

Immersive and brand journalism in educational and cultural information. The case of RTVE Lab

*Periodismo de inmersión y de marca en la
información educativa y cultural. El caso
de Lab de RTVE*

DOI: <https://doi.org/10.32870/cys.v2021.7728>

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The aim of this research is to analyze the use of immersive and brand journalism in the information published by RTVE Lab. The case study method has been used, which combines both qualitative and quantitative techniques. The results reveal that virtual reality (VR) is an attractive format for disseminating cultural news because it enhances the immersive experience of the user; yet approximately only 20% of VR is used to provide information about branded content.

KEYWORDS: Immersive journalism, virtual reality, brand journalism, education, culture.

La presente investigación analiza el uso del periodismo inmersivo y de marca en la información publicada por el Lab de RTVE. Se emplea el método del estudio de caso, combinando técnicas cualitativas y cuantitativas. Los resultados revelan que la realidad virtual (RV) es un formato atractivo para difundir noticias culturales porque favorece la experiencia inmersiva del usuario, y solo en un 20% se utiliza este formato para informar contenido de marca.

PALABRAS CLAVES: Periodismo inmersivo, realidad virtual, periodismo de marca, cultura, educación.

How to cite:

Sánchez Gonzales, H. M. & Benítez Gutiérrez, A. (2021). Immersive and brand journalism in educational and cultural information. The case of RTVE Lab. *Comunicación y Sociedad*, e7728. <https://doi.org/10.32870/cys.v2021.7728>

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Submitted: 04/02/20. Accepted: 27/10/20. Published: 21/04/21.

INTRODUCTION

Information technology has led to changes in immersive storytelling and in the production and distribution of journalistic and branded content of companies and communication media. A new context is emerging due to changes in prosumer consumption habits (Toffler, 1980), due to the fact that “not only do they consume information, but they also interact and produce it” (Sánchez, 2016b, p. 68). It is a matter of offering innovative, attractive content in order for the audience to participate (Carpentier, 2011; Holton et al., 2016), especially the young audience.

In Spain, these changes are taking place in the media as well as in *labs* or *media labs*, which are essentially media innovation laboratories. These are business units that are driven “to innovate in technology and editorial formats” (Salaverría, 2015, p. 398). This type of unit emerged in 2011 when public broadcaster RTVE set up the first lab, which is the subject of this research, because it is now a benchmark in its commitment to innovative formats and content. However, it was not until 2015 that it launched its first immersive project.

This research analyzes the use of immersive and brand journalism in the cultural and educational news published by RTVE *Lab*. The study addresses the following questions: What is the strategy of immersive rhetoric, and the virtual reality (VR) typology? What type of content is published? Does it refer to a brand? Does it have a functional design and format? Finally, could virtual reality be used as an ideal format for reaching the user?

The specific objectives are: a) to determine the characteristics of immersive rhetoric and VR typology; b) to analyze the content, specialized topic, strategy, and interaction; c) to distinguish the design of the format and ease of access by the user, as well as functionality, comprehension, and even the subjective aspects offered by the researcher.

Studies on immersive journalism have provided an overview of this phenomenon (Barreda, 2018; Domínguez, 2015, Domínguez & Luque, 2011; De la Peña et al., 2010), as well as that of brand journalism (Bull, 2013; Campo, 2015; Tascón & Pino, 2014; Sánchez, 2016a). However, research into these two approaches, or communication trends

within the same educational and cultural news formats has not yet been carried out. We start from the hypothesis that the RTVE *Lab* is committed to immersive experiences through VR for the purpose of transmitting educational and cultural news to the user, but not to communicate the experience of a brand.

IMMERSIVE JOURNALISM:

THE USER AS THE KEY PLAYER IN THE NEWS

The first journalistic content incorporating immersive stories using virtual reality was published by the *Des Moines Register* newspaper in the autumn of 2014, with the multimedia feature entitled “Harvest of Change”. This information allowed the audience to become familiar with and learn about the changes that occur on family farms in the United States with the combination of immigration and globalization. This type of reporting was called “immersive journalism”, because it places the user in the center of the story by using virtual reality and interactive technology.

Virtual reality, a term introduced in 1989 by Lanier (1992), is a technology that portrays “scenes or images of objects produced by a computer system, which give the sensation of being real” (Real Academia Española, 2020), and generates empathy between machines and humans (Witt et al., 2016). It has been studied by several authors (Kalawsky, 1994; Rheingold, 1991; Sheridan, 1992) with different levels of reality and virtuality (Feiner et al., 1993), in addition to typology (Domínguez & Luque, 2011). As a format, it offers infinite possibilities to the user on an experiential and sensorial level due to its ability to transmit stories in a close-up way and allow users to relive them firsthand.

Virtual reality generates immersive and non-immersive computer interfaces (Domínguez, 2013). In the former, the user walks through a digital space re-created by a computer using different devices (glasses, helmets, etc.), and has the sensation of living in a real situation of which they are part. In the latter, which is non-immersive, the user experiences the reality only through a computer screen, mobile device or tablet without having any close contact with what is re-created.

According to Sidorenko et al. (2017), virtual reality and immersive formats have reached another stage of development because they enable the refinement of interfaces and spatial or immersive 360° sound. In journalism, content generated with this technology are of two types: *virtual reality* (VR2), or the use of 3D design and video game software (Unity and Unreal); and *real virtual reality* (RVR), which consists of stories that are immersive but real, and is the type that is the focus of this study.

Virtual reality technology encourages the creation of new immersive narratives (Benítez & Herrera, 2018; De la Peña et al., 2010; Domínguez, 2013, 2015; Hardee & McMahan, 2017; Jiménez, et al., 2016; Ryan, 2004) or, in other words, it allows the user to be immersed in the story (De la Peña, 2010; Pavlik, 2001; Pryor, 2000), so that they experience the news in a different way. Therefore, the technique of virtual reality introduces us to the concept of immersive journalism (De la Peña et al., 2010; Domínguez, 2013), because it allows “not only visual experiences, but sensory as well, in a three-dimensional synthetic environment” (Domínguez, 2013, p. 94). It is “the production of news in a way in which people can gain firsthand experience of the events or situations described” (De la Peña et al., 2010, p. 291). They are scenarios re-created in 3D that allow the user to move freely through them and feel the information firsthand.

Considered to be the mastermind of immersive journalism, as well as the director of the Emblematic Group, De la Peña (2010) is one of the world’s leading producers of virtual, augmented, and mixed reality. She recognizes that immersive journalism allows viewers to experience firsthand the situations that journalists describe, and they are able to feel as if they are at the scene of the event. This experience attempts to separate the distance between the story and the receiver, as well as to produce a sense of being present in the virtual environment, even though it is not the case.

There are various techniques for producing immersive experiences and encouraging an active role by the user. These involve the interface and interaction of the story, video or 360° photography, and reconstructions of images in digital environments, such as 3D. Similarly, through the use of immersive rhetoric (Domínguez, 2015, p. 418), which considers

the composition of the interface without division, the realistic graphic style, continuity of motion to convey a sense of presence, ambient sound to intensify the viewer's feeling of being in the re-created place, interaction through direct manipulation, and pop-up menus or web forms, the user can choose the framing of the scene or a narrative experience that affects the plot through the game with its own rules, and can thereby live through a re-created experience, which is essentially a simulation of people and actions in part of a story in which the user participates in some way, and even assumes a role. Other factors should also be considered, such as the order of the story and the scene, or in other words, how to navigate through the "topic, stories, format, characters, geography, chronology, and plot" (Dominguez, 2015, p. 418).

Various newspapers and media companies such as *The New York Times*, *USA Today*, *The Guardian*, Discovery Max and the BBC have virtual reality applications. Of the ones mentioned, *The New York Times* has developed more than 150 immersive experiences since its VR was launched in 2015, and has also established a channel with daily 360° videos (*The Daily 360*). The app features VR videos produced by brands in the purest advertising style. Gucci, Intel and American Express are some of the companies that have VR videos in the app. In Spain, the projects of media companies such as *El País*, *El Mundo*, *El Español* and RTVE *Lab* stand out, the latter having produced more than ten VR videos where the main objective has been to promote culture.

BRAND JOURNALISM

Since the beginning of the journalistic crisis in 2008, the decline of traditional media and the rise of the Internet and social networks have given companies the possibility of establishing direct communication with their audience without the need for intermediaries. It is increasingly common for public and private companies to create their own communication media which, according to academics, helps them manage their reputation, build audience loyalty by seeking new ways of attracting the target audience through active listening to doubts and opinions, and directly inform a segmented and specialized audience (Sánchez, 2016a).

Although there are authors and professionals who are opposed to linking “journalism” and “brand” in the same term (Barciela, 2013; Llyod, 2015; Meyer, 2014; Ostrihoff, 2013), or the combined term *journalistic ethics* (Hasnat, 2014; Karlova & Fisher, 2013), the truth is that the information provided by company portals is subject to the same criteria of journalistic rigor as a publication in a traditional medium (veracity, honesty, transparency, and seriousness) (Campo, 2015), or even to the use of journalistic techniques to tell a story (Sánchez, 2016a), and/or standard journalistic practice (Murray, 2013).

Brand journalism uses the techniques of traditional journalism. In other words, it consults resources, contrasts information, and spreads it through stories. This form of journalism has the added benefit of making a story directly known by using different formats and channels, while encouraging interaction with the audience, unlike traditional media (Sánchez, 2016a, p. 98).

These new types of newsrooms are staffed by communication professionals who are committed to innovation and, most importantly, are digital natives. They design content oriented to the web based on journalistic genres such as features, news and interviews (Tascón & Pino, 2014), or even on the same values of journalistic information and traditional principles of organizational communication (Kounalakis et al., 1999). According to Campo (2015), there are not many differences between brand journalism and conventional or corporate journalism. Media companies are commercial brands, or, in other words, they are companies that prohibit journalists from going against their own media, where journalists are subject to high levels of pressure.

Brand journalism has been conceptualized and addressed by several authors (Bull, 2013; Campo, 2015; Light, 2014; Tascón & Pino, 2014; Sánchez, 2016a). It enables quality storytelling together with the relevance of brand stories using multiple formats and the omnichannel concept (Tascón & Pino, 2014), in order to speak directly to users (DVorkin, 2012), as they are providers of their own news. According to Dawson Ferguson Strategies (2012), it tells a corporate story by combining credibility and influence in order to differentiate itself from the competition.

Brand journalism is becoming established as a new way of communicating, as well as something that companies need in order to optimize their reputation. It draws on the changes produced on the Internet and on the flood of social media in order to communicate and convey news to a specific audience. News is communicated using storytelling through its own channels without intermediaries (Sánchez, 2016a, p. 99).

According to Tascón and Pino (2014), brand journalism has arisen from a combination of two factors: first, the prosumer's interest in increasing the demand for transparency and accountability from companies; and second, from the fragmentation of audiences into different media and communication platforms. It enters the lives of potential audiences with stories that are familiar to them, and tries to be the newspaper, television or radio channel for them to follow (Tascón & Pino, 2014).

Communication carried out by brands is not new, and in fact it dates back to 1985 when *The Furrow* magazine was launched to publicize agricultural content in a very attractive way with added value (Tascón & Pino, 2014). Years later, Adobe's CMO made a commitment in 2009 for a change to one of its portals to offer professionals the possibility of publishing their articles and interacting in forums, etc. Still later, between 2011 and 2012, some multinationals decided to create their own channels. This is the case of *The Network* (owned by Cisco), as well as financial companies (Credit Suisse) with *The Financialist*, and other businesses (HSBC) with *Businesswithoutborders*, *Openforum*, *American Express*, *Coca-Cola Journey*, etc.

Brand journalism has allowed for the development of new sources of revenue and the integration of branded content departments into newsrooms, which in some cases are driven by the labs. This is a result of its use of marketing and advertising strategies such as product placement (advertising related to the positioning of a product), branded content (content linked directly to a brand), storytelling (the art of telling a story), and transmedia narratives (a story that unfolds across multiple formats and channels), all of which have the aim of delivering a message. This has generated new jobs for branded content writers, who are increasingly in demand in Spanish media newsrooms, according to

the 2017 Annual Report on the Journalism Profession (Asociación de la Prensa de Madrid [AMP], 2017). This growth is due to the fact that these publications are hyper-specialized and focused on a very specific segment of the population who is interested in the information that the brand can provide to them. For brands, it is essential to connect with their audience, and the digital media are aware of this.

There is nothing that engages a person more than emotion. Due to the loss of effectiveness of traditional advertising, branded content was born, a brand communication model that is not as new as it seems, although in recent years it has experienced exponential quantitative and qualitative growth (Valdés, 2018).

There are various cases of media that have opted to establish branded content departments with the aim of improving brand reputation through the creation of special content in which the protagonist is the user. At the international level, some of these include the following: TBrand Studio (*The New York Times*), The Guardian Labs (*The Guardian*), WP Brand Studio (*The Washington Post*) or Brand USA Today (*USA Today*). In Spain, some of the media or communication groups that stand out include the following: UEstudio (*Unión Editorial*), La Factoría (Prisa), Content Factory (*Vocento*), Marcas con Ñ (*El Español*) and EC Brands (*El Confidencial*).

These departments are made up of multidisciplinary teams that include not only journalists, but also programmers, art designers, usability and analytics managers, and others. Their aim is to develop content for brands with different formats by combining videos, infographics, images, interactivity, and more. Some of them often use transmedia narrative formats such as *webdoc* or *docugames*, in addition to storytelling strategies in order to narrate a story. They also offer consultancy services to assist brands.

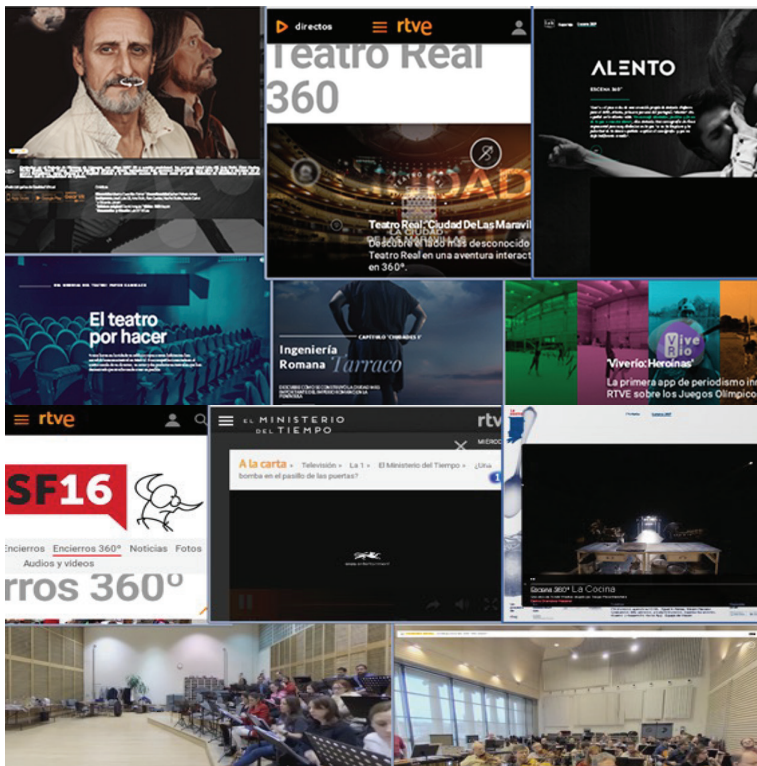
METHODOLOGY

This study has been carried out in four correlative methodological steps using the case study method (Coller, 2000; Stake, 2005; Yin, 1989), and by utilizing the state of the research as a starting point. It consists of inductive research that studies a real, contemporary phenomenon, and

it uses multiple sources to substantiate the investigation of a specific study (Yin, 1998). The four steps mentioned are:

1. State of the research regarding immersive journalism: Barreda (2018); De la Peña et al. (2010); Domínguez (2013, 2015); Domínguez & Luque (2011). State of the research regarding branding: Bull (2013); Campo (2015); Tascón & Pino (2014); Sánchez (2016a).
2. Direct observation technique (García Ferrando & San Martín, 1986). For two months (during March and April of 2018), this technique was used to interact with RTVE *Lab*'s VR projects and to develop guidelines for their analysis and evaluation.
3. Semi-structured interview with Miriam Hernanz, Head of RTVE *Lab*. This qualitative research technique allows for data collection. It can be tailored to the potential of the interviewees to “clarify terms, identify ambiguities, and reduce formalisms” (Díaz et al., 2013).
4. Exploratory analysis of all the cases (ten) was carried out (see Figure 1 and Table 1), which were included in the virtual reality section of the Lab between 2015 and 2018, when the research was completed. A matrix sheet was used to extract and study the data, taking into account eight variables.

FIGURE 1
TEN RTVE *LAB* CASES ANALYZED



Source: The authors based on information from RTVE *Lab*.

TABLE 1
ANALYSIS OF RTVE LAB'S VR CASES

Name	Date of publication	Topic
<i>Orchestra (Teatro Real) (Royal Theater)</i>	November 2017	Rehearsal of the Symphony Orchestra of Madrid
<i>Choir (Teatro Real)</i>	November 2017	Rehearsal of the Intermezzo Choir
<i>Cyrano (Edmond Rostand)</i>	Summer 2017	Various scenes from the play <i>Cyrano</i>
<i>Cervantes VR</i>	April 2017	Commemoration of the anniversary of the death of Miguel de Cervantes
<i>Alento (Spanish National Ballet)</i>	Spring 2017	Choreography by Sergio Bernal and Inmaculada Salomón, the main dancers of the Spanish National Ballet
<i>The Misanthrope (Molière)</i>	Spring 2017	Performance of a scene from the play <i>Misanthrope</i>
<i>San Fermín 2016 (The Festival of San Fermín)</i>	July 2016	Running of the Bulls, <i>San Fermín 2016</i>
<i>The Kitchen (Arnold Wesker)</i>	Autumn 2016	Performance of a scene from the play <i>The Kitchen</i>
<i>Vive Río: Heroínas (Rio Live: Heroines)</i>	August 2016	Preparation of the Olympic athletes for Rio 2016
<i>Ingeniería Romana Tarraco (Roman Engineering in Tarraco)</i>	October 2015	Re-creation of the City of Tarraco, today's Tarragona

Source: The authors.

Both dichotomous and polytomous variables have been taken into account, according to the number of categories, as well as nominal and interval according to the interval measurement scale, which are eight in

total: Immersive rhetoric and VR typology (Domínguez, 2015); specialized topic; content (Campo, 2015), strategy and interaction; design; ease of access (Hassan, 2015); functionality-comprehensibility and subjective aspects (Sánchez & Sánchez, 2020) through heuristic evaluation.

a) *VR typology*

360-degree video and photography, panoramas, digital image reconstructions, and Oculus Rift9 productions.

b) *Immersive rhetoric*

Interface composition with a single frame, realistic graphic style, continuity of motion, ambient sound, and an interactive system: direct manipulation; pop-up menus or web forms; the user can choose what she or he sees, select the narrative experience that affects the plot, engage in play, participate in a representational experience, and impersonate a character.

c) *Specialized topic*

Social, political, cultural and sports.

d) *Content*

Current events (news, features, articles and interviews), content generated or sponsored by a brand, strategy (product placement, branded content, transmedia narrative and storytelling), and coverage of interest to the audience due to the value provided through interaction. In order to obtain such content, the hashtags #CiudadDeLasMaravillas, #TeatroReal360, and #Escena360 were used because they were the most popular. The analysis period was from March 22nd, 2017 to April 1st, 2017. The Twitonomy tool was used to extract the data.

e) *Design used*

Color, efficiency, aesthetics, photographs, icons, and text legibility.

f) *Ease of access by the user*

Ease of learning, satisfaction, and memorability feature.

The latter has been measured by the time spent: very little time (less than one minute), a small amount of time (between one and two minutes), and a fair amount of time (between three and four minutes).

g) *Functionality and comprehensibility*

1) Audiovisual or interactive elements that distract and/or slow down reading; 2) the content does not fulfill its purpose of informing; 3) the content is too complex because it contains too much information; 4) use of textual elements to facilitate comprehension (headline, lead paragraph, a short contextual or explanatory text, etc.); 5) the texts that accompany the interactive content make it easier to understand; and 6) the way the interactive content is presented is in line with the data and the possibilities of interaction (no false expectations are created).

h) *Subjective aspects*

1) I felt comfortable consuming the content; 2) I found the content innovative; 3) Any user can quickly get an idea of the type of information offered and the navigation possibilities.

With these last two variables (functionality/comprehensibility and subjective aspects), a distinction has been made between positive and negative indicators grouped into two categories, A (-) and B (+), respectively, and these have been coded where appropriate. The results have been obtained according to the statistical scale of interval measurement (1 being the lowest value and 3 the highest), because it defines the unit of measure and assigns each element a number that indicates quantity, according to the measurement used. In this case, the arithmetic mean of position or central tendency has been used.

TABLE 2
VARIABLE AND CODING

Category	Code	Functionality and comprehensibility
A (-)	AVI	- Audiovisual or interactive elements that distract and/or slow down reading.
	NCU	- The content does not fulfill its informative purpose.
	DIN	- The content is too complex because it contains too much information.

Category	Code	Functionality and comprehensibility
B (+)	CTE	- Use of textual elements to facilitate comprehension.
	TFC	- The texts that accompany the interactive content make it easier to understand.
	FDI	- The way of presenting the interactive content is in line with the data and the possibilities of interaction.
Subjective aspects		
A (-) y B (+)		- I felt comfortable consuming the content. - I found the content innovative. - Any user can quickly get an idea of the type of information offered and the navigation possibilities.

Source: The authors.

ANALYSIS AND RESULTS

Characteristics of immersive rhetoric and VR typology

A total of 80% of RTVE *Lab*'s VR content is 360° video, whereas 20% is composed of hybrid videos that combine 360° with computer-generated environments. For Miriam Hernanz, Head of RTVE *Lab*, virtual reality is a viable format for the development of journalism:

Journalism can be carried out by developing virtual reality techniques. I believe this technology provides journalism with two assets that would otherwise be much more difficult to generate: the value of empathy, and the value of teleporting or placing the person in a space or situation that is impossible to access (personal communication).

TABLE 3
ANALYSIS OF RTVE *LAB*'S VR CASES

Name	Publication date	VR typology
<i>Orchestra (Teatro Real)</i>	November 2017	360° Video
<i>Choir (Teatro Real)</i>	November 2017	360° Video
<i>Cyrano (Edmond Rostand)</i>	Summer 2017	360° Video
<i>Cervantes VR</i>	April 2017	360° Video + re-creation created with digital images

Name	Publication date	VR typology
<i>Alento (Spanish National Ballet)</i>	Spring 2017	360° Video
<i>The Misanthrope (Molière)</i>	Spring 2017	360° Video
<i>San Fermín 2016</i>	July 2016	360° Video
<i>The Kitchen (Arnold Wesker)</i>	Autumn 2016	360° Video
<i>Vive Río: Heroínas</i>	August 2016	360° Video
<i>Ingeniería Romana Tarraco</i>	October 2015	360° Video + re-creation created with digital images

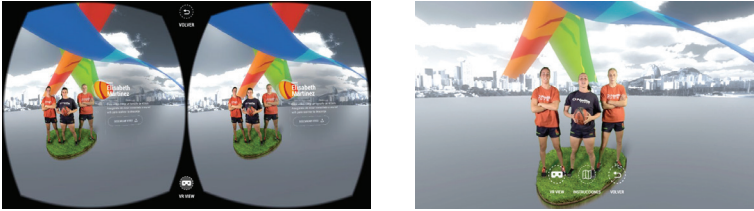
Source: The authors.

Virtual reality and 3D reconstruction technologies are leading us “toward an extended, expanded reality” of the real world together with that which is virtual, and an overlapping of both realities (Sacristán, 2018), as in the case of the *Cervantes VR* project and *Ingeniería Romana Tarraco* (Roman Engineering in Tarraco) (see Table 3). Regarding immersive rhetoric (Dominguez, 2015) (see Figure 4), 80% present a single-frame interface, i.e. the story takes up the entire screen (see Figure 3), with the exception of the projects entitled *Cervantes VR* and *Vive Río: Heroínas* (Río Live: Heroines), where the user has the option to decide. A total of 30% of the projects (see Figure 3), including *Cervantes VR*, *Vive Río: Heroínas*, and *Ingeniería Romana Tarraco*, stand out from the rest because they offer the added value of allowing the user to interact through the manipulation of pop-up menus or web forms, for example, which influence (although not decisively) the possibility of gaining further information and engaging in direct user interaction.

Hernanz distinguishes *Vive Río: Heroínas* from the rest of the VR projects for its immersive aspect.

At the Rio 2016 Olympic Games, we made five immersive feature stories with Olympic women who were preparing for the event. They were minority sports that required a lot of effort just to get a few minutes of media attention. We followed the format known as “A day in the life of...” through immersive filming. The voiceover (an in-depth interview in which the women reflected on their goals) was the guide for the entire narrative (personal communication).

FIGURE 2
 SCREENSHOT OF *VIVE RÍO: HEROÍNAS*, A VR EXPERIENCE
 OF FEMALE ATHLETES IN TRAINING BEFORE THE
 RIO DE JANEIRO 2016 OLYMPICS



Source: RTVE Lab.

As mentioned in Table 3, a total of 20% of the projects, including *Cervantes VR* and *Ingeniería Romana Tarraco*, immerse the user in re-created scenes, thereby allowing them to experience two historical events of global significance firsthand (see Figure 3). In addition, the technology allows the user to identify him or herself, play a role in the story, and personify a character in the scene.

FIGURE 3
 SCREENSHOT OF *CERVANTES VR* AND *INGENIERÍA ROMANA TARRACO*



Historical event that immerses the user in re-created scenes.



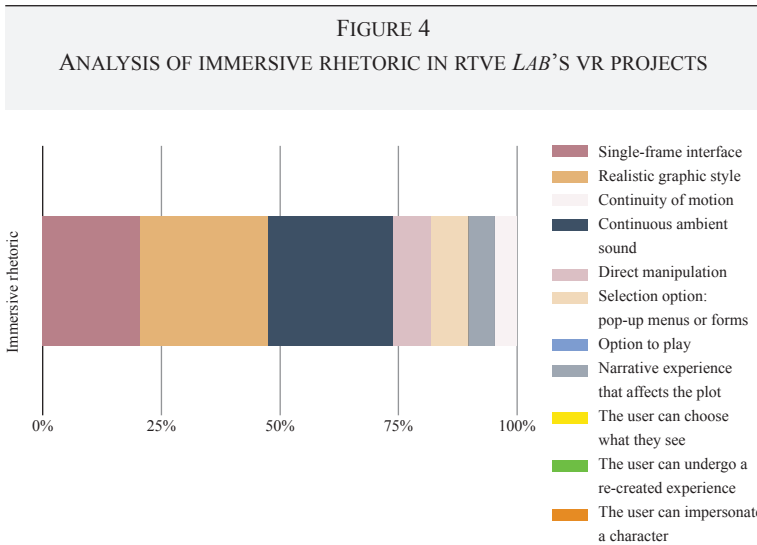
Features a single-frame interface.



Interaction: manipulation of pop-up menus.

The user can access more information.

Source: RTVE *Lab*.



Source: The authors.

The cases analyzed fully comply with the realistic graphic style because they immerse the user in highly realistic scenes with ambient sound to create expectation. However, we have not observed four of

the characteristics related to immersive rhetoric in any of the projects (100%), with the first example being continuity of movement, or in other words, the sensation of being present in the news. The second is choosing what you want to see through the framing of a scene. The third is when the sequence or outcome of the information depends on the user's choice, and the fourth is when a narrative experience is verified by the user utilizing his or her own rules.

ANALYZING CONTENT: SPECIALIZED TOPIC AND INTERACTION

More than half of the VR projects (60%) deal with cultural content: *Orchestra (Teatro Real)*, *Choir (Teatro Real)*, *Cyrano (Edmond Rostand)*, *Alento*, *The Misanthrope (Molière)*, and *The Kitchen (Arnold Wesker)*; 20% are educational (*Cervantes VR* and *Ingeniería Romana Tarraco*); the remaining 10% are related to sports and the social realm (*Vive Río: Heroínas* and *San Fermines* [Festival of San Fermin], both from 2016). The journalistic genres used to tell the stories were features (50%) and articles (50%). Of these, the genre most used for cultural stories was the article (40%).

Of the cases analyzed (see Table 4), the presence of the brand (*Teatro Real*) can be seen in two of the 360° videos: *Orchestra (Teatro Real)*, and *Choir* (also *Teatro Real*). These are cultural projects that use storytelling as a communication strategy through feature articles and were part of the activities developed for the 20th Anniversary of the Re-opening of the *Teatro Real*. In both cases, the impact and interactivity generated among the audience has been evaluated through interaction on Twitter, as well as with the hashtags #CiudadDeLasMaravillas, #TeatroReal360, and #Escena360, because these were the most heavily used channels for its dissemination (see Table 5).

Of the three hashtags, #CiudadDeLasMaravillas stands out because, during the period of analysis, it was mentioned in 119 tweets and 105 retweets from a total of 103 users who participated, among which are included the accounts of RTVE and the *Teatro Real* itself. In terms of potential impact, it is estimated that the hashtag was viewed 7 813 164 times and had a total reach of 2 811 713 users.

TABLE 4
CONTENT ANALYSIS OF TEN RTVE LAB VR CASES

Name	Topic	Current event storytelling	Brand-generated content	Collaborating brands or organizations	Strategy
<i>Orchestra (Teatro Real)</i>	Cultural	Feature article	Yes	The Madrid Symphony Orchestra, <i>Teatro Real</i>	Storytelling
<i>Choir (Teatro Real)</i>	Cultural	Feature article	Yes	Intermezzo Choir, <i>Teatro Real</i>	Storytelling
<i>Cyrano (Edmond Rostand)</i>	Cultural	Article	No	Theater company "La Nariz de Cyrano"	-
<i>Cervantes VR</i>	Educational	Feature article	No	-	-
<i>Alento</i>	Cultural	Article	No	Spanish National Ballet	-
<i>The Misanthrope (Molière)</i>	Cultural	Article	No	Camikase Producciones, <i>Teatro Real</i> , Teatro Calderón	-
<i>San Fermín 2016</i>	Social	Article	No	-	-
<i>The Kitchen (Arnold Wesker)</i>	Cultural	Article	No	Centro Dramático Nacional (National Drama Center)	-
<i>Vive Rio: Heroínas</i>	Sports	Feature article	No	-	-
<i>Ingeniería Romana</i>	Educational	Feature article	No	Estrella Damm	-
<i>Tarraco</i>				Tarragona City Hall	
				Tarragona Smart	
				Mediterranean City	

Source: The authors.

TABLE 5
INTERACTIVITY ANALYSIS OF THE VR CASES OF RTVE LAB

Name	Hashtag	No. Of tweets	Users	Retweets	Links / images	Impact	Scope
<i>Orchestra (Teatro Real)</i>	#CiudadDeLasMaravillas	119	103	105 (88.24%)	14	7 813 164	2 811 713
	#TeatroReal360	20	19	16 (80.00%)	4	23 431	23 431
	#Escena360	2	2	1 (50.0%)	1	17 055	17 055
<i>Choir (Teatro Real)</i>	#CiudadDeLasMaravillas	119	103	105 (88.24%)	14	7 813 164	2 811 713
	#TeatroReal360	20	19	16 (80.00%)	4	23 431	23 431

Source: The authors.

FUNCTIONALITY, DESIGN AND EASE OF ACCESS

All of the cases analyzed have a functional design, with the exception of *The Misanthrope (Molière)*. Such design is related to efficiency, ease of access for the audience, and legibility of the texts, which have a positive impact on the audience. A total of 100% of RTVE Lab's 360° videos are visually attractive due to their aesthetics. According to experts, this prompts the user to "automatically assume it is more user-friendly" (Hassan, 2015, p. 54). They also offer photographs and icons, which improve and facilitate the user experience and understanding of the information. However, only 50% have vibrant colors to attract the user's attention in certain images of the audiovisual feature, including the following: *Cyrano* (Edmond Rostand); *The Misanthrope (Molière)*; *The Kitchen* (Arnold Wesker); *Vive Río: Heroínas*; and *Ingeniería Romana Tarraco*.

Regarding ease of learning, or in other words, the time required to access the audiovisual feature and use it successfully when the user is not familiar with the application, 60% of the projects are very easy to use to perform basic tasks the first time the application is accessed, and these include the *Choir (Teatro Real)*, *Cyrano (Edmond Rostand)*, *Alento*, *The Misanthrope (Molière)*, and *The Kitchen (Arnold Wesker)*; 20% are easy to use and include *Cervantes VR* and *Vive Río: Heroínas*; and 20% are difficult to use, which is the case with *San Fermines 2016* and *Ingeniería Romana Tarraco*. Regarding the feature of memorability of a previously performed activity and the re-access time required for each of the cases analyzed, 70% require very little time (less than one minute), and the remaining 20% require a fair amount of time (between three and four minutes), which include *San Fermines 2016* and *Ingeniería Romana Tarraco*; finally, 10% need only a small amount of time (between one and two minutes), which occurs with *Cervantes VR*. Finally, when measuring satisfaction regarding ease of access (or not), and from the subjective perception of the researcher, only 20% do not offer ease of access, which include *San Fermines 2016* and *Ingeniería Romana Tarraco*.

If we consider the functionality and comprehensibility of each of the cases analyzed (see Table 6) with regard to content and form (design),

TABLE 6
ANALYSIS OF FUNCTIONALITY AND COMPREHENSIBILITY OF TEN RIVE LAB CASES

Criteria/Title	A (-)					B (+)				
	AVI	NCU	DIN	Arithmetic Mean	CTE	TFC	FDI	Arithmetic Mean		
<i>Orchestra</i>	2	1	1	1.3	2	2	3	2.3		
<i>Choir</i>	2	1	1	1.3	2	2	3	2.3		
<i>Cyrano</i>	1	2	1	1.3	2	2	2	2		
<i>Cervantes</i>	2	2	2	2	2	2	3	2.3		
<i>Alento</i>	1	2	1	1.3	2	2	2	2		
<i>The Misanthrope</i>	1	2	1	1.3	2	2	2	2		
<i>San Fermine</i>	1	3	3	2.3	1	1	1	1		
<i>The Kitchen</i>	1	2	1	1.3	2	2	2	2		
<i>Vive Rio: Heroínas</i>	2	1	2	1.6	3	2	3	2.6		
<i>Ingeniería Romana Tarraco</i>	1	2	2	1.6	2	2	2	2		
Arithmetic Mean	1.4	1.8	1.5	1.5	2	1.9	2.3	2.0		

A (-) AVI -Audiovisual or interactive elements that distract and/or slow down reading.
 NCU -The content does not fulfill its informative purpose.
 DIN -The content is too complex because it contains too much information.

B (+) CTE -Use of textual elements to facilitate comprehension.
 TFC -The texts that accompany the interactive content make it easier to understand.
 FDI -The way of presenting the interactive content is in line with the data and the possibilities of interaction.

Source: The authors.

more than half of the projects (66.6%) facilitate understanding with an average value of 2.0, compared to 50% with an average value of 1.3. If we analyze the positive and negative aspects by categories, the data for A (-) reveal that the interactive audiovisual content distracts or slows down reading at the rate of 46.6% (1.4). It is complex and contains too much information in 50% (1.5) of the cases, and it does not fulfill its informative objective at the rate of 60% (1.8). This is the case of the following VR projects: *Vive Río: Heroínas*, *Choir (Teatro Real)*, and *Orchestra (Teatro Real)*, with a rating of 1.0.

Block B (+) in Table 6 shows that in more than half of the cases analyzed (76.6%) with a rating (2.3), the content is compatible with the possibilities of interaction, or in other words, it does not create false expectations for the user. The texts accompanying the interactive content contain the necessary elements (headline, lead paragraph, etc.) (2, 66.6%), and make it easy to understand (1.9, 63.3%). It also bears mentioning that the *Vive Río: Heroínas* project attained the highest score (3), unlike *San Fermines 2016* (1).

Finally, if we analyze the projects that have achieved the highest rating in category B, and to a lesser extent in category A, and have generally promoted functionality and understanding, they are as follows: *Orchestra (Teatro Real)*, *Choir (Teatro Real)*, and *Vive Río: Heroínas*. The project with the lowest rating was *San Fermines 2016*. Regarding the subjective aspects of the researcher, in more than half (60%) with a rating of (2.3) of all the cases analyzed, the content is innovative and encourages its consumption. The user can quickly visualize the information and have an idea of the type of product involved as well as its possibilities for navigation (86.6% (2.6)). *Vive Río: Heroínas* (3) stands out from the rest of the projects with the highest rating, in contrast to the *San Fermines 2016* (1.3) with the lowest.

DISCUSSION AND CONCLUSIONS

Virtual reality offers endless possibilities for immersive and brand journalism, but capturing the user's attention in just a few minutes is a laborious task. This research paper offers an original analysis of interactive storytelling used in educational and cultural information. An

analysis model has been proposed that could be used for future research on the subject, including comparative studies.

According to the present study, most of RTVE *Lab*'s VR projects are 360° videos, according to immersive rhetoric (Domínguez, 2015). Despite being a benchmark in its commitment to this type of content, the *Lab* still has a long road to travel in order to achieve total immersion for the user. This implies interactive and visual immersion techniques in which people, scenes, and part of reality are simulated, and in which the user assumes an active role by playing a character, which are features of immersive rhetoric.

The *Lab*'s VR projects show the scenes and characters of the story in detail and as close to reality as possible, causing a sense of expectation through the sound and story that fills the entire screen. In addition, the projects are attractive due to their aesthetics and, in most cases, they make it easy for the user to access the content in a short period of time due to their design, yet unfortunately the immersive user experience has not been fully achieved.

The *Lab* is not committed to using branded content to provide information about educational topics, but it does utilize cultural content by using the article as a genre and storytelling as a technique, which has gained wide reach due to the participation of users on social networks, although this has not occurred in all of the cases analyzed. There is still a long journey ahead in order for branded content to use VR formats, or for both communication trends to be joined in a single strategy for the purpose of informing the user by providing other types of experiences and encounters.

Despite the interest that virtual reality videos arouse in audiences and their previously mentioned advantages for journalism, there is a serious problem with the implementation of immersive feature articles: the high cost of producing them, and the lack of training among journalists. Therefore, the journalistic community is not yet capable of tackling projects of this type. Hernanz considers that “journalists are not prepared at the present time to develop immersive journalism”, because most of them do not know how to “make non-linear scripts, nor scripts that are interactive. Now we have to *build* scenes to develop a story” (personal communication). This should encourage future lines of

research related to the curricula of communication faculties in Spanish universities.

While it is true that this research is limited to the analysis of specific cases, which are those of the RTVE *Lab*, as well as to the date on which the research was completed in 2018, the findings provide a basis for this type of study with an added benefit. VR projects tend to evolve with narratives and cutting-edge technology, although it depends on audience acceptance. In order for such acceptance to take place, the news must be consumed as an experience, yet this is not going to be possible until immersive journalism advances to the next level (Barreda, 2018), because at the moment it remains in the experimental stage.

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