

Innovative innovation in journalism

[ACCEPTED VERSION]

How to cite: Sixto-García, J., & López-García, X. (2023). Innovative innovation in journalism. *Journalism*, 0(0). <https://doi.org/10.1177/14648849231219359>

Previous studies over the past 23 years have illustrated how the journalistic field has embraced innovative processes. While some of these processes were fully developed at that time, others were still in the process of development or implementation. An ad hoc analysis sheet was designed using innovation categories, where each item is assigned a score based on the level of innovation, ranging from low to high. This methodological instrument is proposed for the analysis of high innovation in news websites and it is applied to narratives, data journalism, audience involvement, co-creation, verification, ethics, corporate information and content distribution in the most widely consumed news sites across Europe, the Americas, Asia Pacific and Africa. What is discovered is that there are no more evolved trends in some regions than in others. Nevertheless, European and American sites offer a broader range of options compared to their African and Asian counterparts.

New media; high innovation; journalism; Europe; Americas; Asia Pacific; Africa.

1. Introduction

The transformation of the communicative ecosystem in the digital society has forced the media into a process of constant adaptation, one that continues to set trends today. While digital native media aim for consolidation –something that many have already achieved–, social networks are furthering their development after having experienced a vast expansion. This growth has altered the identity of social networks to the extent that many can be viewed as platforms that operate as service ecosystems (Alaimo, Kallinikos & Valderrama, 2020).

This ongoing reorganization process brings challenges for well-established journalistic forces, as well as for new arrivals. To deal with the rise of new contemporary platforms (Cozzolino, Corbo & Aversa, 2021), strategies are implemented that combine competitiveness and cooperation. In an ecosystem where the media structure has changed significantly, digital applications, social media platforms and artificial intelligence are shaping media use and production (Krumsvik et al., 2019; Liu, Liu & Jensen, 2020).

In this context, what emerges is a conglomerate of media outlets that are increasingly shaped by the rise of information technologies (Humprecht et al., 2022) and that operate in a scenario characterized by the convergence of two types of currency: money and attention (Manzerolle & Wiseman, 2016). This has led to a societal model marked by platformization (van Dijk, Poell & de Waal, 2018) and communication through mobile devices (Huh, 2020).

The Internet has become the omnipresent digital environment in which people communicate, search for information and make decisions (Kozyreva, Lewandowsky & Hertwig, 2020). The current model of mediated communication is characterized by a generalized dependence on technologies, which has increased during the pandemic (Nguyen et al., 2020). This trend seems to be shaping the immediate futures of the people and groups that organize themselves through

digital information networks, which predominate as communication channels (Milenkova & Lendzhova, 2021).

It is in this scenario where digitization fuels profound transformations of journalistic routines and practices (Lecheler & Kruikemeier, 2016), and where the audience, with their potential to actively take action, gains prominence within emerging models (Nelson, 2019). This active audience actually participates in the news industry. Therefore, it is necessary for journalists to have training that qualifies them to perform diligent verification processes and the preparation of stories relevant to people's lives (Deuze, 2019), without forgetting that professionals who practice digital journalism, as in the past, must comply with professional deontological standards (Bachmann, Eisenegger & Inghoff, 2022).

The current communication landscape is so complex that no one is immune to misinformation (Saling et al., 2021). This makes it necessary to review the normative arguments about journalism and democracy, as well as their viability under radically new conditions (Waisbord, 2018). The cultivation of quality ethical journalism is vital for the proper functioning of societies in the digital age (Esser & Neuberger, 2019), although the quality of the media's work continues to be called into question.

Updated journalistic practices improve the quality of current news products. Knowledge of the ins and outs of these new practices, as well as the importance of the meaning of journalistic culture as a symbolic field for society (Anderson, 2020), should shed light on the trends, the paths that need to be explored, the gains made, and the pending challenges. The innovations of recent years, largely driven by technology (Walsh & Berry, 2021) and which mainly affect information and content, audiences, methods and resources and communication companies (Lopezosa et al., 2021). This upheaval has opened many doors to help ensure the future of journalism through experimentation with modern forms of journalistic practice.

Especially after the COVID-19 pandemic, newsroom practices have undergone significant changes, influenced by factors such as remote work, collaborative efforts and other factors. The digital transformation of legacy media has been accelerated (García-Avilés et al., 2022), since the pandemic brought about new opportunities to explore innovation and transformative changes in news work, particularly during coverage (Konow-Lund, Mtchedlidze & Barland, 2022). Moreover, the past decade has witnessed a surge in the establishment of newsroom innovation labs, aimed at modernizing journalistic workflows (Cools, Van Gorp & Opgenhaffen, 2022). These initiatives reflect a growing recognition of the need to continue satisfying increasingly demanding audiences (Goggin, 2020).

2. Does high innovation really exist in journalism?

An essential hallmark of innovation is that the idea, practice, or object is perceived as new, so that innovation always implies a new source of knowledge. This links innovation to persuasion and makes the product more attractive to the user (Rogers, 2003). Media innovation can be defined as an interwoven and interdependent process of innovation in both media technologies and media practices (Bruns, 2004). The complex power relations or the ethical imperatives are important to study media innovations (Ní Bhroin & Milan, 2020), but analyzing media innovation also implies seeing significant changes in production and technological development (Krumsvik et al., 2019).

In recent years, a multitude of new, innovative approaches to journalistic practices have emerged. These include narrative models (multimedia, immersive journalism...), strategies related to audience involvement (citizen journalism, co-creation and newsgames) and data journalism (Esser & Neuberger, 2019; Lawrence, Radcliffe & Schmidt, 2018). Some methods, like multimedia journalism or the cross-media and cross-promotion of content on social networks, are already fully established in their own right. Others, like immersive journalism, 360 video or robot journalism –linked to artificial intelligence–, are yet to be utilized to the same extent (Lopezosa et al., 2021; Liu, Liu & Jensen, 2020).

After more than 28 years, digital journalism has proven its worth in the professional and academic settings (Salaverría, 2019). In the era of mobile media (Bui & Moran, 2020), digital journalism continues to explore new ground to reach users in networked societies. This is a challenge that professionals face by being attentive to their audiences (Swart et al., 2022), through co-creation initiatives (Sixto-García, Rodríguez-Vázquez & Soengas-Pérez, 2022) and by experimenting with transformed narratives, both inherited and digital native. Genres and content, with their different ways of using current technologies, are among the most researched areas in the field of journalistic innovation (García-Avilés, 2021). These areas provide opportunities to experiment, both in the MediaLab and in the newsrooms with prototypes of news products (Boyles, 2020).

The impact of technology on journalism has been apparent since the beginning of the third millennium (Pavlik, 2000). Innovation processes centered around adapting to these new journalistic practices. Journalists were required to have digital skills to perform new tasks (Reyes-de-Cóar, Pérez-Escolar & Navazo-Ostua, 2022). Newsrooms also incorporated technologists (engineers responsible for the socio-technological changes within journalism) who were integrated into journalistic production processes (Lischka, Schaetz & Oltersdorf, 2022). Together, these multidisciplinary teams created in some newsrooms, and the hybrid profiles of modern professionals, delivered impactful stories. This was especially true in the field of data journalism, which took on new forms and demonstrated the strengths and weaknesses of the overlap between journalistic and non-journalistic roles in the newsrooms (de Lima-Santos, 2022).

This shifting landscape challenges pre-held assumptions of mainstream journalism and explores new avenues, ranging from financial models to corporate information and sustainability considerations. It is in these areas where digital journalism has proven most valuable, even when having to operate within a framework of significant experimentation. At the beginning of the second decade of the millennium, it was already evident that, within the framework of environmental journalism (Hermida, 2010), new thinking was transforming how journalists went about their work. In recent years, this has become even more so the case as journalistic companies have adapted to social media (Hermida & Mellado, 2020). Platforms like X, Facebook and Instagram, already fully integrated into everyday journalistic communication (Brems et al., 2017), and other more innovative ones such as TikTok, invite the media to interact with the youth via briefer, more visual and dynamic narratives (Vázquez-Herrero, Negreira-Rey & López-García, 2022). Much of the innovation in the media is promoted by journalists who lead the process of change in newsrooms (García-Avilés et al., 2019).

Long formats, the visualization of information and data, make up the recipe for innovation in digital journalism as far as better understanding the impact that journalism has on the public,

and in stimulating new ways of thinking that further maximize journalism's strengths (van Krieken & Sanders, 2019). Total journalism takes advantage of all innovations and incorporates users and engages them. It is hoped that this will lead to even better ways to tell the stories that citizens need the most in their daily lives (Vázquez-Herrero et al., 2022). Although it is still a work in progress, it has garnered the attention of many media outlets, journalists, experts in other disciplines, and indeed many citizens.

Journalists, who have always defined themselves as the qualified and authorized narrators of events, are now aware of the fact that certain traditions have been left behind, and that the arrival of new actors, from bloggers as first intruders (Eldridge, 2018) to active audiences (Masip, Ruiz-Caballero & Suau, 2019), have established new approaches to production (Banjac & Hanusch, 2022). Sharing, clicking and linking, practices that are now mainstream (Costerá & Groot, 2014), have laid the foundations for updated storytelling, although today the trend towards passive consumption prevails (Pantic, 2020). Digital native media are undergoing processes of adaptation and reinvention hand in hand with narratives and formats, incorporating user participation and redefining journalistic narratives (Sixto-García et al., 2023).

The trends of the third decade of the millennium seem to show a lot of experimentation in attempts to implement high innovation models. Digital media explore new fields and laboratory prototypes for journalism where the only limit is the extent to which they are accepted by users (García-Orosa, López-García & Vázquez-Herrero, 2020). But what distinguishes innovation from high innovation? Is the innovation that the current media are applying truly innovative?

More than 20 years have passed since Christensen (1997) coined the concept of disruptive innovation to explain that organizations that propose simple solutions displace more powerful ones. From 2000 to 2020, research on innovation in journalism was a diverse and thriving field (García-Avilés, 2021) and some innovations have substantially influenced the organization of society, such as fact-checking, although others are still far from being widely adopted in the industry (Carvajal et al., 2022). At this moment we can differentiate between innovation (or innovative practices that are already consolidated in the industry to a certain extent) and high innovation, determined by the technological pressures that the technological field exerts on journalism today (Wu, Tandoc & Salmon, 2019). This is the case when we refer to automated processes without human intervention (Johnson, 2023) or to a cocreated product by users. Innovation is more open when common challenges are addressed, regardless of the field of study (Iversen, & Hydle, 2023). In this sense, this research is made necessary by the need to investigate the most *innovative innovation* practices within the most successful news websites in the world –those that are most popular among the public–:

RQ1: What high innovation practices are being implemented in the most consumed news websites?

RQ2: Are these innovations really innovative?

3. Sample and methodology

To verify the degree of the implementation of high innovation in digital media, the most read media in the world were selected according to quantitative criteria. The Reuters Institute Digital News Report 2022 (Newman et al., 2022) divides the planet into four large geographic areas (Europe, Americas, Asia Pacific and Africa). From each of these areas, the digital news site

with the most weekly visits in each of the five countries with the most Internet penetration was selected (table 1). The sample ensures that the most consumed information sites in the world are analyzed. Furthermore, the uniformity of the criteria is guaranteed despite the existence of a digital divide, that is, any unequal distribution in access, use or impact of technologies of information and communication derived from geographical or geopolitical criteria. In Africa, only three websites were examined, as they are the only ones recorded by the Digital News Report. It should be noted that in all cases, the most consumed online site in each country was selected, regardless of whether it was a digital native media outlet, the online version of a traditional media outlet, or a news website.

Table 1. Most consumed online media in the countries with the highest Internet penetration

Geographic area	Country	Internet penetration	Online media
Europe	Denmark	98%	<i>DR News online</i>
	Norway	98%	<i>VG Nett</i>
	Germany	96%	<i>t-online</i>
	Netherlands	96%	<i>NU.nl</i>
	Sweden	96%	<i>A.onbladet online</i>
Americas	Canada	94%	<i>CBC News online</i>
	Chile	92%	<i>Meganoticias.cl (Mega)</i>
	Argentina	91%	<i>Infobae</i>
	United States	90%	<i>Yahoo! News</i>
	Peru	82%	<i>El Comercio online</i>
Asia Pacific	South Korea	96%	<i>Naver</i>
	Japan	95%	<i>Nippon TV News online</i>
	Taiwan	92%	<i>Yahoo! News Taiwan</i>
	Hong Kong	89%	<i>TVB News online</i>
	Malaysia	89%	<i>Malaysiakini</i>
Africa	Kenya	85%	<i>Citizen Digital</i>
	Nigeria	73%	<i>BBC News online</i>
	South Africa	58%	<i>News24</i>

Source: Own elaboration using data from the Digital News Report (Newman et al., 2022).

Based on the review of the literature, an analysis sheet was prepared (Bardin, 2011) in which all the modalities of high innovation that are practiced in the media industry today were incorporated. It was divided into eight parts:

1. Narratives: options were considered that ranged from the suggestion or recommendation of topics, to high innovation through immersive journalism, instant narratives and robot journalism linked to artificial intelligence.
2. Data journalism: in this section, the use of big data for the production of news, the use of statistics for data processing or that the media have a laboratory are valued.
3. Audience involvement: the different ways that the public can exercise citizen participation through forums, suggestion boxes and polls are analyzed.
4. Co-creation: co-creation transcends citizen participation. Thus, it is necessary to differentiate both types of innovation. In the case of co-creation, the participation of the public in the creation, development and marketing of the products is valued, as well as the facilities for sending co-creations and encryption guarantees.

5. Verification and transparency: on the one hand, transparency practices as part of the operation of the media outlets. On the other, the dissemination of information linked to investigative journalism, as well as verification and fact-checking exercise are taken into account.
6. Visibility of journalistic deontological standards: the actions implemented to give visibility to the good practices implemented by the media are evaluated. These include rectifications, accessibility to the code of ethics and membership commitments.
7. Corporate information: innovation means that the media also act with social responsibility, so it is important to determine the transmission models for corporate information and media literacy practices.
8. Content distribution: multiplatform dissemination is already a widely practiced technique. Therefore, it is necessary to assess whether content distribution occurs in different platforms, whether belonging to the same communication group or through external media, via mostly social networks and instant messaging applications (cross-media), and if this content is promoted within media under the same ownership (cross-promotion).

It is important to note that only those items that demonstrate true innovation are included in the analysis sheet. Multimedia journalism does not feature because it is already implemented by all media and is a fully established practice that does not imply a high level of innovation. The same is true of infographics and information visualization. In cross-media dissemination, only the most pioneering networks such as TikTok or Twitch are considered highly innovative, so distribution on consolidated networks such as X, Facebook or Instagram is not valued. Similarly, that the user can share news on WhatsApp does not entail innovation according to our criteria, even though the automatic distribution carried out through Line is considered innovative. YouTube channels are also considered highly innovative because they require the adaptation of the news to a longer audiovisual format. Both in this case and in the other avant-garde social networks, they are only counted if the corporate website offers widgets.

In each of the eight categories, all the modalities included in the previous studies were incorporated and a score was awarded based on the degree of innovation and development demonstrated. The minimum score is 1 point and the maximum is 22, although the difference between two consecutive items is not necessarily 1 point, but rather depends on the developmental level, so that two different items can obtain the same score if they demonstrate the same amount of innovation (table 2). In all categories, the 'Others' option was enabled in case an option not included in the record was observed in any media outlet. Nonetheless, this option did not have to be used.

Table 2. Analysis sheet with categories, items and scores. Source: own elaboration.

Category	Items	Scores for each item	Total score per category
Innovative narratives	Topic suggestion	1	151
	People reading now	2	
	Most recent	3	
	Most commented	4	
	People commenting now	5	
	Blogs	7	
	Listen to the news	8	
	News dictionary	9	

	Newsgames	10	
	Proust test	12	
	Advanced visualization of information	14	
	Live broadcasts	16	
	Webstories	18	
	Instant narrative	20	
	360° journalism	22	
	Robot journalism / AI	22	
Data journalism	Big data in news	10	47
	Data and statistics	15	
	DataLab	22	
Audience involvement	Space for user donations/Fundraising space	1	98
	Contact with editorial team/staff contact form	2	
	Forums	3	
	Reader service	6	
	Personalized user experience	8	
	Customization of sources	10	
	Polls	12	
	Media feedback	16	
	Suggestions or complaints box/complaints log	18	
	Audiovisual suggestions and complaints	22	
Co-creation	Space for questions	3	186
	Media chat	5	
	Call and/or SMS to send content	6	
	Instant messaging app for suggestions, complaints or as a chat.	8	
	Message encryption.	10	
	User comments	11	
	Moderated comments	12	
	User editor	15	
	Ability to correct text	16	
	Guided visits	18	
	Meetings with the audience	19	
	Reader contributions	20	
	Paying contributions	21	
	Cocreated product	22	
Verification and transparency	Blogs	4	88
	'That's how we did it'	8	
	Ratification of objectivity	10	
	At least two sources	12	
	Editor's blog	14	
	Investigative journalism	18	
	Fact-checking	22	
Visibility of journalistic ethics	Error reporting	10	50
	Code of ethics	18	
	Membership commitment	22	
Corporate information	Corporate blog	5	95
	Corporate news	12	
	Newsgames	16	
	Teaching materials	18	
	Corporate QR	22	
	Corporate app	22	
Cross-media and cross-promotion	Group content	10	85
	YouTube channel	15	
	Innovative social media	18	
	Instant messaging app	20	
	24/7 radio or TV	22	
			Total: 800

In the hypothetical scenario in which a media outlet exercises all of the above items, it would obtain 800 points. With that being said, it must be taken into account that high scoring items and low scoring items rarely appear together within the same media, despite the fact that an item with a higher score never invalidates one of lower rank as they, in fact, complement each other. As the number of items is different in each category and, therefore, the sum of the scores is also different, to obtain a proportional percentage representation of each category ($1/8 = 12.5\%$ of the set), the rule of three was used. In this way, the innovation factor in each category is comparable with the rest and with the entirety of the categories.

Due to the number of items included, when extracting the scores corresponding to each media outlet in particular ($x/800$), a correction factor $FAC=800/8$ was applied to amend the reading based on the technical standards established for the correct calculation according to the measurement sheets. The scale of values to determine the degree of high innovation is as follows:

- 200 points or more: extraordinary.
- 150 points or more: very high.
- 100 points or more: high.
- Between 75 and 99 points: average.
- Between 50 and 74 points: Low.
- 49 points or less: Very low.

Once the methodological instrument was configured, an exploratory search was carried out of the official websites that registered constant frequency of access during the first half of 2022 (at least one weekly access for each case). As most of the categories refer to items linked to web design and information visualization, the parameters of frequency and periodicity were discarded. These would only have been useful when analyzing the number of fact-checking practices, so that all those cases in which there was at least one significant example during the analysis period could have been counted.

4. Results

Table 3 summarizes all the results obtained. The following sections describe the results in each category of analysis:

Innovative narratives

Narratives is the category where the highest-level innovation is noted. All of the geographical areas, aside from Africa, contain several media outlets (*DR News*, *VG Nett*, *t-online*, *NU.nl*, *A.onbladet*, *Meganoticias.cl*, *El Comercio* or *Yahoo! News Taiwan*) that incorporate instant narratives on their websites. These narratives include a timeline that is updated every few minutes and that allows the reader to be up to date with the latest news. Although this is not robot journalism in the strictest sense, it does show signs of automation.

The webstories proposal of the *Argentine Infobae* is also very significant, showing an adaptation of social network stories to the web. Outside of media like *Yahoo! News United States* or *News24*, 360° journalism is not yet a common narrative model, although live broadcasts are frequent in the four geographical areas. This implies the more pronounced development of more traditional multimedia journalism as opposed to live multimedia

journalism. Only the South African *News24* attained a score in the advanced visualization of information, despite the fact that all the media use infographic techniques. This is because only *News24* surpasses that which is already the regular standards of digital journalism.

On the other hand, other narrative models that do not entail such an advanced development of innovation are common throughout the world, such as the suggestion of topics to the reader, sometimes with live feedback from the number of people who read or comment on that piece of news. Also worth mentioning is the South Korean *Naver*'s coffee shop format in which they select the content and offer the possibility of listening to the news instead of reading it or using news quizzes. The Proust test, a set of questions provided by the French writer Marcel Proust and often used in modern interviews, is only used by *El Comercio de Peru*.

Data journalism

There are only four examples of media outlets that practice data journalism to a significant extent using the interpretation of data for the production of news. Furthermore, there are no examples of data narration with statistical interpretation. Only the Asian *Naver* has a DataLab: that is, a center that interprets big data prior to its journalistic application.

Audience involvement

The vast majority of the most read sites in the world offer spaces for public participation. The most used models range from the most basic such as spaces for donations (*Malaysiakini*), emails or links to contact staff directly (*VG Nett*, *Yahoo! News USA* or *Nippon TV*), through to customer service (*t-online*), customization of feedback sources and reports (*Yahoo! News USA*), polls (*News 24* or *Yahoo! News Taiwan*), mailboxes (*CBC News*), suggestions' mailboxes (*A. onbladet*) and audiovisual suggestions (*VG Nett*). *TVB News online* from Hong Kong is the only media outlet that does not offer alternatives neither for citizen participation nor for co-creation.

Co-creation

The public being able to co-create journalistic products is a highly innovative process. There is evidence of basic practices, such as enabling a WhatsApp number to send user generated content (*Citizen Digital*), the creation of an app for complaints (*Meganoticias.ch*) and the guarantee of anonymity and encryption for messages sent by citizens (*A.onbladet*). There are also intermediate level ideas, such as the possibility to comment on news with editorial moderation, as is the case with *BBC News* in Nigeria.

Highly innovative concepts are apparent in the co-creation analysis. For example, the direct creation of obituaries in Kenya's *Citizen Digital*, direct contributions and co-created products in *UN.nl*, and payment for content offered by the Scandinavians *A.onbladet* and *VG Nett*. *DR News* has a user editor and organizes meetings and guided tours that allow for public-newsroom interaction.

Verification and transparency

The transparency of the media and, above all, the visibility of this transparency within the web architecture is shown through editorial explanations that guarantee the objectivity of the information. This is apparent in *TVB News* and in *t-online*, editorial posts on how journalistic stories are produced (*DR News*), as well as in the confirmation of having used at least two sources in the preparation of the stories as occurs in *A.onbladet*. The Canadian *CBC News* even has an Editor's blog for accountability.

Information verification is another requirement in terms of transparency. The process guarantees the reader that the information they consume is real and was dissected according to purely journalistic criteria. It is surprising, however, that only two media outlets have dedicated significant sections to investigative journalism, as is the case with *CBC investiga* (Canada) or *Megainvestiga* (Chile), while only a few media host fact-checking spaces on their websites (again, *CBC* and *Meganoticias*, and *El Comercio*, *BBC News Nigeria* and *News24*).

The visibility of journalistic deontology

A media outlet cannot be labelled as innovative simply because it has a code of ethics. Rather, these deontological guidelines must be clearly visible and easily accessible for the reader. The same is true regarding membership commitments to journalistic organizations, professional bodies and user organizations. When examining innovation in deontological guidelines, spaces are identified that display the rectifications made by the media (*Naver*, *VG Nett* or *CBC News*), signifying that the error correction policies contained in the codes are more than just well intentioned, but tangible and real.

The visibility of the rules of conduct scores highly in the Danish *DR News*, in the Asian *TVB News* and in the African *BBC News* (albeit in the last case because the user is directed to the self-regulation systems of the *BBC* group). What also stands out is the innovative approach in the visibility of the membership commitments of *CBC News* and *A.onbladet* to the Ombudsman.

Corporate information visibility

Sometimes it seems that corporate information is offered on news sites to be consumed by the media itself rather than by the user. The ways of presenting this information and the resources offered by corporations are innovative practices that must be valued. For example, *BBC News* online has a corporate blog, while *NU.nl* produces corporate news and has a game that centers on the medium itself.

Other media go further and prepare teaching materials, several of them linked to media and digital literacy, as is the case with *Citizen Digital*. *DR News* and *Naver* score highest in corporate information innovation by creating an app and a QR to provide the user with data about the organization.

Cross-media and Cross-promotion

That a medium is engaged in cross-media distribution with other media, or that it advertises through cross-promotional content from another media outlet belonging to the same communication group, is also innovation. However, when this distribution is carried out through traditional social networks, it does not signify a high level of innovation because it is a common practice across all the world's media. In order to be considered innovative, more avant-garde networks must be enabled and promoted on the web, such as *Meganoticias.cl*, which has TikTok, Spotify and Twitch, or *Nippon TV*, which has and advertises TikTok.

For cross-media techniques to be considered innovative, the media outlet must have at least a YouTube channel enabled. The widget also has to be included on the corporate website, as can be seen in the Swedish *A.onbladet*, the Canadian *CBC News*, the Argentine *Infobae* and in the Chilean *Mega*. *Yahoo! News Taiwan* and *Nippon TV News* also perform innovative distribution by using the Line instant messaging application.

The web distribution of content produced by other media belonging to the same business group is the criteria that receives the lowest rating, both because it is already a well-established practice, and because it is a technique limited to media that belong to a multiplatform publishing group (keeping in mind the weighing factor and the complementary nature of the analysis items). Nonetheless, the web broadcasting of 24-hour television (*Nippon TV News*) or television and radio (*Citizen Digital*) does demonstrate innovation, despite the fact that it doesn't occur in digital native newspapers, but on television network websites.

Table 3. Innovation by categories in each media outlet, including resulting score. Source: own elaboration.

Media outlet and country	Digital native	Evaluation category	Items	Score	Score across category
<i>DR News online</i> (Denmark)	No	Narratives	Listening to the news	8	37
			Dictionary	9	
			Instant narrative	20	
		Audience involvement	Personalized narratives	8	26
			Complaints	18	
		Co-creation	Users' editor	15	68
			Corrections	16	
			Guided views	18	
		Verification and transparency	Meetings	19	8
			That's how we did it	8	
		Deontological standards	Code of ethics	18	18
		Corporate information	Educational material	18	40
			App	22	
Cross	Group content	10	10		
<i>VG Nett</i> (Norway)	X	Narratives	Live	16	26
			Instant narrative	20	
		Data journalism	Big data in news	10	10
		Audience involvement	Staff contact	2	24
			Audiovisual suggestions	22	
		Co-creation	Calls and SMS	6	37
			Encryption	10	
Payment	21				
Deontological standards	Corrections report	10	10		
<i>t-online</i> (Germany)	X	Narratives	Topics suggestions	1	21
			Instant narrative	20	
		Audience involvement	Reader service	6	6
		Verification and transparency	Ratification of objectivity	10	10
<i>NU.nl</i> (Netherlands)	X	Narratives	News quiz	10	30
			Instant narratives	20	
		Co-creation	Users' comments	11	53

			Readers' contributions	20	
			Co-created product	22	
		Corporate information	Corporate news	12	28
			Media quiz	16	
A.onbladet online (Sweden)	No	Narratives	News quiz	10	30
			Instant narrative	20	
		Audience involvement	Suggestions inbox	18	18
		Co-creation	Encryption	10	53
			Payment	21	
			Co-created product	22	
		Verification and transparency	At least two sources	12	12
		Deontological standards	Membership commitments	22	22
		Cross	YouTube channel	15	15
CBC News online (Canada)	No	Narratives	Suggestions inbox	1	3
			People Reading now	2	
		Data	Big data in news	10	10
		Audience involvement	Comments inbox	18	18
		Verification and transparency	Editor's blog	14	54
			Investigative journalism	18	
			Fact-checking	22	
		Deontological standards	Correction's report	10	32
			Membership commitment	22	
		Cross	Group content	10	25
			YouTube channel	15	
Meganoticias.cl (Chile)	No	Narratives	Live	16	36
			Instant narrative	20	
		Data	Big data in news	10	10
		Co-creation	Complaints app	8	8
		Verification and transparency	Investigative journalism	18	40
			Fact-checking	22	
		Cross	YouTube channel	15	33
			Innovative networks	18	
Infobae (Argentina)	X	Narratives	Listening to news	8	26
			Webstories	18	
		Cross-media + cross-promotion	YouTube channel	15	15
Yahoo! News (United States)	X (news website)	Innovative narratives	360 journalism	22	22
			Staff contact	2	

		Audience involvement	Personalization of sources	10	
			Voting forums	12	
			Feedback	16	
			Suggestions inbox	18	
<i>El Comercio online</i> (Peru)	No	Narratives	Proust test	12	32
			Instant narrative	20	
		Audience involvement	Staff contact	2	20
			Complaints log	18	
		Verification and transparency	Fact-checking	22	22
<i>Naver</i> (South Korea)	X (news website)	Narratives	Cafeteria (topics suggestions)	1	24
			Listening to news	7	
			Live	16	
		Data	DataLab	22	22
		Audience involvement	Staff contact	2	2
		Co-creation	Chat	5	16
			Users' comments	11	
		Deontological standards	Error report	10	10
		Corporate information	QR	22	22
<i>Nippon TV News</i> (Japan)	No	Narratives	Live	16	16
		Audience involvement	Staff contact	2	2
		Cross	Group content	10	70
			Innovative networks	18	
			App	20	
			24/7	22	
<i>Yahoo! News Taiwan</i> (Taiwan)	X (news website)	Narratives	Immediate narrative	20	20
		Audience involvement	Voting	12	30
			Suggestions mailbox	18	
		Co-creation	Readers' comments	11	11
		Cross	Group content	10	30
			App	20	
<i>TVB News online</i> (Hong Kong)	No	Narratives	Live	16	16
		Verification and transparency	Ratification of objectivity	10	10
		Deontological standards	Code of ethics	18	18
		Cross	Group content	10	10
<i>Malaysiakini</i> (Malaysia)	X	Narratives	Topics suggestions	1	8
			Most recent	3	
			Most commented	4	
		Audience involvement	Donations	1	3
			Staff contact	2	

		Co-creation	Space for questions	3	14
			Users' comments	11	
<i>Citizen Digital (Kenya)</i>	No	Narratives	Blogs	7	23
			Live	16	
		Co-creation	WhatsApp for conversations	8	30
			Co-created product (obituary)	22	
		Corporate information	Teaching material	18	18
		Cross	Group content	10	32
			24/7	22	
<i>BBC News online (Nigeria)</i>	No	Narratives	Live	16	16
		Audience involvement	Suggestions inbox	18	18
		Co-creation	Moderated comments	12	12
		Deontological standards	Code of ethics	18	18
		Verification and transparency	Fact-checking	22	22
		Corporate information	Corporate blog	5	5
<i>News24 (South Africa)</i>	X	Narratives	Topics suggestions	1	61
			Listening to news	8	
			High visibility of information	14	
			Live	16	
			360 journalism	22	
		Audience involvement	Polls	12	30
			Suggestions inbox	18	
		Verification and transparency	Fact-checking	22	22

Table 4 shows each website's scores and the proportional percentage data corresponding to each of the analysis categories. In the lower row, the average percentage attained in each category of innovation with respect to the total is shown in bold. The right column shows the score achieved by each news site by adding the scores of each category.

Table 4. Scores and percentage of innovation by media, category and group

Media	Narrat.	%	Data	%	Aud.	%	Co	%	Verif.	%	Deont.	%	Corp.	%	Cross	%	Total
<i>DR News</i>	37/151	24.5	-	0	26/98	26.53	68/186	36.55	8/88	9.09	18/50	36	40/95	42.1	10/85	11.76	96
<i>VG Nett</i>	26/151	17.21	10/47	21.27	24/98	24.48	37/186	19.89	-	0	10/50	20	-	0	-	0	107
<i>r-online</i>	21/151	13.9	-	0	6/98	6.12	-	0	10/88	11.36	-	0	-	0	-	0	37
<i>NU.nl</i>	30/151	19.86	-	0	-	0	53/186	28.49	-	0	-	0	28/95	29.47	-	0	111
<i>A.onblad.</i>	30/151	19.86	-	0	18/98	18.36	53/186	28.49	12/88	13.63	22/50	44	-	0	15/85	17.64	150
<i>CBC News</i>	3/151	0.19	10/47	21.27	18/98	18.36	-	0	54/88	61.36	32/50	64	-	0	25/85	29.41	142
<i>MEGA</i>	36/151	23.84	10/47	21.27	-	0	8/186	4.3	40/88	45.45	-	0	-	0	33/85	38.82	127
<i>Infobae</i>	26/151	17.21	-	0	-	0	-	0	-	0	-	0	-	0	15/85	17.64	41
<i>Yahoo! USA</i>	22/151	14.56	-	0	58/98	59.18	-	0	-	0	-	0	-	0	-	0	80
<i>El Comercio</i>	32/151	21.19	-	0	20/98	20.4	-	0	22/88	25	-	0	-	0	-	0	74
<i>Naver</i>	24/151	15.89	22/47	46.8	2/98	2.04	16/186	8.6	-	0	10/50	20	22/95	23.15	-	0	96
<i>Nippon TV</i>	16/151	10.59	2/47	4.25	-	0	-	0	-	0	-	0	-	0	70/85	82.35	88
<i>Yahoo! Taiwan</i>	20/151	13.24	-	0	30/98	30.61	11/186	5.91	-	0	-	0	-	0	30/85	35.29	91
<i>TVB News</i>	16/151	10.59	-	0	-	0	-	0	10/88	11.36	18/50	36	-	0	10/85	11.76	54
<i>Malaysiakini</i>	8/151	5.29	-	0	3/98	3.06	14/186	7.52	-	0	-	0	-	0	-	0	25
<i>Citizen Digital</i>	23/151	15.23	-	0	-	0	30/186	16.12	-	0	-	0	18/95	18.94	32/85	37.64	103
<i>BBC News</i>	16/151	10.59	-	0	18/98	18.36	12/186	6.45	22/88	25	-	0	5/95	5.26	-	0	73
<i>News 24</i>	61/151	40.39	-	0	30/98	30.61	-	0	22/88	25	-	0	-	0	-	0	113
		16.34		6.38		14.33		9.01		11.86		12.22		6.6		15.68	11.55%

Source: own elaboration.

When applying Bonferroni Correction these are the variables that confirm the validity of the data: Alpha (0.16), R (8), r (0), and Df (0). With no correction the chance of finding one or more significant differences in 8 tests = 0.7521 (75.21%).

5. Discussion and conclusions

Based on the theories of disruptive innovation (Christensen, 1997) and the diffusion of innovations (Rogers, 2003), this study finds (RQ2) that news sites are innovating the most in their narratives (16.34%), followed by cross-media and cross-content distribution (15.68%) and audience involvement formulas (14.33%). These three categories provide formulas for storytelling and involving the public in the discourse. With that in mind, the results seem to coincide with what some previous studies have already put forward regarding how new narrative models are redefining journalism (Sixto-García et al., 2023; Swart et al., 2022). An African news outlet, *News24*, is found to be the most innovative when it comes to narratives, despite the fact that African media are the only ones that do not make use of instant narrative, the narrative technique that is found to predominate globally. In the distribution of content, no geographical differences are evident. For audience involvement, the news site *Yahoo!* stands out in both the United States and Taiwan.

Although journalistic deontological standards are part of the foundation of journalistic practice (Ní Bhroin & Milan, 2020), Bachmann, Eisenegger & Ingenhoff, 2022), few media outlets

exercise them in a way that can be considered innovative. Nonetheless, those media outlets that are successful in doing so achieve outstanding results. The same is true with the criteria of transparency, accountability and verification of information (Deuze, 2019), where two American media outlets, *CBC News* and *Mega*, rank the highest for fact-checking and investigative journalism.

Co-creation as an innovative practice is still yet to be fully developed (9.01%), as another previous study had already shown (Sixto-García, Rodríguez-Vázquez & Soengas-Pérez, 2022). However, it is shown on this occasion that there is a specific region in Europe, the Scandinavian countries, where co-creation is much more developed than in the rest of the world. There is also a lack of recorded cases regarding innovation for corporate information (Hermida, 2010; Mellado, 2021), though those that are evident are highly innovative. The most surprising finding is the apparent lack of evidence of this practice in American media. Despite the theoretical and conceptual relevance of data journalism (de Lima-Santos, 2022), it is striking that it appears relegated to the last position (6.38%) and not conducted by any African media.

Aside from the exceptions mentioned above, there are no significant differences between the various geographical areas in the evolution of high innovation categories analyzed here. Publicly owned media such as *CBC News* and *DR News* do not operate much differently than their private counterparts, nor is there much difference in terms of innovation between digital native media when compared with traditional online sites, or news websites.

That the global results are always below 20% makes it possible to identify a degree of high innovation that is still incipient. Nonetheless, applying the weighing factor $FAC=800/8$ again confirms how the narratives, the distribution, the involvement of audiences and web visibility of journalistic deontological standards are the nutrients that fuel journalism modern adaptations and that secure public interest. Regarding the news sites' performance across all the categories of innovation listed here, only the Swedish *A.onbladet* online reaches 150 points in the analysis sheet (table 4), which is equivalent to a very high degree of innovation. It is followed by two American media (*CBC News* and *Mega*) and two European ones (*NU.nl* and *VG Nett*), all of whom surpass 100 points (high degree of innovation). From this it can be concluded that it is in America and Europe where innovation is most pronounced within journalistic sites. That only one African medium exceeds 100 points (*Citizen Digital*), and that no Asian attained a score of 100, supports this conclusion.

The primary limitation of this study is that only the media referenced by Reuters Institute are analyzed. Consequently, the development of *innovative innovation* techniques in these sites is still in an embryonic phase (RQ1), so that it cannot be concluded that there is a total journalism (Vázquez-Herrero et al, 2022) that is making use of all the potential that high innovation can provide. Future research should aim to examine the evolution of this situation and determine whether specific categories have made significant progress in any region of the world. Furthermore, it should seek to identify if the differences between America and Europe, and the rest of the world, still persist. This study contributes to the understanding of the state of innovation in the media, thereby contributing to the development of the aforementioned innovation theories. In terms of journalistic practice, this research highlights how news sites are gradually incorporating highly innovative approaches to cater to the needs of audiences who are increasingly demanding, technologically adept and more familiar with new ways of consuming information.

Funding

1. Ministry of Science, Innovation and Universities (Spain), and co-financed by the European Regional Development Fund (ERDF) [PID2021-122534OB-C21. Digital native media in Spain: Strategies, competencies, social involvement and (re)definition of practices in journalistic production and dissemination].
2. Project IBERIFIER - Iberian Digital media Research and Fact-Checking Hub, action number 2020-EU-IA-0252. Co-financed by the Connecting Europe Facility of the European Union (CEF-TC-2020-2).

References

- Alaimo, C., Kallinikos, J. & Valderrama, E. (2020). Platforms as service ecosystems: Lessons from social media. *Journal of Information Technology*, 35(1), 25-48.
<https://doi.org/10.1177/0268396219881462>
- Anderson, C. W. (2020). Practice, Interpretation, and Meaning in Today's Digital Media Ecosystem. *Journalism & Mass Communication Quarterly*, 97(2), 342-359.
<https://doi.org/10.1177/1077699020916807>
- Bachmann, P., Eisenegger, M. & Ingenhoff, D. (2022). Defining and Measuring News Media Quality: Comparing the Content Perspective and the Audience Perspective. *The International Journal of Press/Politics*, 27(1), 9-37. <https://doi.org/10.1177/1940161221999666>
- Banjac, S. & Hanusch, F. (2022). A question of perspective: Exploring audiences' views of journalistic boundaries. *New Media & Society*, 24(3), 705-723.
<https://doi.org/10.1177/1461444820963795>
- Bardin, L. (2011). *Content Analysis*. Edições, 70.
- Boyles J. L. (2020). Laboratories for news? Experimenting with journalism hackathons. *Journalism*, 21(9), 1338-1354. <https://doi.org/10.1177/1464884917737213>
- Brems, C., Temmerman, M., Graham, T. & Broersma, M. (2017). Personal Branding on Twitter. *Digital Journalism*, 5(4), 443-459. <https://doi.org/10.1080/21670811.2016.1176534>
- Bruns, A. (2014). Media innovations, user innovations, societal innovations. *The Journal of Media Innovations*, 1(1), 13-27. <https://doi.org/10.5617/jmi.v1i1.827>
- Bui, M. & Moran, R. (2020). Making the 21st Century Mobile Journalist: Examining Definitions and Conceptualizations of Mobility and Mobile Journalism within Journalism Education. *Digital Journalism*, 8(1), 145-163.
<https://doi.org/10.1080/21670811.2019.1664926>
- Carvajal, M., Mondéjar, D., Valero-Pastor, J. M., De-Lara, A., García-Avilés, J. A. & Arias-Robles, F. (2022). The most prominent journalistic innovations in Spain (2010-2020):

organizational, industrial and social characteristics and impact. *Profesional de la información*, 31(3). <https://doi.org/10.3145/epi.2022.may.04>

Christensen, C. M. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Harvard Business School Press.

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*. <https://doi.org/10.1080/17512786.2022.2097940>

Costera, I. & Groot, T. (2014). Checking, sharing, clicking and linking. *Digital Journalism*, 3(5): 664–679. <https://doi.org/10.1080/21670811.2014.937149>

Cozzolino, A., Corbo, L. & Aversa, P. (2021). Digital platform-based ecosystems: The evolution of collaboration and competition between incumbent producers and entrant platforms. *Journal of Business Research*, 126, 385-400. <https://doi.org/10.1016/j.jbusres.2020.12.058>

de Lima-Santos, M. F. (2022). ProPublica's Data Journalism: How Multidisciplinary Teams and Hybrid Profiles Create Impactful Data Stories. *Media and Communication*, 10(1). <https://doi.org/10.17645/mac.v10i1.4433>

Deuze, M. (2019). What Journalism Is (Not). *Social Media + Society*, online first. <https://10.1177/2056305119857202>

Eldridge, S. A. (2018). *Online Journalism from the Periphery: Interloper Media and the Journalistic Field*. Routledge.

Esser, F. & Neuberger, C. (2019). Realizing the democratic functions of journalism in the digital age: New alliances and a return to old values. *Journalism*, 20(1),194-197. <https://10.1177/1464884918807067>

García-Avilés, J. A. (2021). Review article: Journalism innovation research, a diverse and flourishing field (2000-2020). *Profesional de la información*, 30(1), e300110. <https://doi.org/10.3145/epi.2021.ene.10>

García-Avilés, J. A., Arias-Robles, F., de Lara-González, A., Carvajal, M., Valero-Pastor, J. M. & Mondéjar, D. (2022). How COVID-19 is Revamping Journalism: Newsroom Practices and Innovations in a Crisis Context. *Journalism Practice*. <https://doi.org/10.1080/17512786.2022.2139744>

García-Avilés, J. A., Carvajal-Prieto, M.; Arias, F. & de Lara-González, A. (2019). How journalists innovate in the newsroom. Proposing a model of the diffusion of innovations in media outlets. *The Journal of Media Innovations*, 5(1), 12-18. <https://doi.org/10.5617/jomi.v5i1.3968>

García-Orosa, B.; López-García, X. & Vázquez-Herrero, J. (2020): Journalism in Digital Native Media: Beyond Technological Determinism. *Media and Communication*, 8(2). <https://doi.org/10.17645/mac.v8i2.2702>

- Goggin, G. (2020). Digital Journalism after Mobility. *Digital Journalism*, 8(1), 170-173. <https://doi.org/10.1080/21670811.2019.1711434>
- Hermida, A. (2010). Twittering the news. *Journalism Practice*, 4(3), 297-308. <https://doi.org/10.1080/17512781003640703>
- Hermida, A. & Mellado, C. (2020). Dimensions of Social Media Logics: Mapping Forms of Journalistic Norms and Practices on Twitter and Instagram. *Digital Journalism*, 8(7), 864-884. <https://doi.org/10.1080/21670811.2020.1805779>
- Huh, J. (2020). Smart Communication for a Digital World. *Journal of Interactive Advertising*, 20(3), 240-243. <https://doi.org/10.1080/15252019.2020.1849693>
- Humprecht, E., Castro, L., Blassnig, S., Brüggemann, M. & Engesser, S. (2022) Media Systems in the Digital Age: An Empirical Comparison of 30 Countries. *Journal of Communication*, 72(2). <https://doi.org/10.1093/joc/jqab054>
- Iversen, A. & Hydle, K. M. (2023) High innovation intensity in fish farming: The role of openness in innovation and strategy. *Aquaculture Economics & Management*. <https://doi.org/10.1080/13657305.2023.2193161>
- Johnson, P. (2023). A Case of Claims and Facts: Automated Fact-Checking the Future of Journalism's Authority. *Digital Journalism*. <https://doi.org/10.1080/21670811.2023.2174564>
- Konow-Lund, M., Mtchedlidze, J. & Barland, J. (2022). Organizational and Occupational Innovation when Implementing a Covid-19 Live Tracker in VG Newsroom. *Journalism Practice*. <https://doi.org/10.1080/17512786.2022.2116592>
- Kozyreva, A., Lewandowsky, S. & Hertwig, R. (2020). Citizens Versus the Internet: Confronting Digital Challenges With Cognitive Tools. *Psychological Science in the Public Interest*, 21(3), 103-156. <https://doi.org/10.1177/1529100620946707>
- Krumsvik, A., Milan, S., Ní Bhroin, N. & Storsul, T. (2019). Making (sense of) media innovations. In M. Deuze & M. Prenger (Eds.), *Making Media: Production, Practices and Professions*, (pp. 193-205). Amsterdam University Press.
- Lawrence, R., Radcliffe, D. & Schmidt, T. (2018). Practicing Engagement. *Journalism Practice*, 12(10), 1220-1240. <https://doi.org/10.1080/17512786.2017.1391712>
- Lecheler, S. & Kruikemeier, S. (2016). Re-evaluating journalistic routines in a digital age: A review of research on the use of online sources. *New Media & Society*, 18(1), 156-171. <https://doi.org/10.1177/1461444815600412>
- Lischka, J. A., Schaetz, N. & Oltersdorf A.-L. (2022). Editorial Technologists as Engineers of Journalism's Future: Exploring the Professional Community of Computational Journalism. *Digital Journalism*. <https://doi.org/10.1080/21670811.2021.1995456>
- Liu, J., Liu, X. & Jensen, K. B. (2020). Comparative media studies in the digital age: Taking stock, looking ahead. *International Journal of Communication*, 14(7), 5754-5760.

Lopezosa, C., Codina, L., Fernández-Planells, A. & Freixa, P. (2021). Journalistic innovation: How new formats of digital journalism are perceived in the academic literature. *Journalism*, online first. <https://10.1177/14648849211033434>

Manzerolle, V. & Wiseman, A. (2016). On the transactional ecosystems of digital media. *Communication and the Public*, 1(4), 393-408. <https://10.1177/2057047316679418>

Masip, P., Ruiz-Caballero, C. & Suau, J. (2019). Active audiences and social discussion on the digital public sphere. Review article. *Profesional de la Información*, 28(2), e280204. <https://doi.org/10.3145/epi.2019.mar.04>

Milenkova, V. & Lendzhova, V. (2021). Digital Citizenship and Digital Literacy in the Conditions of Social Crisis. *Computers*, 10(4), 40. <https://doi.org/10.3390/computers10040040>

Nelson J. L. (2019). The next media regime: The pursuit of ‘audience engagement’ in journalism. *Journalism*, 22(9), 2350-2367. <https://10.1177/1464884919862375>

Ní Bhroin, N. & Milan, S. (2020). Media Innovation and Social Change: Introduction to the Special Issue. *The Journal of Media Innovations*, 6(1), 1-8. <https://doi.org/10.5617/jomi.7829>

Nguyen, M.H, Gruber, J., Fuchs, J., Marler, W., Hunsaker, A. & Hargittai E. (2020). Changes in Digital Communication During the COVID-19 Global Pandemic: Implications for Digital Inequality and Future Research. *Social Media + Society*. <https://10.1177/2056305120948255>

Pantic, M. (2020). Engagement With Live Blogs: When Passive Consumption Overpowers Participation. *Electronic News*, 14(1), 22-36. <https://10.1177/1931243120910449>

Pavlik, J. (2000). The impact of Technology on Journalism. *Journalism Studies*, 1(2), 229-237.

Reyes-de-Cózar, S., Pérez-Escolar, M. & Navazo-Ostúa, P. (2022). Digital Competencies for New Journalistic Work in Media Outlets: A Systematic Review. *Media and Communication*, 10(1). <https://doi.org/10.17645/mac.v10i1.4439>

Rogers, E. (2003). *Diffusion of Innovations*. Free Press.

Salaverria, R. (2019). Digital journalism: 25 years of research. Review article. *Profesional de la información*, 28(1), e280101. <https://doi.org/10.3145/epi.2019.ene.01>

Saling, L. L, Mallal, D, Scholer, F., Skelton, R. & Spina, D. (2021). No one is immune to misinformation: An investigation of misinformation sharing by subscribers to a fact-checking newsletter. *PLoS ONE*, 16(8), e0255702. <https://doi.org/10.1371/journal.pone.0255702>

Sixto-García, J., Rodríguez-Vázquez, A. I., & Soengas-Pérez, X. (2022). Co-creation in North American and European digital native media: Web, social networks and offline spaces. *Journalism*, 23(9), 1955-1974. <https://doi.org/10.1177/1464884920984698>

Sixto-García, J., Silva-Rodríguez, A., Rodríguez-Vázquez, A. I., & López-García, X. (2023). Redefining journalism narratives, distribution strategies, and user involvement based on innovation in digital native media. *Journalism*, 24(6), 1322-1341. <https://doi.org/10.1177/14648849211062766>

Swart, J., Groot, T., Costera, I. & Broersma, M. (2022) Advancing a Radical Audience Turn in Journalism. Fundamental Dilemmas for Journalism Studies. *Digital Journalism*, 10(1), 8-22. <https://10.1080/21670811.2021.2024764>

van Dijck, J., Poell, T. & de Waal, M. (2018). *The Platform Society: Public Values in a Connective World*. Oxford University Press

van Krieken, K. & Sanders, J. (2019). What is narrative journalism? A systematic review and an empirical agenda. *Journalism*, 22(6), 1393-1412. <https://10.1177/1464884919862056>

Vázquez-Herrero, J., Negreira-Rey, M.-C., & López-García, X. (2022). Let's dance the news! How the news media are adapting to the logic of TikTok. *Journalism*, 23(8), 1717-1735. <https://doi.org/10.1177/1464884920969092>

Vázquez-Herrero, J., Silva-Rodríguez, A., Negreira-Rey, M. C.; Toural-Bran, C. & López-García, X. (2022). *Total Journalism. Models, Techniques and Challenges*. Springer.

Waisbord, S. (2018) Truth is What Happens to News. *Journalism Studies*, 19(13), 1866-1878. <https://10.1080/1461670X.2018.1492881>

Walsh, C. & Berry, M. (2021) Introduction. *Journalism Studies*, 22(2), 115-118. <https://10.1080/1461670X.2021.1873823>

Wu, S., Tandoc Jr., E. & Salmon, C. (2019). When Journalism and Automation Intersect: Assessing the Influence of the Technological Field on Contemporary Newsrooms. *Journalism Practice*, 13(10), 1238-1254. <https://doi.org/10.1080/17512786.2019.1585198>