

Media labs in Spain as catalytic agents of journalistic innovation: key features in the opinion of experts

Los labs de medios en España como agentes catalizadores de la innovación periodística: rasgos centrales a juicio de los expertos



Susana Herrera Damas. Bachelor in Audiovisual Communication (University of Navarra, 1998) and in Sociology (UNED, 2004) and PhD in Communication (University of Navarra, 2002). Extraordinary Doctorate Award, she has edited 3 books, is (co)author of 5 of them and has written more than 90 articles published in leading academic journals. She has been Visiting Professor at the Universities of Ottawa (Canada), Texas in Austin (USA) and at the Missouri School of Journalism (USA). Since February 2008, she has been working at the Universidad Carlos III de Madrid, where she is an Associate Journalism Professor. Currently, her research focuses on media innovation in digital environments, with special attention to the search for best practices in specific initiatives related to digital interactive narratives and to constructive and solutions journalism. She is head of the Innovation on Digital Media research group whose activity can be consulted on its website https://innovationondigitalmedia.com/. Since 2020 she is accredited as Full Professor by ANECA.

University Carlos III, Spain dherrera@hum.uc3m.es ORCID: 0000-0002-1755-1621



Christian Camilo Satizábal Idarraga. Bachelor in Communication Studies and Master in Higher Education from the Universidad Santiago de Cali in Colombia and PhD in Media Research at the Universidad Carlos III of Madrid. During his academic career, he has been interested in case studies in audiovisual productions and in media innovation labs, a topic to which he dedicated his doctoral thesis.

University Carlos III, Spain 100357195@alumnos.uc3m.es ORCID: 0000-0002-2447-2163

Received: 29/10/2022 - Accepted: 08/02/2023 - Early access: 15/03/2023 - Published: 01/07/2023

Recibido: 29/10/2022 - Aceptado: 08/02/2023 - En edición: 15/03/2023 - Published: 01/07/2023

Abstract:

At the current crossroads that media in general and journalism, in particular, are going through, innovation emerges not as a "nice to have" but as an urgent and peremptory need. In this context, innovation labs are presented as a structured and somewhat

Resumen:

En la actual encrucijada que atraviesan los medios en general y el periodismo en particular, la innovación surge no como un "nice to have" sino como una necesidad urgente y perentoria. En este contexto, los laboratorios de innovación se presentan como un espacio estructurado

How to cite this article:

Herrera Damas, S. and Satizábal Idarraga, C. C. (2023). Media labs in Spain as catalytic agents of journalistic innovation: key features in the opinion of experts. *Doxa Comunicación*, 37. pp. 479-500.

https://doi.org/10.31921/doxacom.n37a1836



This content is published under Creative Commons Attribution Non-Commercial License. International License

privileged space to do so. However, since both the academic and professional literature and the review of the websites of the different labs in the United States and Europe show that their configuration admits highly diverse formulas, we wonder what the central feature of these spaces in Spain is today. To the extent that their raison d'être is clear, it will be possible to define to what extent other bodies can (or cannot) take over their activity. To find this out, we have conducted semi-structured interviews with an intentional sample of 18 authoritative voices in this field. The results show that the main feature of these spaces is precisely their innovative purpose. From this point on, the emphasis is placed on different signs of identity which are nevertheless complementary under the common denominator of sharing the same mission.

Keywords:

Media labs; innovation; journalism; experts; Spain.

y en cierto modo privilegiado para hacerlo. Sin embargo, puesto que tanto la literatura académica como la profesional y la revisión de las webs de los distintos labs en Estados Unidos y Europa refleja que su configuración admite muy diversas fórmulas, nos preguntamos cuál hoy es el rasgo central propio de estos espacios en España. En la medida en que quede clara cuál es su razón de ser, será posible definir hasta qué punto su actividad puede (o no) ser asumida por otras instancias. Para averiguarlo, hemos llevado a cabo entrevistas semiestructuradas con una muestra intencional de 18 voces autorizadas en este ámbito. Los resultados reflejan que el rasgo capital de estos espacios es precisamente su propósito innovador. A partir de aquí, se va poniendo el acento en señas de identidad diferentes que, no obstante, resultan complementarias bajo ese denominador común de compartir una misma misión.

Palabras clave:

Labs de medios; innovación; periodismo; expertos; España.

1. Introduction

The level of disruption that the Internet has generated in our information ecosystem is so enormous, and in many ways so unknown, that a permanent need for change is to be expected. This is what Ros Atkins, a BBC journalist, said recently. He also pointed out that we are living in an era of extreme creativity and that journalism must be able to keep up with it by looking far and wide for inspiration. Otherwise, he continued, we run the risk of audiences finding news to be tired and limited compared to other products they consume. In this context, innovation therefore becomes non-negotiable, just as it is to verify data correctly, to have good storytelling ideas or to be unbiased (Atkins, 2022).

Defined as the ability to react to changes in products, processes and services through the use of creative skills that allow problems or needs to be identified and solved in a way that materializes in the introduction of something new that adds value to consumers and therefore fosters the viability of the media organization (García Avilés, et al. 2019: 3-4), innovation in the media is today revealed as a crucial asset for the survival of the media industry" (Weiss and Domingo, 2010: 1158) to the point that, more than a task, it has become an essential attitude –perhaps the only possible one– to face a clearly disruptive information ecosystem.

In this regard, several authors have argued that if in the new digital ecosystem traditional media want to remain relevant to their audiences, it is not enough for them to simply adapt; they need to reinvent themselves in an essential way (Westlund and Lewis, 2014; Küng, 2015; Paulussen, 2016; Fortunati and O'Sullivan, 2019). Logically, continue Porcu et al. (2020: 1420) this does not happen overnight but it requires a whole new culture of innovative (Porcu, 2020) and resilient learning (Seville, 2017). And yet, in the face of this need, what has been appreciated by several researchers (Ryfe, 2012; Buijs, 2014; Usher, 2014; Tameling, 2015) is that the culture of newsrooms has been an obstacle –and not a stimulus– to change and renewal.

A desirable, innovative learning culture should embrace innovation in both its exploitation and exploration (March, 1991; O'Reilly and Tushman, 2013) and should also extend to all its elements including –in the model of García Avilés, et al., 2019: 11-13– the areas and aims of innovation, the types of actors, the drivers and the outcomes, so that this minimizes the impact of possible obstacles.

Innovation is precisely the purpose with which the first media innovation laboratories were born, first in the United States and later on in Europe.

In a first definition, labs are "units or departments dedicated to research, experimentation, development and implementation of technological and editorial innovations" (Salaverría, 2015: 398). Following Tanaka (2011), they tend to focus on new technologies to devise, research, experiment and innovate technologically and socially through the collaboration of several disciplines. In this sense, they are highly innovative internal management formulas that in several cases began as spaces for the creation of new narratives and, over time, have been transformed into product development laboratories. On other occasions, they continue to be departments dedicated to the exploration and generation of digital narratives, taking advantage of the possibilities generated by the evolution of the Internet itself.

At the same time, media labs are places of experimentation that emerge as a strategic response to the current situation experienced by many media, afflicted by a serious multifactorial crisis that makes it urgent to find new narratives, products and services that meet the information needs of a consumer who has disconnected with the traditional media system and has chosen other ways of being informed.

In this context, it seems wise to provide independent spaces in which to think, analyze, test, but above all in which to have enough time and perspective to design different solutions, a need that is impossible to achieve in the frenetic pace of day-to-day operations. Thus, it is understandable that labs have been seen as a lifeline for the medium in which they are inserted, due to their effective contribution to creating new narratives, new forms of income or even new audiences (García-Avilés, 2020; Zaragoza-Fuster and García-Avilés, 2020), something that also occurs in the so-called second-generation innovation labs (Hogh-Janovsky and Meier, 2021).

The latter are the labs that were created between 2017 and 2021. Basically, they differ from the previous ones in that they are more integrated into the organizational structures of the newsrooms, which allows them to more efficiently meet the needs of journalists who, in addition, work in specific phases of production (Hogh-Janovsky and Meier, 2021). Following these authors, these second-generation labs are also characterized by the multiple efforts made by their employees to act as an engine of innovation to transform their organization by transferring knowledge, sharing new ideas and approaches through advanced training, thorough and transparent communication of innovation, agile project accompaniment and staff rotation. These labs are also more oriented towards designing new business models that are sustainable. To this end, they apply a process of dynamic change and constant learning. From a more concrete perspective, Cools, Van Gorp and Opgenhaffen (2022) distinguish three types of ways of working:

- 1. static (the lab team works alone),
- 2. dynamic (lab members collaborate with other professionals, such as journalists or engineers from the organization) and

3. a hybrid form between both types.

To these features, García Avilés (2023) adds that, in general, second-generation labs are also distinguished by:

- 1. focusing on finding creative solutions to improve narratives and formats
- 2. devoting greater attention to solving the needs of specific users and targets
- 3. favoring a network structure that may involve collaboration with external organizations and that prioritizes the transfer of innovation to other areas of the news outlet

Precisely because of the evolution that these spaces have undergone, we ask ourselves what their central feature is today. This is the main objective of this research: to find out what is currently the main feature that characterizes these laboratories. More specifically, the specific objectives of this article are:

SO1: To explore the perception of experts regarding the central feature shared by these spaces.

SO2: To explore their perception regarding other complementary identity signs.

2. Media labs as catalytic agents of journalistic innovation

According to some of the main contributions on the origin of media labs (Salaverría, 2015; Donaire Pitarch, 2016; Sádaba and Salaverría, 2016; González Alba, 2017; Sixto, 2019; Zaragoza-Fuster and García Avilés, 2022), the first media lab was the one developed by the North American media group Knight Ridder in Boulder, Colorado. It was directed by Roger Fidler, who had a multidisciplinary team composed of journalists, designers, technologists and researchers. Its most outstanding project was the tablet newspaper, a prototype that predates today's tablets. In Spain, a similar experiment led by Mario Santinoli at El Periódico de Catalunya, is an early example that stands out. From 2010, there was an international boom of these spaces after reference media such as The New York Times, The Washington Post, The Boston Globe, the BBC, AFP, The Huffington Post or The Guardian began to take a chance on developing them.

In the United States, an outstanding example was the project started by The New York Times, which began in 2006 and was later restructured into the Research & Development Lab. With similar functions, those of PBS and The Boston Globe seek to innovate from different perspectives that also include the creation of new journalistic projects and media literacy. Other labs have ceased their activity. Buzzfeed, for example, announced in 2015 the launch of the Open Lab for Journalism Technology and the Arts which, however, closed two years later. During its existence, they experimented with bots, drones, sensors and spherical video, although they finally understood that it was better to integrate the lab staff into the newsroom in a more natural way and not as a stand-alone item. For some years now, the current trend in this country seems to be to incorporate innovation into the development teams, which are called "Research & Development" and experiment around the product and the business model, in line with what happens with second-generation labs.

In Latin America, we find media labs in countries such as Argentina, Brazil and Peru. In Argentina, Nación Content Lab was created in 2015 as a new marketing solution for brands interested in contacting their audiences based on relevant and quality content. In Peru, the Ojo Lab –linked to the digital native Ojo público– has carried out different interactive specials. In Brazil, the lab of the newspaper Agência Pública has experimented with different technologies and formats.

In Europe, Spain is one of the countries with the largest number of labs, including active ones, but also those that have been disappearing. It is followed by the United Kingdom, Germany, France, Norway, Portugal, Italy, Ireland, Switzerland, Finland and the Netherlands. The first European media lab, Medialab, of the French news agency France Press¹, started its activity in the 2000s. Among the European labs, we find some prestigious media labs such as the BBC News Lab of the British public broadcaster BBC, the French news agency AFP, The Guardian or the Italian radio and television network RAI. However, some of them closed down shortly afterwards. Of the 28 European labs identified by Zaragoza and García Avilés (2022), 20 remain active. RAI's, for example, closed a year after its creation, while others have been restructured and have been trying out different formulas (Nunes, 2020; Nunes and Mills, 2021; Mills and Wagemans, 2021).

Despite the boom that labs experienced in the 2010s –especially in 2012 and 2014–, this has subsequently subsided, either because no new labs have appeared or because those that existed have been restructured and have even disappeared. Nor has the phenomenon been alien to a certain fashion since, following Salaverría (2015: 403), it seems more avant-garde to say that one has a lab than a traditional infographics and multimedia section. All in all, it is worth remembering with Küng how important it is to distinguish between innovations based on business strategies from those based on technological artifices, also known as "shiny new things". In this sense, the author criticizes the fact that many news organizations have abandoned long-term strategic planning in favor of short-term innovation projects that are merely tactical and opportunistic and, consequently, represent a competitive weakness (Küng, 2017: 15).

The review of the academic and professional literature on the subject leaves us with a series of similarities and differences. Among the former, labs are characterized by:

- i) having a strong commitment to innovation,
- ii) being committed to extending it to the whole environment,
- iii) being made up of small but multidisciplinary teams,
- iv) having a certain degree of autonomy with respect to the editorial staff, and
- v) working with agile methodologies, which allows them to innovate quickly, efficiently and dynamically.

The strong commitment to innovation is, in fact, one of the central features of any lab, as well as its raison d'être (Sádaba and Salaverría, 2016: 158). This innovation extends to different areas, although the most common has to do with the development of digital narratives. At the same time, this commitment to innovation also becomes a challenge since, sometimes, innovation exceeds expectations and leads to a failure that the medium must assume. On the more positive side, media labs have driven the development of different narratives such as interactive infographics, scroll narratives, interactive documentaries, interactive specials, newsgames or immersive reports with 360° video, to name some of the most common ones in recent years. At other times, the innovation carried out in the lab has made it possible to find new revenue streams or new subscription systems.

As part of the lab's commitment to innovation, it does not limit itself to generating it, but tries to disseminate it (Rogers, 2003) and extend it to the whole environment (López Hidalgo and Ufarte Ruiz, 2016: 11), although with different levels of achievement

¹ It is still active today. To learn more about the projects they are working on, you can check out their website at https://www.afp.com/en/agency/medialab.

(Zaragoza and García Avilés, 2020). The ideal point would be that its existence would become unnecessary because the culture of innovation would have been assumed in an organic way by the entire newsroom. Following Porcu (2020) and Valero-Pastor (2020: 213), only those companies that foster a true learning culture among their members have the opportunity to:

- 1. innovate (Cameron and Quinn, 2011 and Heijboer, Korenhof and Pantjes, 2013).
- 2. gain competitive advantages (Porter, 1985; Watkins and Marsick, 1996; Baars-Van Moorsel, 2003 and Yolles, 2009)
- 3. transform themselves through the creation of new knowledge (Nonaka, 1994; Wang, Su and Yang, 2011 and Schenke, 2015) and,
- 4. survive long-term market disruptions (March, 1991 and O'Reilly and Tushman, 2013).

At this point, the lab can lead the innovative learning culture referred to above. Following Porcu, this is defined as:

a social climate that encourages people to work and learn together, to grow as individuals and as a group (team, organization), and that provides people with the autonomy to be flexible, to experiment, to be creative and to investigate radical possibilities so that the organization has a better chance to survive in the long run. This is facilitated by servant leadership, open communication, mutual trust, a supportive culture, shared goals, valuing individual achievements, and training and development (Porcu, 2020)

In practice, this culture can be transmitted in different ways. Following Valero-Pastor and Carvajal-Prieto (2019: 1160), these include teaching -formal, informal and mixed-, communication systems -formal, informal and mixed-, in addition to professional resources such as employee exchange groups, interdepartmental visits or ambassadors who, as early adopters of a particular innovation, act as "evangelists" with respect to the rest of the newsroom. On other occasions, knowledge transfer occurs through creative formulas such as the Quartz Quest or the Confidencial Lab Day (Valero-Pastor, 2020). Logically, technology can be a great ally for this purpose through the use of IT tools such as emails, newsletters or services such as Trello, Asana, Slack or Jira that dynamize, streamline and simplify team collaboration by optimizing workflows (Valero-Pastor, Carvajal-Prieto and García Avilés, 2019: 8-9).

Labs are formed by small but multidisciplinary teams. The size of these structures allows the generation of flexible and adaptive instances (Palomo and Palau, 2016), open to experimentation. In turn, multidisciplinary teams bring together journalists with other professional profiles such as graphic designers, video makers, programmers and computer developers with the idea of designing more contextualized and feature-rich journalistic products and services (Küng, 2015, 2017 and Zaragoza and García Avilés, 2022).

In turn, these teams enjoy a certain autonomy, which allows them to work at two or even three different speeds. In this sense, the labs have independent dynamics from the rest of the environment. This gives them greater flexibility to adapt to new market standards and create more attractive and complete products (Valero-Pastor, 2020: 234-235). Following Mills and Wagemans (2021: 11), this greater autonomy is also intended to ensure a certain distance from the hierarchical structures and routines of media organizations.

Following Valero-Pastor (2020), innovation labs are characterized by stimulating the flow of ideas and collaborative project development, with facilities physically configured to employ efficient and agile methodologies such as design thinking, problem solving (Moultrie et al., 2008), lean startup methodology (Ries, 2011), scrum methodology (Maximini, 2015; Schwaber and

Sutherland, 2017), or XP, Crystal, Kanvan or Scrumban programming (Valero-Pastor; Carvajal-Prieto; García-Avilés, 2019: 4-8). On many occasions, the starting point is the so-called "minimum viable products" with which incremental value propositions are offered to make them grow or to "pivot" them (in the jargon), rectifying what is necessary.

On the opposite side, innovation laboratories are differentiated by:

- (i) the main focus of their activity and.
- ii) specializing in one type of digital narrative or another.

Indeed, some labs are oriented towards exploring new narratives, formats and data journalism while others technologically develop digital applications, promote projects or startups and teach citizenship in critical media consumption (Salaverría, 2015: 401).

Regarding the narratives in which they specialize, labs can be differentiated according to whether their preferred wager is interactive infographics (Vizoso, 2020), scroll narrative (Rojas Torrijos, 2014), podcast (Orrantia, 2019), newsgame and gamified narratives (García-Ortega and García-Avilés, 2018), transmedia production (Scolari, 2013) or the interactive documentary (Vázquez-Herrero, González-Neira, Quintas-Froufe, 2019 and Vázquez-Herrero, López-García and Gifreu-Castells, 2019), which includes video and is enriched with photo galleries, infographics and scroll narratives to facilitate the assimilation of information and thus make it more didactic, dynamic, multimedia and entertaining. To a lesser extent, some labs have also explored the potential offered by drones and immersive reporting with 360° video (Benítez de Gracia, 2019 and Benítez de Gracia and Herrera Damas, 2020). In Spain, the latter is the case with those of El Confidencial and, above all, RTVE.

3. Situation of the labs in Spain

Indeed, in Spain, these are the two most relevant innovation laboratories in terms of longevity, but also in terms of commitment to innovation. At the same time, they are very different from each other.

RTVE's was launched in June 2011 and is considered the first innovation lab in the country. On their website, they define themselves as a pioneering audiovisual lab that seeks creative and novel ways to tell stories on a wide range of topics, seeking to innovate, entertain and, above all, inform. Although the lab began with only two people -a designer and a journalist-, over time it has grown in number, but also in variety of profiles. Today, in addition to journalists, it integrates computer developers, graphic designers and filmmakers who work on each project from scratch and in a collaborative manner. Their firm commitment to audiovisual and interactive innovation has earned them several awards such as the Malofiej infographics awards, the Webby Awards, the Lovie Awards and the José Manuel Porquet digital journalism award. As time has gone by, they have been taking risks on increasingly sophisticated audiovisual genres. Some of their most outstanding wagers are immersive features with spherical video, podcasts, newsgames, specials and interactive documentaries (López Hidalgo and Ufarte Ruiz, 2016; Sádaba and Salaverría, 2016: 160 and González Alba, 2017).

For its part, El Confidencial's lab came on to the scene in 2013 under the name "El Confidencial.Lab", as an innovation and product laboratory. It is the area of innovation, strategy and new narratives of El Confidencial, a digital native newspaper founded in 2001. The idea was to distance itself from the turmoil of day-to-day operations in order to work in second gear

and on product strategy, something that requires a broader perspective. More specifically, the lab aimed to accelerate the digital leap of the newspaper and began as a catalytic unit aimed at turning El Confidencial into one of the most innovative, sustainable and technologically advanced media in Spain (Laso, cited in López Hidalgo and Ufarte, 2016; Vara Miguel, 2016; García-Avilés, 2018; Vázquez-Herrero, 2018 and Valero-Pastor, 2020).

As early as 2014, it began to produce multimedia reports with parallax effects in the style of those released by The New York Times in 2012. Over time, the lab has increased the number and diversity of profiles as it has renewed the website, developed native apps in the Apple and Android stores, experimented with bots and launched photo stories. In 2017, with the support of Global Editors Network and Google News Lab, they launched El Confidencial Editors Network, an annual hackathon on journalistic innovation (Boyles, 2017) that brings together teams from the most important media. Little by little, they are moving from being a lab for new formats to becoming an innovation unit. El Confidencial's lab uses Scrum methodology and, in general, agile and flexible workflows in order to constantly test projects starting from a minimum viable product that is developed over successive deliveries with their corresponding value propositions. Each team is autonomous and independent and is synchronized through weekly horizontal meetings in which they analyze what has been done and look for possible solutions to any incidents that have been identified. In any case, at El Confidencial they are very clear about the need to extend the innovation generated in the lab to the rest of the newsroom to the point that its very existence could be diluted (Valero-Pastor, 2020).

In addition, the lab has allowed them to find different revenue streams, first through branded content and, since June 2020, through the implementation of an innovative subscription system. As for the digital narratives they have developed newsgames and gamified narratives, interactive infographics, scroll narratives and interactive specials that combine images, music, slides and templates to offer information in a didactic, dynamic, multimedia and attractive way.

Along with the RTVE and El Confidencial labs, there are also more modest experiences in Spain, either because they have not had continuity over time or because they have arisen more recently and are still very much in an embryonic state with respect to their possible future development.

This is the case, for example, of Vocento, which launched its lab in 2014 as a result of a course on Data Journalism on the occasion of the entry into force in Spain of the Transparency Law. In the words of its former director, Borja Bergareche, the lab was aimed at serving as an accelerator of key trends for the group's business, embracing social networks, video, new narratives, R&D and new forms of business and monetization, while acting as an internal evangelist on digital transformation with a strong focus on results, helping both newsrooms and teams to become effective. Like the El Confidencial lab, it resorted to agile methodologies to develop software and apply design thinking intended to analyze complex problems and to solve them collaboratively (López Hidalgo and Ufarte, 2016; Villar Gutiérrez, 2017; Ossorio Vega, 2017; García-Avilés, 2018 and Vocento, 2019). Eventually, the lab ceased its activity in 2019.

Among those that remain active², one of the most recent labs is that of the El País newspaper. It was born in March 2018 with four journalists, a designer, an HTML layout artist and a computer programmer. In its presentation, it claims to have been conceived with the intention of continuing to open paths to 'do journalism'. To this end, it brings together journalists, designers, programmers, graphic designers, photographers, filmmakers, data and network specialists (El País, 2018). It works in the same physical space as the newspaper and in a very coordinated way since it is the newsroom that proposes the stories and the lab serves as a kind of narrative experimentation corner that, in each case, proposes the format that can be more innovative. To build the stories, this lab usually starts from ephemeris of historical issues to which it dedicates installments and special projects in the form of interactives, webdocs, animation, data, immersive displays, gamification, podcasts, 360° video, drones, interactive visualizations, 3D graphics integrated into video or streaming television programs from the scene of the events and narratives in the form of a thread that the director of the lab herself carries out from the newspaper's corporate Twitter account (El País, 2018; Mediamorfosis, 2019; Gosálvez cit. in Clases de Periodismo, 2018).

The latest media lab to appear in Spain is that of the financial newspaper Expansión, which belongs to the Unidad Editorial group. This lab started to be developed in 2021 as the area of new narratives and data visualization of the newspaper. The idea was that, on the web, users would find a greater development of the stories that have already appeared in print. The editorial gamble is therefore based on mixing the latest trends in journalism such as statistics, data visualization, programming and the expert analysis of the specialized journalists that the newspaper has. So far, Expansión's lab has mainly developed interactive infographics, scroll narratives and creative data visualizations. The latter are very frequent considering the singularity of the economic information.

4. Methods

After this conceptual and contextual presentation of the labs, we will put these findings face-to-face with the vision of the experts to try to find out what the central features and the main signs of identity that characterize these spaces in Spain are, taking into account the various formulas that their configuration admits (Nunes, 2020; Nunes and Mills, 2021; Mills and Wagemans, 2021). To the extent that their raison d'être is clear, it will be possible to determine to what extent their purpose can (or cannot) be taken over by other actors. To find out, between October 2021 and May 2022 we conducted 18 semi-structured interviews with a purposive, non-probabilistic sample of experts made up of some of the most prominent voices in media innovation in general and in these laboratories in particular.

Indeed, following Hernández Sampieri et al. (2010: 396) the types of samples usually used in qualitative research are non-probabilistic or directed, whose purpose is not to generalize in terms of probability. They are also known as "guided by one or more purposes", since the choice of the elements depends on reasons related to the characteristics of the research. In turn, we opted for the semi-structured interview format (Young, 1960; Taylor and Bodgan, 1987; Wimmer and Dominick, 1996 and Howitt, 2019) as it ensured that interviewees could express themselves freely and using their own words in response to semi-

² On February 3, 2023, a consultation of its website shows that the last entry is dated January 2020, although there is no news of the official closure of this lab, at least to date.

open-ended questions. In this case, we also opted for a sample of experts (Hernández Sampieri et al., 2010: 397), which requires the opinion of individuals with a qualified view on the topic. This view was conditioned by being an academic researcher, being an expert in media innovation, or being linked to a particular lab.

To conduct the interviews, we followed the usual procedure in these cases, systematized by authors such as Young (1960) or Howitt (2019). In order to have a more complete vision, we wanted to triangulate the academic perspective with the professional one. To select the candidates, we took into account some of the contributions they had made to the object of study either from a theoretical point of view or from a professional perspective by being involved –at the time of the interview or at some previous moment– in media innovation or in some particular lab. In the following table we present a brief summary of each of the experts interviewed. To learn more about their backgrounds and career paths, please consult the following links:

Table 1. List of interviewed experts

Full Name	Position ³	University/media/lab	Profile
Miriam Hernanz	Director	RTVE lab	Lab Professional
Carol Espona	Journalist	RTVE lab	Lab Professional
César Peña Martínez	Journalist	RTVE lab	Lab Professional
Alejandro Laso	Director of strategy and innovation	El Confidencial lab	Lab Professional
Guiomar del Ser	Editorial Product Editor-in-Chief	El País lab	Lab Professional
Javier García Fernández	Journalist and lab manager	Expansión lab	Lab Professional
Àlex Badia	Co-founder	Barret Films	Expert in media innovation
José Antonio González Alba	Journalist	Sembramedia	Expert in media innovation
Alfredo Casares	Journalist	Instituto de Periodismo Constructivo	Expert in media innovation
Michaëla Cancela	Audio editor	Agencia France Press	Expert in media innovation
José Alberto García Avilés	Full Professor	Universidad Miguel Hernández	Academic researcher
Miguel Carvajal Prieto	Associate Professor	Universidad Miguel Hernández	Academic researcher
José Manuel Noguera Vivo	Associate Professor	Universidad Católica San Antonio	Academic researcher
Ainara Larrondo Ureta	Associate Professor	Universidad del País Vasco	Academic researcher

³ At the time of the interview, we conducted the interview with.

Luis Miguel Pedrero Esteban	Professor and researcher	Universidad Nebrija	Academic researcher
José Luis Rojas Torrijos	Associate Professors	Universidad de Sevilla	Academic researcher
Teresa Zaragoza Fuster	Journalist and Professor	Universidad Miguel Hernández	Academic researcher
José María Valero Pastor	Assistant PhD Professor	Universidad Miguel Hernández	Academic researcher

Source: prepared by the authors

In each case, we drew up the interview guide based on a series of common questions. For reasons of space, we include here the answers to the question on the central feature of the innovation labs according to the interviewees. The interviews lasted an average of one hour and, due to the difficulties of conducting them in person, we conducted them remotely in synchronous online mode through Google Meet or the platform preferred by the interviewee who, in this case, sent the corresponding link. In all cases, and with the explicit permission of the experts, their interviews were recorded with the idea of transcribing the content and then ordering and categorizing it following the method proposed by Taylor and Bogdan (1987).

To analyze the results more efficiently, we found it very useful to work with the Atlas.ti software (version 22), examining the content first at a textual and then at a conceptual level, establishing networks and links between the visions, but also similarities, differences and nuances between the different discourses. The result of successive readings allowed us to ensure internal consistency. Finally, we proceeded to write up the results, which we now present. It should be noted that we had explicit permission from the interviewees to publish their statements in a non-anonymous manner and also that they had time to be able to refine the content of their statements based on a fairly definitive version of the text⁴.

5. Results

For Rojas Torrijos, labs are innovation units whose central mission is precisely that: to innovate, understanding innovation as a mixture of trend research, technological learning and search for solutions that are explored and implemented in the form of new products and formats to expand the technological and narrative possibilities of journalism, adapting them to the demands and characteristics of the new digital environments (Rojas Torrijos, 2021).

In similar terms, for García Fernández (2022), of Expansión's lab, the central feature is the possibility of telling things in a different way that allows the content that users access on paper to be enriched so that "it is not the same as always: a few vignettes of images with an endless amount of text that in the end ends up being boring".

Pedrero considers experimentation to be one of the hallmarks of any lab, since you can't innovate if you don't try it out. In this sense, the lab is "that part of the environment or that environment integrated in the environment" which, as a "capsule", allows innovation based on experimentation, and that is what later gives rise to establishing (or not) that test (Pedrero, 2021). In his

⁴ In any case, all of them were quite satisfied with the version we sent them, with few adjustments in purely formal and expressive matters.

opinion, this work is essential today, since the medium is still subject to routines and conditioning factors that sometimes do not allow us to try new things, to take the work more calmly, to delve into other narrative possibilities or to explore.

From there, that test –in a "multiplicity of formats", adds Badía (2021)– can become a product after a phase of settlement, adjustment and consolidation, but the initial experiment is essential. In turn, Pedrero recognizes that this experimentation can be related to technology, but also to the narrative or the ways of working, distributing, consuming, etc.

For his part, García Avilés considers that a decisive feature in labs is the interdisciplinary nature of the profiles that make them up. This allows journalism professionals to coexist with others from different fields such as information technology, computing or design with the idea that the "sum of this teamwork from different perspectives makes innovation possible" (García Avilés, 2021).

For Cancela this is also one of the central features of any lab: to provide "safe spaces" in which different profiles coexist; people who know the world of journalism in depth along with developers, designers, systems experts or data journalists: "more than anything else it is the possibility of different professions working together within a medium to innovate. To be creative and innovate" (Cancela, 2021).

According to César Peña, this is exactly what happens in the RTVE lab, which brings together journalists with video producers, computer developers and graphic designers, something that allows "unique projects to be created" (Peña, 2021). This view is also supported by Noguera, who considers that the journalistic profile should work hand in hand with profiles specialized in data, programming, user experience, together with other professionals such as the product manager, the audience manager, for example. Regardless of the names, Noguera believes that it is possible for the lab to be the most multidisciplinary place in the media in which the business model, the editorial line and audience development are aligned.

In his opinion, the evangelizing purpose should also be part of any lab because it is not a question of it being the only place in the medium where innovation takes place, but rather that in the short, medium and long term the whole medium is impregnated with this "culture of innovation" to the point of making the existence of the lab itself unnecessary. In this sense, he recognizes that labs are more typical of large media and newspapers with very large structures in which different generations of journalists have lived together, some of them more reluctant and resistant to change. In these newsrooms, which had to make the transition from paper to digital based on a certain "analog legacy", the lab can serve as a place to turn to for example and help (Noguera, 2021).

On the contrary, the new media –which have experienced "a boom" in the last decade as a consequence of the closure of the big media and the generation of a whole "pool of experienced journalists" – are much smaller. This, which at first could be a weakness, has turned out to be an advantage at least for these purposes because it allows them to be more agile and flexible in their line, in their structure, but also in their business model, especially because many of the employees have already "internalized" this mentality and "all this philosophy of entrepreneurship, of design thinking, of Canvas, of lean start up or of the minimum viable product" (Noguera, 2021).

In a similar sense, González Alba considers that the lab has an indispensable role in leading this new culture and that it can become the centralizing axis that capitalizes and guides the cultural change and the assumption of innovation by the entire newsroom. In fact, this should be their function, especially in the current context of accelerated and obligatory digital

transformation. This transformation, which, according to González Alba (2021) "has much more to do with cultural change and less to do with technological tools than one might think", must "undoubtedly" be led by the lab team.

For all this, professionals must be constantly updated both in their knowledge and in terms of production techniques and methods (Zaragoza, 2021). In addition, it is necessary for them to have a certain calmness in the face of the urgency with which everything is lived. In this sense, Hernanz (2021) states that "laboratories think more than they do" because at RTVE, for example, they try to ensure that their product is not so much of quantity "but of quality and differentiation". In this regard, she adds that another differential element is that they usually do not know what they are doing. "We don't feel comfortable with the decisions we make because we don't know if they are going to be understood, which is what innovation requires". "If we knew how to tell the story", she continues, "we would be doing a more traditional or more standardized journalism" (Hernanz, 2021).

For the former head of the RTVE lab, it is also essential that the people who make up a lab are very open to technology and understand that the new way of doing journalism must be based on the traditional accuracy but, at the same time, must be open to trying new things, including the possibility of citizens being a source (Hernanz, 2021).

Valero-Pastor adds two other requirements that, in his opinion, constitute important features in a lab:

- (i) adaptability, being willing to change any of its structures, its professional profiles, its workflows or any of its configurations in order to be always attentive and willing to introduce modifications in the products and in the rest of the company, and.
- ii) the collaborative culture, understanding that, nowadays, a product is no longer journalistic content as such, but it must also integrate requirements related to format, interactivity or user experience. "In the end, it is almost impossible to approach this from the perspective of a single person and, in addition, the product is enriched if it is approached from different points of view" (Valero-Pastor, 2021).

In addition, it is also pointed out that it is necessary for the members of the lab to be able to work with a certain degree of autonomy and freedom. This is the vision of the former director of the Diario de Navarra lab, for whom it is essential that the management provides a space in which professionals can have a certain degree of autonomy, understood as the ability to experiment without necessarily having to generate specific results for production, "especially at the beginning".

For Cancela, freedom is necessary to be creative which, in turn, constitutes "the basis of innovation". This freedom, in addition to the configuration of the teams, also extends to "imagining new formats and testing them on a small scale or even openly", at least to demonstrate that these formats can be created and that they can exist (Cancela, 2021).

Along with autonomy, Casares adds that it is important for the lab to be useful: "the organization has to see that there is a transfer and that it is useful." This usefulness sometimes consists of a specific transfer of results, but other times it is of a more intangible nature, since it refers to the learning that is generated and that will have an impact on the internal culture of the environment. "This," Casares (2021) continues, "is modified by the labs as they incorporate uncertainty, trial and error and experimentation, attitudes and attributes that are not always present in the newsrooms as they focus on meeting very clear production objectives that are often "incompatible" with innovation.

In order to be useful, it is important for the lab to have contact with the newsroom because it must help it to solve journalistic challenges of different types: sometimes related to new narratives, others to new ways of approaching communities or

experimenting with new models to generate revenue. In this regard, Casares recognizes that there are many types of lab and that each medium uses it for what it considers most relevant, including that it can help the medium to ask itself questions that perhaps it would not ask itself and to discover needs that it does not yet have (Casares, 2021).

Laso expresses himself in similar terms, claiming that the members of the lab should be able to "do things". For the director of strategy and innovation of El Confidencial, it is very important that the structure of the company trusts these profiles and their capabilities and does not condition them, so as to get the best out of themselves. This, which for Laso is "super important" today in any company, is essential in the case of laboratories (Laso, 2021).

Larrondo considers the "human factor" to be essential: that the lab should have a team and leaders with a clear strategy, who are very committed to innovation, who know what it is, who have a lot of contact with other media, with other companies, with the university environment and who have creative people who also share this interest, since "(...) in the end, a lab aims to be the avant-garde of the media" (Larrondo, 2021).

From the RTVE lab, Espona also claims the convenience of combining a firm commitment on the part of the management with the will of a group of restless professionals willing to go further: "To innovate you have to have the means and be committed, and that also requires investment. And all of this is accompanied, of course, by those who make it possible. Young, open people who dare to try new things" (Espona, 2021).

In the case of El País, its manager says that for them it is very important "not to take anything for granted", to be able to open the mind and think in less conventional terms in the public service that their newspaper can offer. "The question is that we know how to get it right in the way we transmit a story, an idea, a coverage without being subjected to a certain pattern, but that we look for a lane in which to get it right and reach the environment" (Del Ser, 2021). This, Del Ser continues, does not mean "doing more or less crazy things systematically", but trying new formulas and formats when it is considered that the information to be transmitted requires an experiment. To this end, it is advisable to be flexible, but also balanced when choosing narrative resources, since it is not just a matter of "trying for the sake of trying, innovating for the sake of innovating, adding more or less color to things, more or fewer special effects". It is a matter, she continues, of finding the balance between the journalistic service provided by the newspaper and the best way of providing that service to the user.

In a similar vein, Carvajal points out that it is essential for the newspaper to know its public, including the audience, the employees and the company. In his opinion, it is this knowledge that will allow the lab to identify problems, empathize with the way they consume, know how the media works, what the needs of the staff are, etc. Otherwise, if there is no real data, none of the experiments, tests or products born in the lab will be successful. "They will simply be the creativity of a genius locked in his world" (Carvajal, 2021).

6. Discussion and conclusions

Labs are highly innovative internal management formulas that began, first in the United States and then in different European countries, as spaces for the creation of new narratives and that, over time, have been transformed into product development

laboratories. On other occasions, they continue to be departments dedicated to the exploration and generation of digital narratives, taking advantage of the possibilities generated by the evolution of the Internet itself.

At the same time, they are places of experimentation that emerge as a strategic response to the current situation experienced by many media today, afflicted by a serious multifactorial crisis that makes it urgent to find new narratives, products and services that meet the information needs of a consumer who has disconnected from the traditional media system and has chosen other ways of being informed.

In this context, it seems wise to provide independent spaces in which to think, analyze, test, but above all, in which to have enough time, resources and perspective to design different solutions, a need that is impossible to achieve in the frenetic pace of day-to-day operations. In this regard, all interviewees align with the discourse that news organizations are not very good at achieving exploratory innovation (O'Reilly and Tushman, 2004; Storsul and Krumsvik, 2013; Westlund and Lewis, 2014 and Tameling, 2015) perhaps not for lack of will but because the daily production of news, focused on short-term demand and efficient production, usually absorbs most of the creative energies of professionals (Porcu et. al, 2020: 1423).

Yet, as March (1991) and O'Reilly and Tushman (2013) remind us, if organizations seek to survive in the long term, they need the "organizational ambidexterity" (Maijanen and Virta, 2017) that allows the two types of innovation –the exploitative and the explorative– to be reconciled because, although the focus on exploitation seems attractive in the short term, it can become "self-defeating" in the long run (Porcu et al., 2022). Moreover, without exploration, the organization cannot embrace and develop new ideas that are creative, which can result in organizations that, far from taking risks, become "trapped in suboptimal stable equilibria" (March, 1991: 71). Understandably, this danger seriously compromises the potential of the lab as a privileged space in which to promote exploratory innovation.

Otherwise, the results reflect few substantial differences between the experts' discourses, depending on whether they are academics or professionals. Both agree that labs are innovation units and that this is, therefore, their mission, their purpose and their only "central feature". From this point on, the interviewees emphasize different signs of identity which, nevertheless, are complementary and never contradictory. Nor do the professionals' discourses vary substantially according to the lab in which they work.

They stress, for example, the importance of experimentation, since innovation cannot be achieved without testing. From there, this test can be converted into a product. This will be followed by a phase of settling, adjustment and consolidation, but the initial experimentation is key. Moreover, this experimentation can take many different forms, since innovation can come from technology but also from narrative, ways of working, distributing, consuming, etc.

That experimentation -other experts point out in line with the findings of the academic literature (Küng, 2015, 2017 and Zaragoza and García Avilés, 2022)— is best approached from interdisciplinary teams in which, in addition to conventional journalists, one can find data journalists, computer developers, graphic designers, video makers, experts in systems, user experience and usability, audience managers, etc. Thus, labs are configured as "safe spaces" when it comes to hosting this diversity of profiles that cohabit to work together, dialogue and generate unique projects in which the business model, editorial line and audience development are aligned.

It is also mentioned that every lab should have an evangelizing purpose to avoid being the only place in the media where innovation takes place, a greater risk in the case of large newspapers with bulky structures in which different generations of journalists have coexisted, some of them more reluctant and resistant to change. In these cases, it is up to the lab to lead the transition to the new culture. To this end, it is essential to be open to technology, to constantly update both knowledge and production techniques and methods, and to be able to work with adaptability and agility but also with a certain degree of calm.

The readiness of the labs to change any of their structures, profiles, workflows and various configurations in order to introduce improvements in the products and in the rest of the company is also essential. In addition, a certain collaborative culture is required since the journalistic product has to combine content design with good formatting, adequate interactivity and an optimal user experience, a requirement that cannot be addressed from the perspective of a single person.

It also points to the need for lab professionals to be able to work with a certain degree of autonomy and freedom, since creativity is "the basis of innovation". In addition to the configuration of teams, this freedom extends to the possibility of imagining new formats and testing them on a small scale or even openly. Working autonomously also includes being able to experiment without having to reach specific production targets, especially when the lab is taking its first steps. Learning itself should also serve as an indicator or output of the work being carried out.

Another interviewee emphasizes that it is important for the lab to maintain close contact with the newsroom because that is what will help solve journalistic challenges, whether they refer to interactive narratives, new ways of approaching communities or revenue generation. In this sense, the responses of the interviewees confirm that, despite the fact that Spanish laboratories have been in existence for more than a decade, their configuration -that of those that survive- is elastic and, in many aspects, is still under construction today. In any case, the greater sustainability of the second-generation labs (Hogh-Janovsky and Meier, 2021 and García Avilés, 2023) compared to those of the first generation is also noted, precisely because of this greater integration with the newsroom.

It also seems key that the laboratory should be the result of a firm commitment on the part of the management to design a clear strategy and place a leader who is highly committed to innovation at the helm, so that the lab becomes an outpost of the medium. This view is in line with that of Küng (2017) when she recalls the importance of planning innovation in a strategic way, beyond those wagers on technological artifices that only turn out to be tactical and opportunistic.

The main limitation of our study is that it examines only the views of some of the most prominent experts in innovation laboratories in Spain. Although the findings offer interesting insights by systematizing the discourse of a set of qualified voices, the results cannot be generalized. Nor can it be ignored that the research is framed in an unusually complex context, marked by the worldwide impact of the covid-19 crisis which, as is understood, has not helped the progressive consolidation of these spaces either.

As future lines of research, it would be interesting to broaden the focus from here to include the vision of other experts in the field of Spanish –such as those linked to the labs of the aforementioned media in Peru and Argentina– but also those responsible for some of the labs that are most active in Europe and the United States. It would also be useful to keep an eye on how the second-generation labs evolve in their integration with the newsroom and in their use of agile methodologies in order to find out what difficulties they are experiencing, but also what strategies have proved to be the most efficient in overcoming

them. It also seems interesting to find out why they decided to close those labs that have not continued their activity in order to extract lessons learned on how to reverse these possible causes. In order to continue to build knowledge, it could be useful to further conceptualize the interactive narratives generated in the labs and to examine user preferences in order to carry out exploratory innovation to design products and services that are better suited to their needs.

7. Acknowledgements

Article translated into English by Harvey Holtom.

This work has been supported by the Madrid Government (Comunidad de Madrid-Spain) under the Multiannual Agreement with UC3M in the line of Excellence of University Professors (EPUC3MXX), and in the context of the V PRICIT (Regional Programme of Research and Technological Innovation).

8. Specific contributions of each author

	Name and surname
Conception and design of the work	Susana Herrera Damas
Methodology	Susana Herrera Damas
Data collection and analysis	Christian Camilo Satizábal Idárraga and Susana Herrera Damas
Discussion and conclusions	Susana Herrera Damas and Christian Camilo Satizábal Idárraga
Drafting, formatting, version review and approval	Susana Herrera Damas and Christian Camilo Satizábal Idárraga

9. Bibliographic references

Atkins, R. (2022). Journalism is not a given in people's lives. Here's how to rethink the future of news. *Reuters Institute*. http://bit.ly/3IYdPuo

Baars-Van Moorsel, M.A.A.H. (2003). Leerklimaat. De culturele dimensie van leren in organisaties. Dutch University Press. https://bit.ly/3l3wNI5

Benítez de Gracia, M.J. y Herrera Damas, S. (2020). Cómo producir reportajes inmersivos con vídeo en 360º. UOC.

Boyles, J.L. (2017). Laboratories for news? Experimenting with journalism hackathons. *Journalism*, 21 (9), 1-17. https://doi.org/10.1177/1464884917737213

Buijs, K. (2014). *Regiojournalistiek in spagaat: De kwaliteit van het redactieproces in de regionale journalistiek; een case-studie.* Boom Lemma.

Cameron; K.S. & Quinn, R.E. (2011). *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*. John Wiley & Sons.

Clases de Periodismo (2018). Esto debe de saber sobre el laboratorio de El País para contar historias con una "filosofía nativamente digital". *Clases de Periodismo*. http://bit.ly/3F8y0on

Cools, H.; Van Gorp, B. & Opgenhaffen, M. (2022). New Organizations, Different Journalistic Roles, and Innovative Projects: How Second-generation Newsroom Innovation Labs are Changing the News Ecosystem. *Journalism Practice*, online first, 1-16. https://doi.org/10.1080/17512786.2022.2097940

Donaire Pitarch, D. (2016). *El auge de los laboratorios de innovación en los medios de comunicación*. Trabajo de Fin de Grado. Castellón: Universitat Jaume I de Castelló. https://bit.ly/3L99kjr

Fortunati, L. & O'Sullivan, J. (2019). Situating the Social Sustainability of Print Media in a World of Digital Alternatives. *Telematics and Informatics*, 37, 137-145. https://doi.org/10.1016/j.tele.2018.04.005

García-Avilés, J.A. (2018). Resultados de la innovación en los laboratorios de medios: el caso de El Confidencial.LAB. *El Profesional de la Información*, 27 (2), 359-366. https://bit.ly/3ZR5NKs

García-Avilés, J.A. (2020). Laboratorios de innovación en los medios: la transformación de un modelo. *Blog del Master en Innovación en Periodismo*. http://bit.ly/3l0Y7qj

García-Avilés, J.A. (2021). Review Article: Journalism Innovation Research, a Diverse and Flourishing Field (2000-2020). *El Profesional de la Información*, 30 (1). https://doi.org/10.3145/epi.2021.ene.10.

García-Avilés, J.A. (2023). Media labs de segunda generación: aceleradores de innovación periodística. *Blog del Master en Innovación en Periodismo*. http://bit.ly/3ZBkvWx

García Ortega, A. y García-Avilés, J.A. (2018). Gamificación del contenido periodístico para mejorar el engagement: Análisis de cuatro casos de éxitos. En J.L. González-Esteban y J.A. García-Avilés (coords.). *Mediamorfosis. Radiografía de la innovación en el periodismo*. Universidad Miguel Hernández, 151-174.

González Alba, J.A. (2017). Los labs de medios en España: la innovación desde el área de la organización periodística. *Cuadernos de Periodistas*, 33, 49-63. https://bit.ly/3J62N6u

Heijboer, M., Korenhof, M. & Pantjes, L. (2013). Een krachtige leer cultuur voor continu leren. *Opleiding & Ontwikkelling*, 6, 6-11.

Hernández Sampieri, R., Fernández Collado, C. y Baptista Lucio, M.P. (2010). *Metodología de la investigación*. McGraw Hill. 5ª edición.

Hogh-Janovsky, I. & Meier, K. (2021). Journalism Innovation Labs 2.0 in Media Organisations: A Motor for Transformation and Constant Learning. *Journalism and Media*, 2, 361-378. https://doi.org/10.3390/journalmedia2030022

Howitt, D. (2019). Introduction to qualitative methods in psychology. Putting Theory Into Practice. Pearson. 4th edition.

Küng, L. (2015). Innovators in digital news. Tauris.

Küng, L. (2017). Going Digital. A Roadmap for Organisational Transformation. Reuters Institute. http://bit.ly/3J7ExAN

López Hidalgo, A. y Ufarte Ruiz, M. (2016). Laboratorios de periodismo en España. Nuevas narrativas y retos de futuro. $\acute{A}mbitos$, 34, 1-12. https://bit.ly/3YD10QE

Maijanen, P. & Virta, S. (2017). Managing Exploration and Exploitation in a Media Organisation-aCapability-Based Approach to Ambidexterity. *Journal of Media Business Studies*, 14 (2), 146-165. https://doi.org/10.1080/16522354.2017.1290025

March, J.G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2 (1), 71-87. http://bit.ly/3ZCTceq

Maximini, D. (2015). The Scrum Culture. Springer.

Mediamorfosis (2019). Patricia Gosálvez, Caso El País Lab. YouTube. http://bit.ly/3ZDXfHc

Mills J. & Wagemans A. (2021). Media labs: Constructing journalism laboratories, innovating the future: How journalism is catalysing its future processes, products and people. *Convergence*, 27(5), 1462-1487. https://doi.org/10.1177/1354856521994453

Moultrie, J., Stevens, J. & Crilly, N. (2008). Designing and design thinking in strategy concepts: frameworks towards an intervention tool. *International DMI Education Conference Design Thinking: New Challenges for Designers, Managers and Organizations.* 14-15 April, ESSEC Business School, Cergy-Pointoise, France. https://bit.ly/41ThthI

Nonaka, I. (1994). Dynamic Theory of Organization Knowledge Creation. *Organization Science*, 5 (1), 14-37. https://doi.org/10.1287/orsc.5.1.14

Nunes, A.C.B. (2020). O que é inovação em mídia e jornalismo? Uma análise de media labs e seus projetos / What is media and journalism innovation? An analysis of media labs and their projects. Thesis for: PhD in Social Communications at PUCRS (Brazil) and UBI (Portugal).

Nunes, A.C.B. & Mills, J. (2021). Journalism innovation: how media labs are shaping the future of media and journalism. *Brazilian Journalism Research*, 17 (3), 652-679.

O'Reilly, C.A. & Tushman, M.L. (2004). The Ambidextrous Organization. Harvard Business Review, 82 (4), 74-83.

O'Reilly, C.A. & Tushman, M.L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives*, 27 (4), 324-338. https://doi.org/10.5465/amp.2013.0025

Orrantia, A. (2019). Diez claves para contar buenas historias en podcast. UOC.

Ossorio Vega, M.A. (2017). No creo que haya que reinventar completamente el periodismo, pero sí adaptarlo y transformarlo. *Media-tics*. http://bit.ly/3LdmHyR

Palomo, B. y Palau-Sampio, D. (2016). El periodista adaptativo. Consultores y directores de innovación analizan las cualidades del profesional de la comunicación. *El Profesional de la Información*, 25 (2), 188-195. http://bit.ly/3mJeDf0

Paulussen, S. (2016). Innovation in the Newsroom. En Witschge, T., Anderson, C.W., Domingo, D. & Hermida, A. (eds.). *The Sage Handbook of Digital Journalism.* Sage, 192-206.

Porcu, O. (2020). Exploring innovative learning culture in the newsroom. *Journalism: Theory, Practice & Criticism,* 21 (10), 1556-1572 (first published online in 2017) https://doi.org/10.1177/1464884917724596

Porcu, O., Hermans, L. & Broersma, M. (2020). Unlocking the Newsroom: Measuring Journalists' Perceptions of Innovative Learning Culture. *Journalism Studies*, 21 (10), 1420-1438. https://doi.org/10.1080/1461670X.2020.1758956

Porcu, O., Hermans, L. & Broersma, M. (2022). Trust and Fear in the Newsroom: How Emotions Drive the Exchange of Innovative Ideas. *Journalism Studies*, 23 (9), 999-1139. https://doi.org/10.1080/1461670X.2022.2061577

Porter, M.E. (1985). Competitive Advantage: Creating and Sustaining Superior Performance. Free Press.

Ries, E. (2011). The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. Crown Publishers.

Rogers, E.M. (2003). *Diffusion of innovations*. Free Press, 5th edition.

Rojas Torrijos, J.L. (2014). Periodismo deportivo. Nuevas tendencias y perspectivas de futuro. *Correspondencias & Análisis*, 4, 177-190. http://bit.ly/3T39gDM

Ryfe, D.M. (2012). Can Journalism Survive: An Inside Look at American Newsrooms. Polity Press.

Sádaba, Ch. & Salaverría, R. (2016). Los labs de medios en España: Modelos y tendencias. En Casero Ripollés, A. (coord.). *Periodismo y democracia en el entorno digital.* Sociedad Española de Periodística, 149-164.

Salaverría, R. (2015). Los labs como fórmula de innovación en los medios. *El Profesional de la Información*, 24 (4), 397-404. https://bit.ly/3LdM83t

Schenke, W. (2015). *Connecting practice-based research and school development: Cross-professional collaboration in secondary education*. PhD Thesis: Universiteit van Amsterdam, Amsterdam. https://bit.ly/3ZDKtZt

Schwaber, K. & Sutherland, J. (2017). The Scrum Guide. http://bit.ly/3ZDv631

Scolari, C.A. (2013). Narrativas transmedia: Cuando todos los medios cuentan. Deusto.

Seville, E.W. (2017). Resilient Organizations: How to Survive, Thrive and Create Opportunities Through Crisis and Change. Kogan Page.

Sixto, J.I. (2019). "News Labs": ¿la fórmula de innovación en los medios? *Asociación de Entidades Periodísticas Argentinas*. http://bit.ly/41Wuasl

Storsul, T. & Krumsvik, A.H. (2013). What is Media Innovation? En Storsul, T. & Krumsvik, A.H. (eds.). *Media Innovation, a Multidisciplinary Study of Change*. Nordicom, 13-27.

Sullivan, B. (1997). In Action: Creating the Learning Organization. Personnel Psychology, 50 (2), 492-495.

Tameling, K. (2015). En wat doen we online? Crossmediale dilemma's op de Nederlandse nieuwsredactie. Boom Lemma Uitgevers.

Tanaka, A. (2011). Situating Within Society: Blueprints and Strategies for Media Labs. En Plohman, A. (ed.). *Blueprint for a Lab of the Future*. Baltan Laboratories, 12-20.

Taylor, S.J. y Bogdan, R. (1987). Introducción a los métodos cualitativos: la búsqueda de significados. Paidós.

Usher, N. (2014). Making News at The New York Times. Media World.

Valero-Pastor, J.M. (2020). La construcción de la innovación en los medios de comunicación nativos digitales: los casos de El Confidencial y Quartz. Tesis Doctoral. Universidad Miguel Hernández.

Valero-Pastor, J.M. & Carvajal, M. (2019). Transferencia de conocimiento para la innovación en las organizaciones periodísticas. Estudio de casos españoles. *Revista Latina de Comunicación Social*, 74, 1154 a 1172.

Valero-Pastor, J.M. Carvajal-Prieto, M. y García-Avilés, J.A. (2019). Flujos de trabajo para el periodismo postindustrial: métodos y programas para una comunicación organizacional más ágil y transversal. *El Profesional de la Información*, 28 (5) https://doi. org/10.3145/epi.2019.sep.14

Vara Miguel, A. (2016). El Confidencial: Innovar en contenido como clave del éxito. En Sádaba, Ch., García Avilés, J.A. & Martínez-Costa Pérez, M.P. (coords.). *Innovación y desarrollo de los cibermedios en España*. Eunsa, 165-177. https://bit.ly/3Fd3sll

Vázquez-Herrero, J. (2018). Los Laboratorios periodísticos: Estudios de caso de El Confidencial. Libro de Comunicaciones del VI Congreso Internacional de la AE-IC- 'Comunicación y Conocimiento' Sección: Producción y Circulación de Contenidos, 2109-2122. https://bit.ly/3ZJ0ldi

Vázquez-Herrero, J.; González-Neira, A. y Quintas-Froufe, N. (2019). La audiencia activa en la ficción transmedia: plataformas, interactividad y medición. *Revista Latina de Comunicación Social*, 74, 73-93. https://bit.ly/3l5opHW

Vázquez-Herrero, J.; López García, X. & Gifreu-Castells, A. (2019). Evolución del documental interactivo: Perspectivas y retos para su consolidación. *Estudos em Comunicação*, 29, 127-145. https://bit.ly/423g2gY

Villar Gutiérrez, M.A. (2017). InfoPlayas e infoEsquí, dos experimentos de 'periodismo robot' para los lectores. *Vocento Media Lab.* http://bit.ly/3IYfPCU

Vizoso, Á. (2020). TheCorrespondet.com, ElConfidencial.com y Observador.pt tres estrategias en el uso de la infografía periodística en los cibermedios. *Actas del VII Congreso Internacional de la AE-IC*, 1543-1564.

Vocento (2019). La mitad del mundo. ABC. http://bit.ly/425sgFU

 $Wang, D., Su, Z. \& Yang, D. (2011). Organizational culture and knowledge creation capability. \textit{Journal of Knowledge Management}, \\ 15 (3), 363-373. \ \text{https://doi.org/} 10.1108/13673271111137385$

Watkins, K.E. y Marsick, V.J. (1996). In action: Creating the learning organization. American Society for Training and Development.

Westlund, O. & Lewis, S.C. (2014). Agents of Media Innovations: Actors, Actants, and Audiences. *Journal of Media Innovations*, 1 (2), 10-35. https://doi.org/10.5617/jmi.v1i2.856

Wimmer, R.D. y Dominick, J.R. (1996). La investigación científica de los medios de comunicación: una introducción a sus métodos. Bosch.

Yolles, M. (2009). Competitive advantage and its conceptual development: an exploration. *Business Information Review*, 26 (2), 93-111. https://doi.org/10.1177/0266382109104411

Young, P.V. (1960). Métodos científicos de investigación social. Introducción a los fundamentos contenido, método, principios y análisis de las investigaciones sociales. Instituto de Investigaciones Sociales de la Universidad Nacional Autónoma de México.

Zaragoza Fuster, M.T. (2022). Los laboratorios de innovación de los medios de servicio público europeos. Los casos de BBC News Labs y RTVE Lab. Tesis Doctoral. Universidad Miguel Hernández.

Zaragoza Fuster, M.T. & García Avilés, J.A. (2020). The Role of Innovation Labs in Advancing the Relevance of Public Service Media: The Cases of BBC News Labs and RTVE Lab. *Communication & Society*, 33, (1), 45-61.

Zaragoza Fuster, M.T. & García Avilés, J.A. (2022). Public Service Media laboratories as communities of practice: implementing innovation at BBC News Labs and RTVE Lab. *Journalism Practice*. https://doi.org/10.1080/17512786.2022.2088602