

# **Decoding the Mobilization of Knowledge in a Latin American key: particularisms, internationalisms, dimensions, concrete totalities and complex system.**

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## Research Paper

### **Decoding the Mobilization of Knowledge in a Latin American key: particularisms, internationalisms, dimensions, concrete totalities and complex system.**

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**Abstract:** The globalization of science has significantly transformed the ways knowledge is generated, disseminated, and applied, fostering a complex interplay between local contexts and global networks. This intricate phenomenon, encompassing both opportunities and challenges, requires a nuanced understanding of how scientific collaboration, cultural diversity, and socio-economic factors influence the mobilization of knowledge, particularly in Latin America.

The mobilization of knowledge in Latin America must navigate unique regional characteristics, balancing particularisms and internationalisms. Particularisms emphasize the importance of local cultural and social contexts, including language barriers, institutional structures, and the sovereignty of knowledge. This perspective recognizes the need for locally relevant and culturally sensitive approaches to knowledge dissemination and application.

Internationalisms highlight the global interconnectedness of scientific endeavors, facilitated by advances in information and communication technologies (ICTs). These international networks enable the sharing of knowledge across borders, promoting collaborative research and addressing global challenges such as climate change and public health crises. Despite the universal principles of scientific inquiry, the integration of diverse cultural and methodological perspectives enriches the scientific process.

The interaction between concrete totalities and complex systems is essential in understanding the dynamics of knowledge mobilization. Concrete totalities refer to the tangible entities involved, such as researchers, academic institutions, and policy makers. Complex systems encompass the interconnected networks, policies, and socio-economic dynamics that shape the environment in which knowledge is produced and utilized. In Latin American context, the

mobilization of knowledge must address regional disparities, promote equitable access to resources, and empower marginalized communities. Ultimately, decoding the mobilization of knowledge in a Latin American key involves embracing the richness of particularisms, leveraging the strengths of internationalisms, and navigating the intricate dimensions, concrete totalities, and complex systems that define the region's unique landscape. This multifaceted approach aims to foster innovation, inclusivity, and sustainable development, ensuring that scientific progress benefits all segments of society.

**Keywords:** knowledge mobilization, globalization, particularism, internationalism, dimensions

### Introduction:

The globalization of science emerges after the growing interconnection and cooperation between scientists, institutions and communities around the world in the process of generation, dissemination and application of scientific knowledge. This phenomenon has multiple dimensions and consequences, both positive and negative. The globalization of science and the construction of knowledge constitute a complex phenomenon that facilitates and imposes speeds offered in the advancement of knowledge and problem solving. International collaboration must be inclusive and equitable, respecting local diversities and promoting a fair distribution of the benefits of scientific progress.

Different authors have addressed the globalization of science from various perspectives, providing a theoretical and empirical framework to understand how

global dynamics affect the production, dissemination and application of scientific knowledge.

The globalization of science assumes its complexity and multidimensionality and has been addressed by several authors and academics. Sheila Jasanoff (2004) has described the interaction between science, technology and society, examining how science and technology are influenced by cultural, political and social contexts. John Ziman (1994) explored the nature of science as a social activity, analyzing how the dynamics of globalization affect the production and organization of scientific knowledge. Ulrich Beck (1992, 2008), known for his work on the theory of risk society, coined the concept of "reflexive modernity" and his studies on global risks include reflections on the globalization of science and how it faces and responds to risks. global. Michael Gibbons (1997) together with other authors, introduced the concept of "Mode 2" in knowledge production, which refers to the production of knowledge in application contexts, characterized by interdisciplinarity and transnationality. Helga Nowotny (2001) has worked extensively on the sociology of knowledge and the interaction between science and society, addressing how globalization transforms scientific practices and the relationship between science and society. The transition of the modes of knowledge production, from Mode 1 (monodisciplinary and professional) to Mode 2 (contextualized and transdisciplinary), and subsequently to Mode 3 (integrator of the social and environmental), shows the evolution towards a more contextualized, socially responsible and oriented to practical application.

Mode 3 of Knowledge Production includes the contextualization of

knowledge, recognition of transdisciplinary and transcultural, social participation in the regulation of universities and scientific centers, and the integration of the environment as a crucial component.

Latin America, in the 70s, adopted strategies such as the “Sábato triangle” and faced challenges of globalization, poverty and underdevelopment. Despite the growth in the number of university students and graduates, Mode 1 of university prevails, with challenges such as the waste of qualified human resources and a high rate of emigration of professionals.

To face these challenges, a model is proposed that intensively uses knowledge in the economy, the State and society. This implies improving management, quality and institutional efficiency, focusing on applied research and innovation.

The case of Argentine universities between 1989 and 2003 is notable, since they managed to survive and grow despite extreme economic adversities. This demonstrates the capacity of universities to contribute significantly to solving social and economic problems, strengthening their role as development agents in Mode 3 of Knowledge Production.

Manuel Castells (2006, 2012) examines the information society and the knowledge economy and analyzes how globalization and communication networks impact the production and dissemination of scientific knowledge. Immanuel Wallerstein (2004) is known for his world-systems analysis and has discussed how global structures of power and economics influence the production of scientific knowledge.

Theories of globalization are a set of perspectives and approaches that seek to understand and explain the phenomenon of globalization, its causes, characteristics and consequences. Some of them are:

### **1. Economic Theory of Globalization**

This theory maintains that globalization is primarily an economic process driven by international trade, foreign direct investment, and global financial markets. The main features include the liberalization of trade and the deregulation of markets with the least government intervention in the economic and connectivity of global financial markets and the elimination of tariff and non-tariff barriers. Some of the exponents of this theory are Paul Krugman (2000) with his new theory of international trade that introduced concepts such as economies of scale and product differentiation, explaining how companies and countries benefit from trade through competition. and innovation; Joseph Stiglitz (2002) with his critique of neoliberal globalization, highlighting the problems and inequalities that can arise from unregulated globalization, advocating for a fairer and more equitable globalization. Furthermore, Jagdish Bhagwati (2008) with the defense of free trade arguing that free trade can be a force for good, improving living standards and reducing poverty and Milton Friedman (1966) defender of the free market and deregulation, arguing that economic globalization is a natural extension of free market principles, promoting efficiency and economic growth.

### **2. Dependency Theory**

This theory suggests that globalization perpetuates the economic and political dependence of developing countries on developed countries. Some key points

include unequal exchange whereby developing countries export raw materials at low cost and import manufactured goods at high prices with increasing economic and social inequality between and within countries.

### 3. World-System Theory

Proposed by Immanuel Wallerstein (2004), this theory maintains that the world should be understood as an interconnected system, divided into central, semi-peripheral and peripheral countries. The important points are the international division of labor that assigns different economic roles for countries depending on their position in the system and where the central countries dominate and exploit the peripheral ones.

### 4. Theory of Global Culture

This perspective focuses on the cultural aspects of globalization and maintains that globalization promotes a homogeneous global culture, although processes of cultural hybridization also occur. Prominent elements are the spread of ideas, values and practices on a global level and the combination of elements from different cultures to create new cultural forms.

### 5. Theory of the Information Society

This theory argues that globalization is driven by the advancement of information and communication technologies (ICT), which transform the economy, politics and culture. Key aspects include the digital economy given the growing importance of information and knowledge and the increase in interconnectivity through the internet and other ICTs.

### 6. Global Governance Theory

This perspective studies how global affairs are managed through international institutions, multilateral agreements, and networks of state and non-state actors. Main points constitute the importance of

organizations such as the UN, WTO, IMF, etc., and multilateralism with cooperation between multiple countries to solve global problems.

### 7. Critical Theory of Globalization

This critical theory sees globalization as a process that benefits elites and harms the working classes and the poor. It highlights the negative aspects and contradictions of the globalization process. Important components constitute the dominance of global capital over work and social life and the persistence of social movements fighting against the negative effects of globalization.

Each of these theories offers a unique vision and highlights different aspects of the globalizing phenomenon. Together, they provide a more complete and multifaceted understanding of globalization.

Positive Aspects of the Globalization of Science

1. International collaboration allows the formation of international networks allows scientists to work together on complex and multidisciplinary projects that transcend the capabilities of any individual country and joint projects such as CERN (European Organization for Nuclear Research) or the Hubble Space Telescope, are examples of collaborations that bring together resources and knowledge from multiple nations.

2. Access to resources since globalization facilitates access to advanced and expensive scientific infrastructures that many countries could not develop on their own and financing through international organizations and consortia makes it possible to finance research that requires large investments.

3. The dissemination of knowledge through publications and conferences. Globalized science promotes publication

in international journals and the organization of conferences where knowledge is shared and discussed openly. Additionally, the movement toward open access is democratizing access to scientific research, allowing scientists around the world, regardless of affiliation or location, to access the latest scientific information.

4. Diversity and inclusion in that international collaboration incorporates different cultural, methodological and epistemological perspectives, enriching the scientific process and enhancing innovation with a beneficial impact on training and development through the international mobility of scientists. This facilitates the transfer of knowledge and skills, contributing to the development of capabilities in less developed countries.

### **Challenges and Criticisms of the Globalization of Science**

1. Inequalities and Asymmetries given that there is a significant disparity between developed and developing countries in terms of access to resources, infrastructure and scientific funding, although the majority of high-impact scientific publications and research funds are concentrated in the Global North, which can perpetuate the dependency of developing countries.

2. Intellectual Property and Access as patents and intellectual property rights can limit access to crucial innovations in areas such as medicine and technology for developing countries. However, inequitable access is exposed given that the results of published academic research are still behind paywalls, restricting their availability.

3. Standardization and homogenization processes given that globalization can lead to the homogenization of scientific

practices, to the detriment of valuable local knowledge and methodologies, and can promote in certain scientific communities the adoption of international agendas to the detriment of concern for local research topics. Furthermore, the dominance of certain methodological approaches can overshadow other forms of knowledge and modes of research.

4. Cultural and Ethical Impact in that ethical standards can vary significantly between cultures, and what is acceptable in one context may not be acceptable in another and there is a risk that local or indigenous knowledge is appropriated without due recognition or benefit for the communities of origin.

### **Globalization and Knowledge**

Cultural and scientific globalization has a significant impact on the mobilization of knowledge in universities, transforming higher education and research in several key aspects.

Academic exchange and international mobility favored by globalization processes is facilitated at the international level. This allows for greater cultural and perspective diversity in classrooms and research, as well as Exchange Programs. Initiatives such as Erasmus in Europe or Fulbright programs in the United States promote the mobility of students and academics, enriching the educational experience and fostering international collaboration.

Collaboration and international research is the attitude that universities have increasingly shown in recent years. Collaboration increasingly occurs in international research projects, joint postgraduate training, sharing resources, data and knowledge. This is particularly important in scientific and technological areas where the problems are global and

complex. The dissemination of research through international publications and conferences allows academics to share their findings and learn from their peers in other countries.

Access to advanced ICTs that facilitate the exchange of information and collaborative work in real time. Platforms such as videoconferencing, digital repositories and scientific databases allow rapid and wide dissemination of knowledge. Furthermore, Open Educational Resources (OER) that promote the availability of online educational materials, such as massive open online courses (MOOCs), digital textbooks, and open access articles, democratize access to knowledge. Curriculum diversification is exposing how study programs are adapting to include global and comparative perspectives, preparing students for an interconnected world, and the inclusion of multicultural and multilingual content in curricula fosters intercultural understanding and global competence among students.

University networks and consortia that facilitate cooperation in education and research. Examples include the University Innovation Network (Universitas 21) and the Association of European Universities (EUA) and strategic alliances between universities from different countries promote research collaboration, student exchange and the co-creation of academic programs. The transfer and commercialization of knowledge, meanwhile, the conception of education as a commercial good, and the processes of globalization and the responses that universities give to it, encourage the creation of business incubators and technology parks associated with universities, facilitating the transfer of

knowledge from the academic field to the productive sector. Patents and Spin-offs in universities are more involved in the protection of intellectual property and the creation of derivative companies (spin-offs) that commercialize the results of academic research and formulate transfers to the private sector.

The cultural impact motivated by the presence of students and professors from diverse cultures in universities that can hire them, promotes tolerance, respect and intercultural understanding. Cultural globalization results in the mixing and adaptation of diverse cultural traditions and practices, enriching the university experience. Cultural and scientific globalization amplifies the flow and mobilization of knowledge in universities, promoting international cooperation, access to advanced resources, educational diversification and the transfer of knowledge to the productive sector, although these processes are not linear or permanent and expose the particularisms of the contexts of higher education institutions. Despite this, in general, these dynamics strengthen the role of universities as engines of innovation and global development.

### **Particularism e Internationalism of Knowledge Mobilization**

The social mobilization of knowledge involves the dissemination and application of knowledge generated in academic, scientific and technical contexts to society in general, seeking to generate a positive impact on people's lives and on the development of communities. This process can be analyzed from two complementary perspectives: particularisms and internationalisms.

## Particularities of Knowledge Mobilization

1. Cultural and Social Context is relevant given that knowledge is influenced by the cultures and societies in which it is produced. Cultural practices, values, and norms determine what types of knowledge are considered valuable and how they are shared.

2. Language and Communication constitutes a particularistic barrier in the mobilization of knowledge. Translating and interpreting knowledge between different languages can alter or lose important nuances.

3. Institutional Structures of universities, governments and organizations have specific structures and policies that influence how knowledge is mobilized.

4. Knowledge Sovereignty in the idea that local actors must have the capacity to generate, adapt and apply knowledge according to their own needs and priorities.

5. Diversity of Actors since the mobilization of knowledge must include the active participation of local communities, who are the main beneficiaries and must have a voice in the process and should involve different sectors such as NGOs, local governments, companies and local universities. crucial for a holistic approach.

## Internationalisms

1. Disciplinarity given that knowledge is often mobilized within specific disciplines with their own methodologies and paradigms and on the other hand there are universalisms in Knowledge Mobilization

2. The globalization of Knowledge facilitates the creation of international knowledge networks that transcend borders and cultural contexts.

3. Digitalization and the Internet have universalized access to knowledge, allowing more people in different parts of the world to access information and data. However, there are prestigious journals where certain scientific communities publish with restricted access.

4. Despite cultural differences, there are scientific principles and research methods that are widely accepted and applied throughout the world.

5. Many current issues, such as climate change, the COVID-19 pandemic and sustainability, require knowledge mobilization that transcends borders and specific contexts.

Particularisms and internationalisms in the social mobilization of knowledge are not exclusive approaches, but complementary. There are tensions and instability between the two allowing knowledge to be adapted to specific local contexts while benefiting from global exchange and collaboration. The key is to recognize and respect local particularities, while taking advantage of the opportunities and resources offered by international collaboration. Both perspectives are crucial to understanding how knowledge is produced, shared and used in the contemporary world.

## Dimensions

The mobilization of knowledge in a Latin American context presents particular dimensions that respond to the social, cultural, economic and political characteristics of the region. The key dimensions of knowledge mobilization in Latin America are

1. Generation and Production of Local Knowledge given by contextualized research and the promotion of local science. Contextualized Research in the promotion of research that addresses



specific problems in the region, such as poverty, inequality, biodiversity and endemic diseases and the promotion of Local Science: Initiatives to strengthen research capacities in universities and research centers as well as the development of scientific talents.

2. Translation and Transfer of Knowledge in cultural and intersectoral terms. The adaptation of knowledge to local cultural and linguistic contexts, ensuring that it is accessible and relevant to target communities and intersectoral transfer: Facilitate the transfer of knowledge between sectors such as academia, government, industry and community organizations.

3. Exchange and Co-production of Knowledge given by regional collaboration and community participation. They are regional collaborative actions by promoting collaboration between Latin American countries to address common challenges and share resources and experiences and community participation through the involvement of local communities in the co-production of knowledge, ensuring that their knowledge and perspectives are integrated into the research processes.

4. Implementation and Application of Knowledge in evidence-based practices and social innovation. These practices promote the use of scientific data to inform public policies and practices in key areas such as health, education and rural development and social innovation in the development and implementation of social innovations that respond to local needs and promote sustainable development.

5. Dissemination and Communication of Knowledge through media and technology and constant education and training. Media and Technology with the

use of traditional and digital media to disseminate knowledge, including community radio, television, social networks and digital platforms. Training and professional development programs for educators, health professionals, community leaders and other key actors.

6. Evaluation and Monitoring of Knowledge in participatory terms with social impact indicators. The implementation of participatory evaluation methods that involve communities and local actors in assessing the impact of knowledge mobilization initiatives and the development of indicators that measure the social and cultural impact of knowledge mobilization in local communities.

7. Knowledge Policy and Governance at a regional and inclusive level with the creation of public policies that support research and the mobilization of knowledge, including financing, infrastructure and regulatory frameworks. Inclusive Governance with governance structures that include diverse actors, such as academics, government representatives, community leaders and civil society organizations.

8. Cultural Context and Adaptation given by the recognition of indigenous and local knowledge and traditional practices. Recognition of indigenous and traditional knowledge since the integration and valorization of traditional and indigenous knowledge and practices in the research and knowledge mobilization processes provide depth and integrity to the construction of scientific knowledge. Cultural sensitivity by ensuring that knowledge mobilization initiatives respect and adapt to local cultural practices and values.

9. Inequalities and Social Justice characterized by equity in access and

empowerment of vulnerable groups. By addressing inequalities in access to education and research resources, ensuring that marginalized and vulnerable communities' benefit from the knowledge mobilized. The empowerment of vulnerable groups since using knowledge mobilization as a tool to empower women, youth, indigenous communities and other vulnerable groups.

### **Concrete Wholes and Complex Systems**

The interaction between concrete wholes and complex systems in the mobilization of science is an issue that addresses how the different elements and actors in the process of mobilizing scientific knowledge interact with each other.

On the one hand, "concrete wholes" refer to the specific and tangible entities involved in the mobilization of science, such as individual researchers, academic institutions, research organizations, professionals in the field, and end users of science. research, such as those responsible for formulating public policies or professionals in different sectors. On the other hand, "complex systems" refer to the interconnected network of relationships, processes and dynamics that characterize the environment in which the mobilization of science takes place. This includes aspects such as organizational structures, government policies, economic incentives, social and cultural norms, among others.

The interaction between these concrete wholes and complex systems is crucial to understanding how scientific knowledge is produced and implemented in society. For example, individual researchers may be influenced by the funding policies of

the academic institutions in which they work, as well as the demands and expectations of the end users of the research. Similarly, government policies can be shaped by available scientific evidence and perceived societal needs.

The mobilization of science involves a dynamic and complex interaction between the concrete wholes involved in the process and the complex systems in which they operate. Understanding this interaction is essential to promote effective mobilization of scientific knowledge and its application in society.

### **Knowledge mobilization**

The Social Sciences and Humanities Research Council of Canada (SSHRC) defines knowledge mobilization as "a general term that encompasses a wide range of activities related to the production and use of research results, including synthesis, dissemination, transfer, exchange and co-creation or co-production of knowledge by researchers and knowledge users. Effective knowledge mobilization includes plans to publish data, where appropriate" (SSHRC, 2017).

The concept of knowledge mobilization refers to the different ways in which stronger connections and the actors can be made between research, policy and practice as Levin (2008) describe. Knowledge mobilization results in a catalyst for the knowledge intermediation system, between multiple actors to transform the findings and products of a researcher to the practice of a user. The goal is to use clear, understandable language and an accessible format to present scientific-technical information, which "...helps make academic research accessible to non-academic audiences and supports collaborations between academic

and non-academic partners, such as community organizations.” (Phipps et al., 2016, Usmani and Alamgir, 2020).

Knowledge mobilization (KM) seeks to strengthen relationships between research, policy and practice. However, its implementation in the educational field faces various difficulties. Currently, a dynamic of hierarchical relationships predominates where potential users of knowledge receive information passively. In many cases, educational agents do not even access this information, since it is not easily available. Furthermore, there is limited or deficient knowledge about what KM is and what its objectives are, which represents an internal problem for organizations, since, if people do not understand the topic in depth, they will hardly be able to measure its importance. Canadian author Ben Levin (2008) raises several key questions that organizations, researchers, policymakers, and educators should consider as a starting point for working on KM:

1. What needs to be done to improve knowledge about KM? What research, tools, practices and protocols need to be developed? What types of data are necessary?

2. What types of efforts to promote knowledge mobilization work in different circumstances?

3. What are the institutional benefits of KM development? What are the main difficulties you face?

4. What types of infrastructure are needed to most effectively support KM? What types of capabilities, systems, resources and relationships need to be developed?

In recent years, the understanding of knowledge mobilization has evolved, considering different theoretical and conceptual perspectives. The main issues

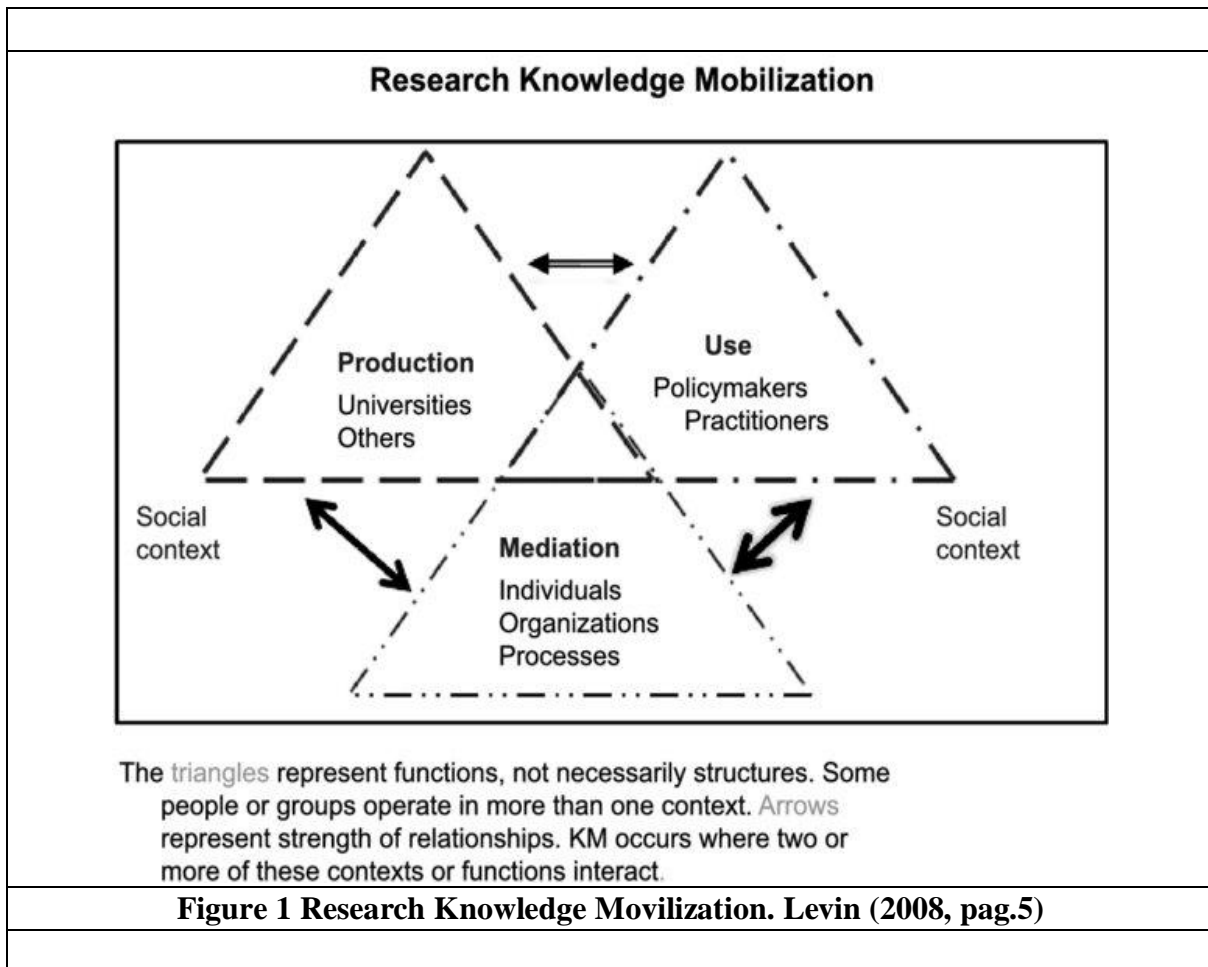
and challenges in conducting empirical research in the field include methodologies and approaches to studying the effectiveness of knowledge mobilization (Levin, 2008). Knowledge mobilization focuses primarily on knowledge derived from formal research, which uses systematic and accepted processes to generate data and conclusions. However, it is recognized that this is not the only type of knowledge that influences educational policy and practice.

The writing of a knowledge mobilization plan should address elements such as: key message and relevance, objective, address of knowledge users, summary of their context or needs, level of commitment to research and planned activities, characterization of suitability for the users of their knowledge, schedule, budget and necessary resources. These actions serve to implement the knowledge mobilization plan in Canadian universities. It is also of interest to know the expected impact of the research and the evaluation strategy according to the use promoted by the university in Canada. (University of Ottawa website - <https://research.uottawa.ca/writing-knowledgemobilization-kmb-plan>).

Efforts are aimed at increasing the effectiveness and impact of its investigative efforts. To plan a knowledge mobilization strategy, questions such as: what, why, who, how and when will be evaluated in terms of objectives and indicators are important (Quiroga, 2022). The concept of knowledge mobilization does not have a single definition, but rather different perspectives and definitions (Najdorf and Alonso, 2014), such as the use of evidence and research results for decision-making in public

policies (Nutley, et al. ....2003), a method or tool that facilitates the translation of research results into action (Bennet, 2007), efforts to share research results

with other users (Levin, 2011) and actions that allow knowledge to be left ready for action and its intervention through interlocutors (Najdorf and Alonso, 2014).



The Levin 2008 model states that in the first rectangle there is production made up of the university and research centers, in the second triangle it is use made up of policy makers and practitioners and the last is the mediation triangle made up of individuals, organizations and processes. Naidorf and Alonso (2018) seek to operationalize the regulatory framework on knowledge mobilization in three dimensions that actively intervene in the

processes of knowledge production and that offer a way to analyze the knowledge mobilization capacity of public policy in research. scientific. These dimensions are the definition of research agendas, the evaluation of academic activity and the use of the knowledge produced. Below, these three dimensions and their interconnection are described in detail, as well as the actors involved in each one (Naidorf and Alonso, 2018). There are the

definition of research agendas, the evaluation of academic activity and the use of the knowledge produced.

#### 1.- Definition of Research Agendas

This dimension studies strategic issues, guidelines and recommendations that are part of knowledge mobilization policies. Examines how public policies, both national and supranational (international or regional), establish research priorities. Furthermore, it includes the analysis of the influence that funding organizations, both public and private, have on the selection of research agendas by researchers, research teams, institutes or research centers (Naidorf and Alonso, 2018).

#### 2.- Evaluation of Academic Activity and Researcher Performance

This analysis provides a comprehensive view of how academic work modalities structure research and affect scientists and their interactions, as well as the profile of researchers and the evaluation of their work. This reflects the complex and multifaceted dynamics within the academic field and its impact on the production of scientific knowledge, as well as the modalities of academic work, focusing attention on how the times and forms of research are structured within academic institutions. This approach considers several crucial aspects that impact both the object of study and the relationships and roles within the scientific field (Naidorf and Alonso, 2018).

#### 3.- Use of Produced Knowledge

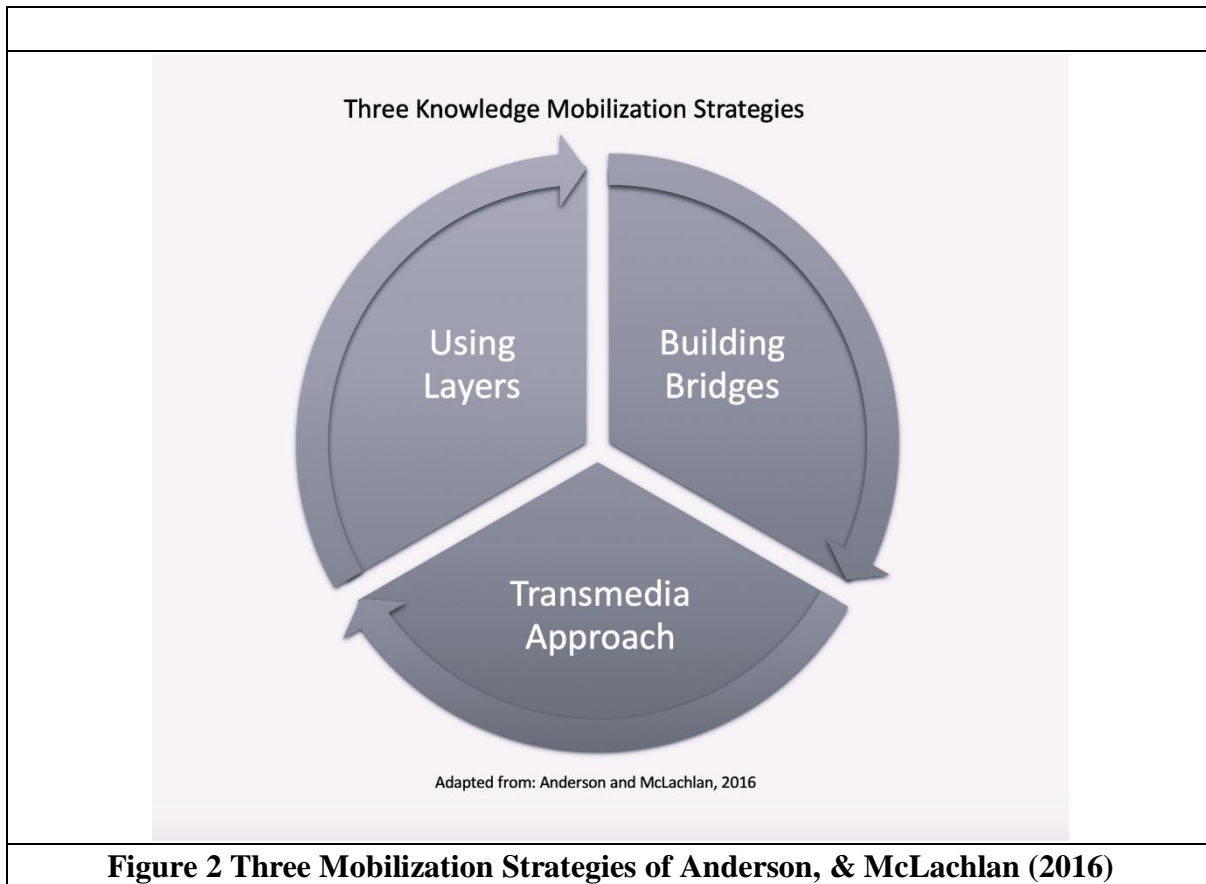
This concept encompasses a detailed analysis of how knowledge is defined, used and mobilized, considering its usability, the involvement of various actors, and its impact on public and

scientific policies. This multidimensional approach provides a broad understanding of the processes and challenges associated with the effective utilization of knowledge in society.

#### Knowledge mobilization in three layers

Anderson and Mclachlan (2016) propose for transformative research to mobilize knowledge with three options: using layers, building bridges and a transmedia approach. These layers form a new approach that recognizes that the complexity, length and technical language of most academic writing – or research/technical writing in general – excludes many knowledge users and potential beneficiaries of research (Anderson, Mclachlan, 2016).

The production and communication of knowledge in academia generally exposes parameters of positivist “objective” research and predominantly embody hierarchical processes of linear knowledge transfer. Anderson and Mclachlan (2016) propose a paradigm of transformative research born in knowledge mobilization processes that involve close collaboration between researchers and community actors as co-researchers within the framework of a broader agenda for progressive social change. This approach recognizes that various knowledge creators/users will be more or less involved when knowledge is communicated in different forms and media. Even so, the processes of mobilization of science in the humanities and social sciences should be systematized in a broad strategy that covers the universe of resources of the organizations themselves, which are often wasted.



### 1. Use of Layers

Using Anderson and McLachlan's (2016) three-layer model would allow knowledge to be mobilized with multiple actors in ways that would naturally have been impossible if we exclusively used the university's typical knowledge transfer strategies. That is, the linear transfer of the university to the citizen community. The model offered by the authors is one way, in which expert knowledge is transmitted to non-expert users. It is the social and ultimate purpose of the university: to transmit to the community what the teacher-researchers find or think about the possibilities of a better life. But not just transmit it and share it.

### 2. Building bridges for the mobilization of knowledge

This approach recognizes that different actors are separated by epistemological, discursive and disciplinary divisions. To work across these boundaries, it is necessary to employ keywords, examples, metaphors, objects and discourses that resonate with a wide range of politics, sensibilities and interests. The use of a bridge can bring people closer to communicative and collaborative spaces and create new productive advantages between groups and individuals who share an interest. In this space, new opportunities arise for participants to explore more holistic and subtle layers of understanding, opening up new opportunities for learning, knowledge creation, networking and transformation.

### 3.-Transmedia Approach

A transmedia approach involves telling stories through multiple media where different media are used strategically because each has advantages and disadvantages. These narratives offer new ways of teaching and learning, adapting to contemporary culture marked by audiovisual media, digital applications, streaming platforms and social networks. These formats allow us to build and relate to knowledge in a way that transcends the traditional boundaries of formal education.

These narratives allow the production of non-linear and expanded stories, based on the interests of the communities, and generate altered ways of narrating that offer multiple possible routes. Henry Jenkins (2009), a master of transmedia narratives, defines this form of narrative as a process where elements of a fiction are dispersed through multiple channels to create a unified and coordinated experience. Each medium brings something unique to the development of the story. Carlos Scolari (2013), expanding on this idea, explains that a transmedia narrative is not limited to adapting a story from one medium to another, but rather each medium and language contributes to a single, large narrative universe. Although we can agree with the good intentions of Anderson and McLachlan, the truth is that the processes of mobilization of science require a commitment from higher education institutions and a strong commitment to the idea of a science that seeks the participation of different actors on the path to the construction of higher knowledge. The mobilization of science requires institutional strategies and commitment of participants. These three strategies for Anderson, McLachlan

(2016) constitute one of the many possibilities that KM offers us. They continue to be relevant within the framework of systematic strategies and processes of knowledge mobilization in educational organizations.

### Latin America

The mobilization of knowledge in Latin America requires an approach adapted to local and regional realities, considering cultural diversity, social inequalities, and economic and political particularities. Integrating these dimensions allows for a mobilization of knowledge that is not only effective, but also inclusive and respectful of the specific contexts in which it is applied. This makes it easier for knowledge to generate a real and positive impact on the sustainable and equitable development of the region.

The mobilization of knowledge is a complex and multidimensional process that can be analyzed from various social theories. These theories provide conceptual frameworks for understanding how knowledge is produced, shared, and used in society. Some of the most relevant social theories in relation to the mobilization of knowledge are the theory of Co-production of knowledge of Janasoff (2004) and Nowotny (2001), which maintains that knowledge is co-produced through interactions between scientists and various social actors, such as communities, organizations and governments. Emphasizes the importance of collaboration between different actors to generate relevant knowledge applicable to specific contexts, the theory of Innovation Systems with representatives such as Bengt-Åke Lundvall (2002, 2016), Freeman (2008), Nelson, (1982), that focus on how innovation systems (national, regional or sectoral) facilitate

the creation, dissemination and use of knowledge.

The Innovation Systems (IS) approach, developed by Richard Nelson, Christopher Freeman and Bengt-Åke Lundvall, has become a dominant framework for studying innovation within the academic community. This approach highlights the importance of the generation and dissemination of knowledge in relation to new products and production methods. It focuses on interactions between various entities, including companies, universities, banks, technical standards institutes, and government institutions, that collectively foster innovation. Furthermore, these authors have analyzed the interactions between companies, universities, research institutions and the government in the production and mobilization of knowledge. In Latin America, this approach has influenced policies to promote science, technology and innovation, since it helps explain why certain countries, regions or sectors are in certain positions within the development ranking.

The theory of the Knowledge Society (Bell (2006) and Castells (2012) states that contemporary societies are structured around the production, distribution and use of knowledge and explores how the economy and social relations are transformed as a function of knowledge. And the information. The theory of Knowledge Translation by Callon (1998) and Latour (1992) among others, which describes the process of converting scientific knowledge into applicable and useful forms for various audiences and contexts, emphasizing the importance of intermediaries and the mechanisms that facilitate the understanding and use of knowledge in different areas. In addition,

they are also linked to the Theory of Knowledge Transfer (theory of diffusion of innovations) by Everett Roger (1962), which refers to the process of mobilizing knowledge from its origin to end users, encompassing various methodologies and approaches to facilitate this process, addressing how knowledge is adopted and adapted by different groups and organizations.

Furthermore, the Knowledge Economy theory of Machlup (1962) and Romer (1990) which examines the role of knowledge as a crucial economic resource in modern societies and considers how knowledge and innovation drive economic growth and competitiveness, the theory of practice of Pierre Bourdieu (2010) and Etienne Wenger (1987), with his concept of communities of practice, where he proposes that knowledge is generated and used through specific social practices and analyzes how everyday practices and communities of practice influence the production and use of knowledge, the Actor-Network Theory (ANT) with contributions from Bruno Latour (1992) and Michel Callon (1998) among others, which propose that knowledge is mobilized through networks composed of actors human and non-human (technologies, institutions), examines how networks and relationships between different actors affect the creation and circulation of knowledge.

Finally, we talk about Luhmann's theory of Social Systems (1973), which states that society is composed of autopoietic systems that communicate and process information and that is used to understand how different social systems, such as the scientific system, the political system, , etc.) process and mobilize knowledge in specific ways. Luhmann's social systems theory breaks with traditional distinctions



in philosophy and sociology, such as transcendental and empirical, subject and object, and ideology and science. By applying the distinction between system and environment, Luhmann eliminates the possibility of escaping the forced selectivity of contingent observations. This theory is seen as self-contradictory and repetitive because a system must observe society from within society itself. In this context, Luhmann develops the idea that the observer, who observes society from the subsystem of sociology, offers descriptions that are essentially "the society of society." Luhmann criticizes traditional theories of society, including Marxist and bourgeois theories, for making the mistake of taking a part for the whole.

In Marxist theories, society is understood primarily in economic terms, where production and metabolic needs replace politics as the center of the social process. Instead, in bourgeois theories, "bourgeois society" means that property owners replace the politically defined ruling class. From the Marxist perspective, the functional primacy of the economy leads to a vision in which the economy permeates all spheres of life. Luhmann recognizes that economics may have functional primacy in terms of internal complexity and emerging social problems, but criticizes the extrapolation of this primacy to a totalizing explanation of society. He argues that the political subsystem, although increasingly differentiated and complex, has also played a crucial role throughout the capitalist era. The functional primacy of the economy should not imply complete domination of all spheres of life. These social theories offer diverse perspectives to understand the mechanisms and dynamics of knowledge mobilization.

Each theory highlights different aspects of the process, from collaborative co-production to knowledge transfer and translation, providing a comprehensive framework for analyzing how knowledge moves and is applied in society. The combination of these theories can offer a more complete and nuanced vision of knowledge mobilization, especially in complex and diverse contexts such as those of Latin America.

### **The context of knowledge mobilization**

The context of knowledge mobilization is complex and multifaceted, encompassing various dimensions that influence how knowledge is produced, shared, applied and evaluated in society. This context includes social, economic, cultural, political and technological factors that interact with each other. The context of knowledge mobilization is a complex network of interrelated factors that influence how knowledge is produced, shared, applied and evaluated in society. Understanding this context is crucial to design effective knowledge mobilization strategies that are sensitive to social, economic, cultural, political, technological, institutional, geographical, environmental, historical and global particularities. Only through a holistic approach that considers all these dimensions can we ensure knowledge mobilization that is inclusive, equitable and effective in addressing contemporary challenges.

1. Social and Cultural: the perception and valuation of knowledge and science in society influence its mobilization. Societies that value innovation, education and research tend to facilitate the mobilization of knowledge and the existence of different cultures, languages and traditions affects how knowledge is

shared and applied. Knowledge mobilization must be sensitive to these differences and promote inclusion and respect for traditional and indigenous knowledge.

2. Economical: the availability of funds for research and development (R&D) is crucial. This includes both public and private financing. More robust economies can invest more in the generation and application of knowledge and the economic incentive systems, such as patents, prizes and subsidies, can motivate the production and transfer of knowledge. Economic policies that encourage innovation and collaboration are essential.

3. Political and Legal: the government policies related to science, technology and innovation (STI) play a central role. This includes education policies, research funding, intellectual property protection, and ethical regulation and the regulations and standards: laws and regulations governing research and knowledge use, such as ethics standards and intellectual property rights frameworks, are crucial to ensuring responsible and fair knowledge mobilization.

4. Technological: the access to advanced technologies and digital platforms facilitates the mobilization of knowledge. This includes information and communication technologies (ICT), databases, online collaboration networks and data analysis tools and the technological innovations can transform how knowledge is generated, shared and applied. Examples include artificial intelligence, big data, biotechnology and information technology.

5. Institutional: the universities, research centers and laboratories are the main generators and disseminators of knowledge. Your ability to collaborate

and connect with other actors is crucial and the collaboration networks, both formal and informal, between academic institutions, companies, governments and non-governmental organizations, facilitate the transfer and application of knowledge.

6. Geographic and Environmental: the geographic characteristics, such as location, access to resources, and infrastructure, can influence knowledge mobilization. Urban areas tend to have more resources and access to knowledge networks than rural areas and the specific environmental needs and challenges of a region can direct attention and research and knowledge mobilization efforts toward particular areas, such as sustainable agriculture, biodiversity conservation, or natural disaster management.

7. Historical: the historical context and development trajectory of a society influence its ability to generate and mobilize knowledge. Past experiences, both of success and failure, shape current practices and policies.

8. Globalization as globalization facilitates the exchange of knowledge across borders, allowing international collaboration and access to knowledge and technologies from other parts of the world and the unequal distribution of resources and capabilities between countries and regions can affect equity in the mobilization of knowledge.

### **Time and space:**

Time and space are fundamental dimensions that influence the mobilization of knowledge. These dimensions affect how knowledge is generated, transferred, adapted and applied in different contexts.

### **Time and Knowledge Mobilization**

1. Historical and Contextual: the mobilization of knowledge is influenced by its historical context. Scientific theories and discoveries are products of their time and reflect the concerns, technologies and capabilities of a specific era. Precisely, knowledge is mobilized in cycles that can include phases of discovery, diffusion, adoption and obsolescence. These time cycles can vary in duration depending on the type of knowledge and the context in which it is applied.

2. Synchronization and Rhythm: the synchronization of efforts between different actors and stages of the knowledge mobilization process is crucial. This includes coordination between researchers, professionals and decision makers to ensure that knowledge is applied in a timely manner. The speed at which knowledge is adopted can vary. Some innovations are quickly accepted, while others may face resistance and require more time to be incorporated.

3. Change and Adaptation: the relevance of knowledge can change over time, requiring continuous adaptations. This is especially important in dynamic contexts where social, economic or technological conditions are constantly evolving. The accumulation of experiences and historical memory play a role in how knowledge is interpreted and applied, influencing its future mobilization.

### **Space and Knowledge Mobilization**

1. Geographic Context: knowledge is mobilized differently in different geographical contexts. Factors such as infrastructure, access to resources, and socioeconomic conditions can influence how knowledge is disseminated and used

in different regions. Furthermore, there is a constant interaction between local knowledge (contextual and specific) and global knowledge (general and universal). Effective knowledge mobilization must integrate both scales.

2. Spaces for Interaction: universities, research centers, companies and non-governmental organizations act as nodes in networks that facilitate the mobilization of knowledge. The spatial configuration of these networks influences the efficiency and scope of the process. Digitalization and information technologies have transformed the space for knowledge mobilization, allowing for faster and broader dissemination through digital platforms and social networks.

3. Barriers and Bridges: geography can act as a barrier to knowledge mobilization, especially in rural or remote areas with limited access to infrastructure and communication technologies and the creation of collaborative networks, both physical and virtual, can overcome these barriers, facilitating the flow of knowledge between different regions and communities.

### **Significant Structures:**

If we take up Lucien Goldman's (1984) idea of significant structures, the mobilization of knowledge can be analyzed in terms of knowledge produced and deployed. through his theory of the "meaningful structures" of knowledge. Goldman, a philosopher of social epistemology, focuses on how knowledge is produced, distributed, and used within a society, and how it structures Social cultures influence these processes. The concept of meaningful structure, taken from Lukács and adapted by Goldman, suggests that cultural creations seek meaningful responses to particular

situations, creating a balance between the subject of the action and the object. This dialectical approach implies that collective mental and cultural structures emerge from the historical experiences of social groups, reflecting their worldview.

1. Knowledge Institutions made up of universities and research centers, which act as the main generators and validators of knowledge. They provide a structure for systematic research and the training of new scientists and scholars and academic publications, scientific journals, books and conferences are essential means for the distribution and evaluation of knowledge within the scientific community.

2. Communication Networks established by the group of experts and professionals who share and discuss relevant information. These networks facilitate the transfer of specialized knowledge and interdisciplinary collaboration and the entire media that includes both traditional media (press, radio, television) and digital media (blogs, social networks). They are crucial for the dissemination of knowledge to the general public and for influencing public opinion and policy.

3. Validation and Evaluation Mechanisms such as Peer Review, the system by which scientists evaluate the work of their colleagues. This process is essential to ensure the quality and credibility of scientific knowledge and the ethics and regulatory committees that oversee the ethical and methodological integrity of scientific research. They ensure that knowledge is produced and used responsibly.

4. Funding Structures such as government agencies and foundations: which provide funds for research and development. Your funding policy can

influence which areas of knowledge are developed and prioritized and private initiatives: such as companies and non-governmental organizations investing in research and development, often with a focus on practical and marketable applications.

5. Regulatory and Political Frameworks made up of scientific and technological policy, laws and regulations that guide research and the use of knowledge that promote innovation, the protection of intellectual property rights and regulate ethics in research and systems educational programs that train future scientists and informed citizens. Education is key to the dissemination and understanding of knowledge in society.

6. Epistemic Communities made up of communities of practice Communities, those groups of people who share a common interest in an area of knowledge and who collaborate regularly to improve their professional practice and traditional knowledge communities that include indigenous and local communities whose practices and Ancestral knowledge is a vital form of knowledge, as recognizing and respecting this knowledge is crucial for inclusive knowledge mobilization.

7. Information and Communication Technologies (ICT) such as digital platforms with tools such as databases, knowledge management systems and collaborative platforms that facilitate the collection, organization and exchange of knowledge, Artificial Intelligence and Big Data that constitute emerging technologies that transform the way in which knowledge is processed and mobilized, allowing the analysis of large volumes of data and the automation of complex tasks.

8. Culture and Social Practices such as the perception and valuation of

knowledge in society influences how it is mobilized. A culture that values science and innovation tend to facilitate the mobilization of knowledge and practices and rituals understood as the ways in which communities interpret and apply knowledge in their daily lives.

The significant structures of knowledge mobilization, according to Lucien Goldman's perspective, encompass a wide spectrum of institutions, networks, mechanisms, regulatory frameworks, technologies and social practices. Each of these structures plays a crucial role in the production, distribution and utilization of knowledge in society. Understanding these structures and their interactions allows for more effective, equitable and adapted knowledge mobilization to the specific needs and contexts of society.

### **Final Words:**

In recent years, there has been a growing interest from universities and research centres in knowledge mobilisation (KMb) with the aim of improving evidence-based research policies and practices. This approach encourages knowledge producers, such as university researchers, to generate more relevant evidence and knowledge users, such as practitioners, to access and apply that evidence. However, effectively conducting KMb can be challenging without adequate support and training (Golhasany & Harvey, 2023). Therefore, individuals and organizations are implementing capacity building interventions to facilitate the KMb process through more effective support structures, skills and incentives.

The challenges of the mobilization of science come from the lack of knowledge and understanding of higher education institutions of the main ideas that make

up the mobilization of knowledge. Given the lack of knowledge, it is difficult to find institutional strategies in universities where there are not even institutional strategies for public communication of science. Scientific communicators and researchers in accessible language can communicate their achievements and advances in the research processes, however, this would be an additional task for the teacher-researchers of Argentine universities who already have an overload of work.

### **On way from Knowledge mobilization**

Argentine universities face a series of difficulties and challenges when trying to develop and maintain effective knowledge mobilization strategies. Argentine universities often operate on tight budgets, which makes it difficult to invest in specific knowledge mobilization programs and are highly dependent on public funds that may be insufficient or unstable, affecting the ability to plan and execute long-term strategies. There is a shortage of professionals specialized in technology transfer, scientific communication and knowledge management, and training of academic and administrative staff in knowledge mobilization practices is limited.

Academic production is often measured in terms of scientific publications and obtaining research funds, leaving knowledge mobilization in the background, and knowledge transfer and mobilization activities are not always recognized or valued within the academic system, which can discourage researchers. On the other hand, cultural and disciplinary differences can make collaboration between researchers from different fields and between scientists and communicators difficult, and traditional

hierarchical structures can prevent fluid and collaborative communication between departments and faculties. The lack of adequate technological infrastructure can make it difficult to implement platforms and tools for knowledge transfer, and inequality in access to technological resources between different universities and regions is also a problem.

The absence of integrated platforms for knowledge management and dissemination limits the ability to share information efficiently. Many universities have limited links with industry, which reduces opportunities for the transfer of practical and applicable knowledge, and the lack of incentives for both researchers and companies makes it difficult to create strategic alliances and effective collaborations. Aligning academic research with social and community needs and demands is a constant challenge that would allow the community to be involved in the research and knowledge transfer process. It can be complex due to differences in expectations and objectives.

The absence of clear and coherent policies at the institutional level on knowledge mobilization can generate ambiguities and lack of direction where bureaucracy and administrative processes slow down and complicate knowledge transfer initiatives. Differences in language and terminology used by academics and other actors (industry, community, government) can make effective communication difficult, and lack of access to mass communication platforms limits the ability to disseminate knowledge to a broader audience. The lack of an integrated and strategic approach in knowledge communication-mobilization reduces the potential impact

of mobilization initiatives. To overcome these challenges, it is essential that Argentine universities must invest in specialized resources and training, foster an institutional culture that values the mobilization of knowledge. develop adequate technological infrastructures. strengthen the link with the productive sector and the community, establish clear and coherent policies and regulations.

In addition, there are problems of financing and adequate resources in Argentine universities, which makes the implementation of any initial project difficult. Also, the fact that the actors involved often lack the necessary skills to effectively mobilize knowledge and the disconnect between mission and practice given that there is an inconsistency between the mission statements of research organizations on knowledge mobilization and their actual practices. Building capacity through training and ongoing support to individuals and organizations is essential to meet needs and initiatives tailored to specific contexts, especially in developing countries, are required to address their unique challenges.

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