonilla also mentioned the following challenges in Latin America and the Caribbean regarding the evaluation of the quality of research and the production of knowledge:

1. **The need to build collective scientific knowledge:** The collective practice of knowledge must be recognised, identified, and encouraged. To illustrate, Nobel Prizes and Economics prizes are increasingly being awarded to teams. This is partly because knowledge today is so diverse and the inputs so numerous, that it is not possible for a single person to comprehensively cover it all.
2. **Applicability or Innovation:** Knowledge must have some kind of affirmation in its applicability. In this sense, it should be considered how knowledge leads to the construction of technology or procedures that refer to people. In the same way, the incentive systems must consider the applicability capacity or the possibility of innovation as elements for the construction of indicators in accordance with the society in which the research is carried out.
3. **Relevance and linkage with society:** Knowledge must respond to the requirements of the society that funds the research and benefit the people in it.
4. **Open Science:** Public funding for research should be promoted and the possibility of accessing innovations and knowledge constructions without major costs should be provided.



Finally, Dr. Bonilla pointed out that Latin America and the Caribbean are going through the last of a series of stages that sought to order, systematise and give meaning to research and teaching through the application of rigid criteria for the recognition of the careers of researchers and professors. Although these criteria have helped to advance the academic quality of universities in the region, they are no longer in use in other societies.

Questions from the audience:

Should all research have social impact? If research it is not published in accredited journals, where should it be published?

According to Dr Sarah de Rijcke, responsible evaluation of research does not imply the suspension of journal publications or the exclusive concentration on socially relevant research. Rather, it is about finding a middle ground between the excessive focus on publication and the various incentives for publication, as research has different missions.

In this sense, Dr de Rijcke suggests that while research, education and social relevance are related, different profiles can be developed within the team, with each member focusing on a particular aspect. Additionally, this practice could be implemented at all levels: research groups, faculties, and universities. This would allow to get rid of the inequity of incentives to publish in high impact journals using relatively simplistic metrics and to develop more sophisticated methods to follow-up on broader indicators.

What are the recommendations for implementing social impact measurements in research processes in higher education institutions?

Adrián Bonilla recommended the development of indicators that take into account the possibility of producing knowledge construction teams, that is, producing collective and organised knowledge. He also suggested encouraging the integration of universities through the recognition of alliances between professors from different departments and units, which would increase the impact and quality of research.

On the other hand, knowledge must be analysed from its relevance, inquiring, among other things, its subject matter, how it can be applied, what kind of networks it influences, and how it can be given continuity. For Dr Bonilla, the research process does not end with the publication of the paper, but with the innovation generated by the knowledge.

In addition, incentives should be given to research that responds to the needs of society, that takes advantage of the capacities of the researcher and of the university, and that makes responsible use of the resources that finance it. It should be clarified that in Latin America and the Caribbean knowledge is produced in conditions of scarce resources; the amount of investment is sporadically lower compared to universities in other regions. It is also important to close the gap in the access to higher education in Latin America and the Caribbean. According to Dr. Bonilla, there is no research if there is no teaching; indeed, responsible research should seek to produce strategies for access to education.

How to compare profiles and trajectories of professors from economically unequal universities for the granting of resources by the State?

Sarah de Rijcke mentions one of the proposals of the European Commission's Open Science reports, to include capacities in the assessment of researcher portfolios. In this sense, the aim is to take into account the financial, infrastructural and social possibilities to which researchers and their institutions have access, including the individual context of the research, the properties of the laboratories, the composition of the equipment, the type of funding available, among others. This would, in turn, allow emphasis to be placed on the research process rather than the outcome, and create fairer comparisons between researchers.

What aspects of academic production should be encouraged and discouraged, taking into account the missions of the university and the country?

According to Dr Bonilla, it is necessary to encourage collective knowledge, the production of knowledge networks and knowledge management that begins with the process of inquiry and culminates in innovation or social applicability. Likewise, individual recognition of people should be encouraged, in proportion to the effort invested in a collective research process.

On the other hand, Dr. Bonilla considers that it is necessary to discourage the possibility that knowledge be isolated from the society where it is developed, and that the production of knowledge is recognised or valued only by publications. Likewise, it is necessary to discourage outdated evaluation regimes, focused on reflecting practices that are easy to measure and that in turn generate waste of social resources. Similarly, according to Dr Bonilla, it is pertinent to discourage the division between teaching and research and the dynamics of creating academic "personalities" over teams.

Recommendations on incentive models involving social impact and publication of articles?

With regard to recommendations on incentive models for research that can give value to social impact and publication, Dr Sarah de Rijcke suggests reading the article [The production of scientific and societal value in research evaluation: a review of societal impact assessment methods](#), by Jorrit P. Smit and Laurens K. Hessels, published on April 11, 2021 in *Research Evaluation*. In this article, they compile methods for determining societal relevance, and classify them according to the type of research that was conducted.

Should evaluation metrics or rankings be created depending on countries and regions?

According to Dr Sarah de Rijcke, elements such as geographical location and capacities to produce knowledge differ between countries and regions. For this reason, the rankings are problematic, as they evaluate and classify everyone equally according to superficial perspectives. She also points out that it should be kept in mind that many rankings use questionable methodologies for their evaluations, as well as metrics that are not compatible with each other.

For his part, Dr Adrián Bonilla considered that the qualification of a "good" university depends on the environment and the capacity of its educational unit to produce and disseminate knowledge. Universities should be valued depending on the needs of societies. According to Dr Bonilla, the



rankings use a series of indicators that can be considered subjective; prestige, for example, constitutes an advantage for universities, since it influences their classification but does not necessarily reflect their quality.

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.

Interesting links

Video of the Webinar: <https://youtu.be/hxnYvXyvjj5>

Philip Ball: Science must move with the times, Nature. 5 November 2019.

Available at: <https://www.nature.com/articles/d41586-019-03307-8>

Jorrit P. Smit and Laurens K. Hessels 2021: The production of scientific and societal value in research evaluation: a review of societal impact assessment methods. Research Evaluation; rvab002.

Available at: <https://academic.oup.com/rev/advance-article/doi/10.1093/reseval/rvab002/6220452>

José Luis Villaveces, Luis Antonio Orozco, Doris Lucía Olaya, Diego Chavarro and Elizabeth Suárez 2005: How to measure the impact of science and technology policies? Revista Iberoamericana CTS, Vol 2, No. 4.

Available at: <http://www.revistacts.net/contenido/numero-4/como-medir-el-impacto-de-las-politicas-de-ciencia-y-tecnologia/>

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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