



# University and Television: Challenges of Scientific Dissemination in Aragon

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## ABSTRACT

**Introduction:** This study is part of a doctoral research project on the social transfer of scientific information in Aragon. It analyzes the journey of science generated at the University of Zaragoza until its appearance on regional television, highlighting the importance of strengthening the link between the research community and the media to foster a more informed citizenry.

**Methodology:** A qualitative exploratory-descriptive design was applied, involving in-depth interviews with journalists, institutional stakeholders, and science communication personnel, as well as a focus group with university researchers. Thematic coding and data triangulation were used to identify obstacles and proposals for improving science dissemination. **Results:** Key obstacles identified include the lack of specialization and resources in newsrooms, weak connections between scientists and journalists, the perceived low public interest in scientific topics, and the need for communication training among both journalists and researchers. Suggested improvements include more accessible press releases, the creation of stable media spaces dedicated to science, and joint training programs. **Discussion:** The findings align with previous studies that show the marginalization of science on television and emphasize the need for scientific media literacy. Institutional collaboration and training in science communication are highlighted as essential strategies to reverse this trend and strengthen scientific culture.

**Conclusions:** This research provides a solid foundation for implementing strategies to enhance the visibility of science in Aragon, promoting cooperation between universities and media outlets, the development of content tailored to television formats, training in science communication, and the establishment of dedicated spaces that support a critical, informed, and engaged society.

**Keywords:** Science communication; Regional television; Scientific media literacy; Knowledge transfer; Science journalism; Science outreach; Science Culture Unit.

## 1. INTRODUCTION

Aware of the importance of media literacy (Marta-Lazo & Gabelas-Barroso, 2023), and specifically of scientific media literacy (Ibarra-Arias & Marta-Lazo, 2024), this research delves into the path of scientific information from the time it is generated in research groups and institutes of the University of Zaragoza until its coverage in the media. Special attention is paid to the factors that influence the visibility or relegation of the news hierarchy in the media. By analyzing this process, the importance of a stronger link between researchers and the media as a mechanism to promote the presence of scientific topics on Aragonese television is highlighted. In addition, this approach offers an opportunity to reflect on more effective science communication strategies, so that citizens have access to information that encourages their participation and understanding of advances in science and technology.

Science communication plays a key role in the transfer of knowledge to society, facilitating that scientific advances not only inform, but also promote critical thinking and informed decision making (Bucchi & Trench, 2021). However, recent studies reveal that science continues to occupy a marginal space in the agenda of the mass media, especially on television (Francescutti, 2009), where coverage of scientific topics is frequently surpassed by content considered to be of immediate interest or entertainment (Nisbet et al., 2002; Verhoeven, 2010). This deficit in the media coverage of science is particularly relevant in the context of the Aragon region, where the University of Zaragoza is one of the main scientific knowledge production centers. Despite this, the scope of this information in regional media is still limited (Ibarra-Arias et al., 2022).

This research explores the mechanisms of scientific information transfer in Aragon, using as a case study the interaction between the University of Zaragoza and the regional audiovisual media. The aim is to identify the challenges and opportunities that determine the presence of scientific news in regional television, through a mixed methodological design that includes in-depth interviews with journalists, editors and science communication managers, as well as a focus group composed of university researchers. With this approach, the aim is to obtain a comprehensive perspective of the obstacles that hinder the dissemination of science and to formulate proposals to optimize this transfer in future science communication scenarios.

Among the previous findings relevant to this research are the limitations in editorial resources and the lack of specialized training among journalists, which directly impacts the quality and quantity of scientific content (Arulchelvan, 2010; Orozco Gómez, 2014). At the international level, authors such as Qusien and Robbins (2023), Smith and Morgoch (2020) or Veneu et al. (2008); have shown that structural obstacles and editorial priorities condition the space devoted to science in newscasts, a reality also observed in the Aragonese context. On the other hand, in countries such as Mexico, Mejía and Agudelo - Londoño (2019) has analyzed how the media can play an active role in strengthening scientific culture, provided that collaborative relationships are established

between scientists and journalists. In doing so, he stresses the need to adapt science communication strategies to the demands of the media and the public.

This research also takes into account the importance of television as a channel for scientific dissemination (Gascoigne et al., 2020), given its ability to present content in a visual and accessible way, compared to other media (Bucchi and Saracino, 2016 & Blanco López, 2004). In fact, in the Autonomous Community of Aragon, television continues to be one of the primary sources of information for the population (Avante, 2024), which reinforces the relevance of analyzing how coverage of scientific topics occurs in this medium. However, as Bucchi and Trench (2021) and Verhoeven (2010) point out, television usually relegates these topics due to the perception of low interest on the part of the audience, which results in a biased coverage towards news with greater immediate audience potential. Thus, a reflection on scientific media literacy (Ibarra-Arias & Marta-Lazo, 2024) and the responsibility of the media in promoting educational content that contributes to the collective welfare is proposed.

In addition, several studies and institutional reports have highlighted the relevance of television as a key tool for the social communication of science in Spain. According to the Survey of Social Perception of Science and Technology (FECYT, 2023), television continues to be one of the main ways through which citizens access scientific information. However, it becomes the main source in segments of the population that show less spontaneous interest in science and technology topics. In this context, the Scientific Culture and Innovation Units (UCC+i, in Spanish) play a fundamental mediating role, as stated in the White Paper prepared by FECYT<sup>1</sup> (2021), as they promote adapted formats and collaborations with audiovisual media. All this reinforces the idea that television, despite the changes in information consumption habits, maintains a strategic role in the mass dissemination of scientific knowledge and in the construction of a shared scientific culture.

## **2. OBJECTIVES**

The main purpose of this study is to analyze the dynamics and challenges regarding the transfer of scientific information in the autonomous community of Aragon, focusing on the interaction between the University of Zaragoza and the media. Through this analysis, the aim is to contribute to a better understanding of the factors affecting the visibility of science in the media and to propose improvements in science communication practices in the region. The following are the general and specific objectives of the research:

General Objective:

- To examine the process of dissemination of scientific information generated at the University of Zaragoza, from its production in research groups to its coverage in the Aragonese media, to identify obstacles and opportunities in the transfer of knowledge to society.

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<sup>1</sup> Spanish Foundation for Science and Technology  
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Specific Objectives:

1. To identify the internal and external factors that influence the visibility of science in the Aragonese media agenda, such as the perception of journalists, the priority of contents in the media and the communication strategies of the Scientific Culture Unit of the University of Zaragoza.
2. To evaluate the role of regional television as a channel for scientific dissemination in Aragon, analyzing the quantity, quality and type of scientific news broadcast on television news programs, as well as the editorial practices that condition the selection and presentation of scientific content.
3. To examine the obstacles and needs of journalists and editors in relation to the coverage of scientific topics, assessing the relevance of specialized training in science journalism and the availability of resources to improve the understanding and approach to these topics.
4. To analyze the impact of press releases and other informative materials generated by the Scientific Culture Unit of the University of Zaragoza in the dissemination of science, with the aim of determining their effectiveness and adequacy to the criteria of newsworthiness of the media.
5. To propose recommendations and communication strategies that favor a greater presence of science in the Aragonese media, aimed at improving collaboration between researchers, academic institutions and the media, as well as to promote greater scientific literacy among citizens.

This set of objectives seeks not only to understand current science communication practices, but also to provide a basis for optimizing knowledge transfer and strengthening the role of science in Aragonese society.

### **3. METHODOLOGY**

This study focuses on the analysis of the perceptions, experiences and challenges of key actors involved in science communication, such as journalists, scientific policy makers, staff of the Scientific Culture Unit (UCC, in Spanish) of the University of Zaragoza and university researchers. The techniques and procedures used in the development of the qualitative study are detailed below.

#### **3.1. Methodological approach and research design**

This qualitative study, with an exploratory-descriptive design, seeks to identify the factors that affect the presence of scientific content in the regional media agenda. To this end, in-depth interviews and a focus group were conducted to obtain a broad and detailed view of the obstacles and opportunities in science communication. The qualitative design allows capturing the perceptions of the participants in their natural context, facilitating a rich and nuanced understanding of the phenomenon under study (Patton, 2014). All interviews were videotaped through the Teams application for subsequent archiving. This tool has allowed us not only to catalog, but also to obtain a real-time transcription of the conversations.

### **3.1.1. Data collection techniques**

Regarding data collection, in-depth interviews were conducted with key actors in science communication and a focus group organized with directors of research institutes.

First, eight semi-structured interviews were conducted with journalists, media editors, scientific policy makers, news agency representatives and staff of the UCC of the University of Zaragoza. These interviews explored participants' perceptions of the challenges of scientific news coverage, identifying factors such as lack of specialization in science journalism, scarcity of resources, and perceived audience interest in science topics. The interviews were designed to foster an open conversation, allowing participants to freely express their opinions and experiences around science coverage in Aragon. The analysis of these interviews followed an inductive coding approach, which facilitated the identification of patterns and emerging themes in the responses (Strauss & Corbin, 1998).

In addition to the interviews, a focus group was conducted with directors of research institutes of the University of Zaragoza, some of them with extensive experience in science communication and dissemination. The group interaction allowed a dynamic discussion on the perceptions and experiences of the researchers in relation to the coverage of their projects and findings in the media. This approach was useful to obtain diverse perspectives on the obstacles that hinder the entry of science into the media agenda (McCombs & Shaw, 1972) and to explore strategies that could improve collaboration between researchers and journalists. The focus group technique, frequently used in exploratory research, allowed for extracting valuable and contextualized information on communicative dynamics in the university setting (Krueger & Casey, 2014).

### **3.1.2. Data analysis procedure**

As for data analysis, a coding and thematic analysis, a comparative analysis of perceptions among actors, and data triangulation and internal validation were carried out.

Both the in-depth interviews and the focus group were recorded and transcribed verbatim for analysis. A thematic coding process was employed following the principles of grounded theory, allowing the identification of key categories and emerging patterns in the testimonies (Charmaz, 2006). Through this open coding technique, data were grouped into themes such as the perception of science in the media agenda, the competencies needed for effective science communication, and the structural limitations in the media and in academic units to achieve more effective dissemination.

The qualitative data were organized and compared to identify possible differences in the perceptions of the actors involved (journalists, UCC representatives, scientific policy makers and researchers). This comparative analysis allowed a deeper understanding of the particular obstacles and opportunities from the perspective of each group, revealing points of convergence and discrepancy in terms of the coverage and treatment of scientific topics in the regional media.

To ensure the validity of the results, data triangulation was used by comparing the individual interviews and the opinions expressed in the focus group. This triangulation strengthened the credibility of the analysis by making it possible to corroborate the emerging themes with different sources of information and actors involved in the knowledge transfer process (Denzin & Lincoln, 2011).

### **3.2. Ethical considerations**

The study was conducted following the ethical principles for qualitative research, guaranteeing the confidentiality of the participants and their informed consent. The interviewees and focus group participants were informed of the research objectives and had the opportunity to withdraw their participation at any time. Likewise, anonymization of the data was ensured to protect the identity of the participants during the process of analysis and dissemination of the results in publications prior to the doctoral thesis.

This qualitative methodology enables understanding the complexity of the process of scientific information transfer in Aragon, offering valuable insights into the obstacles and challenges in science communication in regional media and providing a basis for proposing improvements in scientific dissemination strategies in the region.

### **3.3. Research development**

The initial phase of the research consisted of in-depth interviews with eight key participants who play a role in science communication in Aragon. These interviews were conducted in a semi-structured manner, allowing the necessary flexibility for participants to share in detail their experiences and views on the coverage of scientific topics in the media. Each interview included specific topics, such as:

- The public's perception towards science and technological topics.
- The strategies used by journalists and editors to deal with and select science content.
- The limitations of time, resources and training that affect the inclusion of scientific topics in the media agenda.
- The valuation of science as informative content and its relevance within the criteria of newsworthiness.

After data collection, the transcription of the interviews was corrected, followed by a thematic analysis. This analysis made it possible to identify recurrent patterns and areas of convergence between the opinions of the different participants. The interviews revealed that, in general, there is a shared perception of the need for specialization in science journalism, as well as a shortage of material and human resources to cover these topics adequately. In addition, journalists highlighted the lack of demand from the public as an additional challenge to justify the presence of scientific news in the news programs.

With the aim of deepening the experiences and perceptions from the field of scientific research, a focus group was conducted with directors of research institutes of the University of Zaragoza. This focus group was structured around the following issues:

- The relationship and communication between researchers and the media.
- The specific challenges faced by researchers when trying to disseminate their findings in an accessible and attractive language.
- The perception of the interest and relevance of their research to the public.
- Previous experiences of collaboration with journalists and media editors.

The focus group format allowed a dynamic interaction in which participants shared their points of view and generated an enriching exchange on the obstacles and possibilities of scientific outreach in Aragon. Researchers highlighted the need for institutional support to improve science communication, as well as the convenience of having specific training in outreach to facilitate their collaboration with the media. They also stressed the importance of adapting scientific messages to a more accessible language, without compromising scientific accuracy.

### **3.4. Methodological Note**

To guarantee the anonymity of the participants, alphanumeric codes have been assigned to the interviewees, who are cited in the text together with the year of the interview. The assignment of codes is as follows: E1, E2, E3, E4 correspond to directors of research institutes; E5 is a news editor; E6 is director of a media outlet; E7 is responsible for the society section in an audiovisual medium; E8 is head of department of a news agency; E9 belongs to the vice-rectorate for Science Policy; E10 works in the Scientific Culture Unit; E11 is a renowned researcher with a career in scientific dissemination; and E12 is news director of a media outlet. The interviews are not publicly available for privacy and ethical reasons, but they have been rigorously analyzed according to the principles of qualitative research (Strauss & Corbin, 1998).

## **4. RESULTS**

The interviews and the focus group revealed a series of recurring issues that affect the process of transferring scientific knowledge to the media. Some of the key points were the following:

### **1. Lack of specialization and resources in science journalism:**

- "Science coverage is often relegated because we do not have specialized journalists in the newsroom" (E1, Personal interview, 2024).
- "We do not always have the resources or the time to delve into scientific news, which limits its inclusion in the news" (E2, Personal interview, 2024).
- "Even when there is interest in covering scientific topics, the lack of trained personnel makes it difficult to produce content" (E5, Personal interview, 2024).
- "There are research institutes that do not have a communication officer specifically dedicated to this work, which can limit their ability to disseminate their findings" (E4, Personal interview, 2024).
- "In the media, science is not usually part of the priority agenda. There are always topics that seem more urgent" (E6, Personal interview, 2024).

### **2. Scientist-media disengagement:**

- "Sometimes we send out very technical press releases and get no response from the media" (E3, Personal interview, 2024).
- "Journalists tend to look for topics that impact the audience immediately, and scientific discoveries don't always fit that model" (E6, Personal Interview, 2024).
- "From our perspective as scientists, we often feel that our findings are not accurately communicated, which makes us hesitant about collaborating with the media" (E11, Personal Interview, 2024).
- "There is a lack of a concerted effort to make science more accessible without losing its rigor"

(E8, Personal interview, 2024).

**3. Perception of low demand for scientific topics by the public:**

- "The audience does not usually ask for science news. If we include them, it is because they fit in a general interest event" (E7, Personal interview, 2024).
- "When we publish scientific news in networks, interactions are much lower than in other topics" (E8, Personal interview, 2024).
- "Traditional outreach formats fail to engage young people, which makes it difficult to expand the audience interested in science" (E12, Personal interview, 2024).
- "There is a cultural problem in the perception of science as something distant or difficult to understand" (E9, Personal Interview, 2024).

**4. Need for training in science communication and recognition:**

- " We could use specific training in how to translate scientific language into a more attractive format for the media" (E9, Personal interview, 2024).
- " We researchers could learn to communicate better, but journalists should also receive training in science" (E10, Personal interview, 2024).
- " If more science communication workshops were promoted from universities, the quality of information in the media would improve considerably" (E12, Personal interview, 2024).
- " It is essential that the new generations of journalists are trained in science communication" (E4, Personal interview).

Based on the previous statements, and according to the contributions of the experts who were interviewed, a series of obstacles were identified that significantly affect the process of transferring scientific knowledge to the media. These obstacles, described by both journalism professionals and researchers, are detailed below:

**Table 1.** *Obstacles to the transfer of scientific information identified in the interviews*

Obstacle	Causes
Lack of specialization and resources in science journalism	- Lack of journalists with scientific training - Lack of time and resources in newsrooms - Scientific topics relegated to politics and entertainment
Scientist-media disengagement	- Difficulty in adapting technical language - Differences between scientific expectations and newsworthiness criteria. - Poor relationship between both groups.
Perception of low demand by the public	- Low perceived demand according to audience metrics - Editorial criteria that prioritize other topics - Lack of scientific culture in general media
Lack of training in science communication	- Lack of specific training programs - Lack of dissemination skills in journalists and researchers - Difficulty in translating scientific knowledge into social language

**Source:** Own elaboration.



In response to the obstacles detected, the participants in the interviews proposed different lines of action to improve the presence of science in the regional media. These recommendations not only seek to strengthen the relationship between universities and the media, but also to optimize news formats and encourage greater communication sensitivity in both journalists and researchers. The main proposals are detailed below:

**Table 2.** *Respondents' proposals for improving the transfer of scientific information*

Proposal	Lines of action
<b>Encourage collaboration between the UCC and the media</b>	<ul style="list-style-type: none"> <li>- To establish more proactive relationships with editorial offices.</li> <li>- To generate joint work dynamics</li> <li>- To increase the frequency and quality of scientific publications</li> </ul>
<b>Implement training programs in science communication</b>	<ul style="list-style-type: none"> <li>To develop specific courses for journalists and researchers</li> <li>- To include training in the dissemination of complex contents</li> <li>- To promote accessible and rigorous communication skills.</li> </ul>
<b>Design more accessible and attractive press releases</b>	<ul style="list-style-type: none"> <li>- To adapt language to the journalistic approach</li> <li>- To reinforce newsworthiness and social impact</li> <li>- To include key data, context and audio-visual elements</li> </ul>
<b>Create specific spaces for science in local media</b>	<ul style="list-style-type: none"> <li>- To dedicate regular sections to science on television and in the regional press</li> <li>- To stimulate public familiarization with scientific content</li> <li>- To increase the visibility of local research production.</li> </ul>

**Source:** Own elaboration.

## 5. DISCUSSION, CONCLUSIONS AND PRACTICAL IMPLICATIONS

This research has identified several challenges and opportunities in science communication in Aragon. Although there are significant obstacles, there is also room for improvement in the visibility of science. For this, collaborative strategies between the university and the media, together with specialized training in science communication, are key. The study thus provides a solid basis for proposing improvements in communication practices at the regional level, with the aim of promoting a society that is more informed and closer to scientific advances.

### 5.1. DISCUSSION

The results of this research reinforce previous findings on the challenges in the transfer of scientific information to the media, especially in the regional television environment (Francescutti, 2009; Nisbet et al., 2002; Verhoeven, 2010). Scientific media literacy is revealed as a key component in this process, since it conditions both the way science is communicated and its perception and understanding by the public (Marta-Lazo & Gabelas-Barroso, 2023; Ibarra-Arias & Marta-Lazo, 2024).

One of the main obstacles identified is the scarce specialization in science journalism, which negatively affects news coverage (Arulchelvan, 2010; Orozco Gómez, 2014). The lack of specific training limits the ability of professionals to interpret and contextualize scientific information in a rigorous and attractive way. This is compounded by editorial routines, which prioritize content with immediate impact to the detriment of scientific content, reducing its visibility on the news agenda (Bucchi & Trench, 2021; Veneu et al., 2008).

A disengagement between the scientific community and the media has also been identified. Researchers are often unaware of newsworthiness criteria, while journalists face difficulties in accessing reliable scientific sources (Smith & Morgoch, 2020; Qusien & Robbins, 2023). Therefore, strengthening collaboration between the two sectors is essential to improve the quality of scientific information.

The study confirms the low presence of scientific content on Aragonese regional television, in line with trends observed in other contexts (Bucchi & Saracino, 2016; Blanco López, 2004). Even though television continues to be a key source of information for citizens, science occupies a secondary place due, in part, to the perception of low public interest. However, works such as Mejía and Agudelo-Londoño (2019) show that the media can foster scientific culture through communication strategies tailored to their audiences.

These findings underscore the need to strengthen scientific media literacy and science communication training, both in journalism and academia. The implementation of training programs aimed at journalists and scientists could favor a more effective transfer of knowledge, improving the relationship between transmitters and disseminators of scientific information. In addition, the creation of stable spaces for science in the media, especially on television, would allow the advances generated by institutions such as the University of Zaragoza to be disseminated with greater reach. This would reinforce the role of science in the public discourse and contribute to a more informed and participative citizenry.

Science communication in the media faces structural and cultural challenges that condition its coverage and reception. As Bucchi and Trench (2021) point out, the lack of specialization and scarce resources in newsrooms make frequent and in-depth coverage difficult, which reinforces the urgency of strategies adapted to the current media ecosystem.

From the researchers' perspective, obstacles associated with the gap between scientific and journalistic language are also evident. While science demands precision, the media prioritize immediacy and emotional connection with the audience (Revuelta, 2006). This difference in approaches hinders effective collaboration and affects the quality of the information received by the public. Recent studies coincide in this, highlighting the need to improve communication channels between both sectors (Gascoigne et al., 2020).

Another fundamental aspect detected is the public's perceived lack of interest in science, which influences editorial decisions and reinforces the need to work on media literacy from an early age. Research such as that of León (2021) shows that integrating scientific content into regular programming can modify this perception and awaken greater public interest.

Likewise, there is a lack of regular coverage of science in regional media. Although there are initiatives at the national level, their local presence is scarce, limiting the opportunities to give visibility to local research and connect with the environment. Creating these spaces would contribute to consolidate a stronger scientific culture, increase the demand for specialized information and reduce the gap between academia and society (Torres-Albero et al., 2010).

Finally, training in science communication emerges as a key tool to overcome these obstacles. Training journalists and researchers in popularization techniques can improve the accuracy and

attractiveness of scientific content. Specific workshops and courses aimed at both groups would have a positive impact on the quality of science communication and its ability to connect with society.

## **5.2 CONCLUSIONS**

This research provides a solid basis for improving science communication in Aragon, proposing specific strategies to address the identified obstacles. Active collaboration between science communication units and the media, together with specific training in outreach, is essential. Tools such as embargoed press releases and audiovisual material provided by research centers can foster greater scientific literacy in the region. This, in turn, would contribute to the development of a more informed citizenry prepared to participate in scientific debates, better understanding the impact of science in today's society.

Throughout the study, the main obstacles and opportunities in the transfer of scientific information in Aragon have been identified, with special emphasis on the relationship between the University of Zaragoza and the regional media. The lack of specialization and resources in science journalism is one of the main limitations for frequent and quality coverage. Added to this there is a disengagement between researchers and journalists, which makes it difficult to convey scientific findings in an understandable and attractive journalistic language. This gap, characterized by divergent expectations and different editorial criteria, highlights the need to strengthen communication and mutual understanding between the two groups.

In addition, participants highlighted the perception of low public interest in scientific topics, which directly influences editorial decisions. This phenomenon, together with the lack of training in science communication both in the editorial offices and among researchers themselves, limits the opportunities for effective collaboration.

In response, the study proposes several strategies aimed at improving the visibility of science in the region. One of the main recommendations is the use of embargoed press releases, which allow journalists enough time to research and adequately contextualize the contents. The usefulness of providing audiovisual material from the scientific sources themselves is also highlighted, which is especially valuable for television media, as it facilitates faster, more accurate and attractive coverage, as well as reducing production costs.

To optimize these tools, it is necessary to strengthen the science communication units of the universities, providing them with adequate technical and human resources. It is also proposed to establish joint training programs for journalists and scientists, including writing workshops, sessions on dissemination techniques and modules focused on newsworthiness criteria. In order to encourage the participation of research personnel, these programs should include the awarding of official certificates.

To strengthen the relationship between the regional media and the scientific community, it is suggested that periodic meetings be organized between research institutes and journalists. These events would make it possible to present scientific advances in an accessible way, strengthen strategic alliances and enrich the information agendas with expert sources in different areas of knowledge. Within this framework, the role of the professional specialized in science communication is particularly relevant, either from the Scientific Culture Unit or as the person in

charge in the institutes themselves, acting as a link between the university and the media.

The need for regular television programs dedicated to science generated at the university is also highlighted. These contents would contribute not only to disseminate institutional activity, but also to build a social link with the audience and improve the public image of the university. Along these lines, it is proposed that universities with their own media produce quality content produced by students that can be broadcast on regional channels, which would represent an incentive for both the university community and the media themselves, without generating additional costs.

Finally, the inclusion of scientific media literacy content in school and high school curricula is proposed. This measure would encourage, from an early age, an interest in science and the habit of consuming relevant media content, thus contributing to a more critical, informed and participatory citizenship.

### **5.3 Practical suggestions**

Based on the obtained results, a series of actions are proposed to improve the transfer of scientific information between the university and the regional media. These recommendations, based on the perceptions of journalists and researchers, aim to strengthen inter-institutional collaboration mechanisms, optimize dissemination formats and foster a stronger scientific culture in the social environment. Among the most relevant practical suggestions, the following stand out:

- **To foster collaboration between scientific culture units and the media**, through sustained relationships that enable the flow of information and the creation of content adapted to journalistic languages.
- **To design joint training programs in science communication**, aimed at both journalists and research personnel, including official certification and development of dissemination skills.
- **To develop clear, newsworthy press releases accompanied by audiovisual material**, adapted to the criteria of the media, especially in the case of regional television.
- **To establish regular coverage in local media dedicated to scientific content**, in order to increase the visibility of the research carried out at the university and bring it closer to the public.
- **To organize periodic meetings between research institutes and journalists**, in order to generate contact networks, update information agendas and facilitate access to reliable scientific sources.
- **To integrate scientific media literacy contents in the educational system**, as a way to develop from an early age a critical and informed citizenry with the capacity to value scientific information in the media.

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