

Data journalism and the digital native press: coverage by *El Confidencial*, *Eldiario.es*, and *El Español* of the Spanish general election campaign of 10th November, 2019

Periodismo de datos y prensa nativa digital: cobertura de la campaña electoral del 10N a través de El Confidencial, Eldiario.es y El Español



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Abstract:

The sheer volume of data to which we have access today means that we are faced with a new media scenario. Data journalism offers a different way of telling stories, a visual narrative that combines data with the latest technology of analysis, visualisation, and representation. Elections provide an opportunity to study the way in which digital media publish articles related to data journalism, as a lot of the material is produced in the form of polls, surveys, and interviews. By using a descriptive and comparative methodology, this study offers a unique view of the situation of data journalism in Spain through the coverage of the general election campaign of 10th November 2019. The descriptive nature of the investigation is based on the fact that one of the objectives has been to increase the knowledge base in this area and analyse the implementation of data journalism in the Spanish digital media. The sample is based on articles from *El Confidencial*, *Eldiario.es* and *El Español*.

Keywords:

Digital native press; data journalism; visualisation; political journalism; general elections.

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Resumen:

El volumen de datos tan grande al que podemos tener acceso hoy en día hace que nos encontremos con un nuevo escenario mediático. El periodismo de datos supone un modo distinto de contar historias, una narrativa visual que combina los datos con las últimas tecnologías en análisis, visualización y representación. Los comicios electorales suponen una oportunidad para estudiar la forma en la que los medios digitales publican piezas relacionadas con el periodismo de datos, puesto que se produce mucho material en forma de sondeo, encuestas o entrevistas. Esta comunicación ofrece, mediante el empleo de una metodología descriptiva y comparativa, una visión particular sobre la situación del periodismo de datos en España a través de la cobertura de la campaña electoral de las elecciones generales del 10 de noviembre de 2019. El carácter descriptivo de la investigación se basa en que uno de los objetivos es conocer y analizar la puesta en práctica del periodismo de datos en los medios digitales españoles. La muestra la componen El Confidencial, Eldiario.es y El Español.

Palabras clave:

Prensa nativa digital; periodismo de datos; visualización; periodismo político; elecciones generales.

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1. Introduction

Data management is a discipline that has always been used in journalism. Today's society demands news events that contain an abundance of data as proof of the accuracy and rigour of what is being reported. The Internet, as well as Information and Communication Technologies (ICT) and databases, provide the possibility of processing, classifying, and storing a large amount of information, thus giving rise to the so-called data journalism. This specialisation is characterised by the combination of traditional journalistic techniques and modern software for data presentation and visualisation. This is a type of journalism that not only tells stories through articles and infographics, but also “uses data to create a story, visualisation or representation of the data that proposes the same story or another, or even a combination of both techniques, which can eventually become a computer application of its own” (Antón Bravo, 2013: 109).

The data journalist is not a specialist of the near future, but is already a reality. The objective is to obtain the key data hidden within a huge amount of information available on the Web in order to transmit it using quality visualisation, and make it comprehensible to readers, given that “professional practice with renewed techniques in various cybermedia is demonstrating that data tells stories and reveals journalistic exclusives of great interest to the reader with significant social impact” (López-García, Toural-Bran and Rodríguez-Vázquez, 2016: 290). The journalist's working environment is based on producing compelling, innovative visualisations that combine data veracity with technological skills. “Journalists are starting to realise that if we don't manage these resources properly, we may even lose the opportunity to find exclusive stories. This requires the reporter to develop special skills” (Crucianelli, 2013: 116).

The needs and objectives of this branch of journalism make it advisable for information professionals to have a certain amount of training in computer science, statistics, programming and design, and at the same time be able to handle the techniques of traditional journalistic work. Sometimes it is also necessary to work as part of a team for more effective processing of data, but most of all, there is “a need to think digital and have a clear commitment to experimentation in order to tell stories for different platforms” (López-García, Toural-Bran and Rodríguez-Vázquez, 2016: 291). In short, this implies “a multidisciplinary work team that has yet to be assimilated into media newsrooms” (Flores Vivar and Salinas Aguilar, 2012: 13). For these reasons, it is necessary for the journalist to accept the reality of his or her chosen profession and adapt to this work methodology, which also provides added value, given that “not only is the technological matrix not going to disappear, it is likely to increase because the process of change and the widespread use of technology cannot be reversed. Therefore, adapting and evolving is essential” (López-García, Rodríguez-Vázquez and Pereira-Fariña, 2017: 88).

Along with journalistic skills, the data journalist needs to have in-depth knowledge of administrative laws and the institutions where he or she resides. This kind of journalism requires a mastery of subjects generally far from the preferences of the conventional journalist. It is therefore necessary to know how public administration works, how to interpret laws, orders, and regulations. “If a journalist doesn't understand how the institutions of his or her country work, it will be difficult for them to undertake the journey successfully” (Crucianelli, 2013: 123). The

practice of this discipline has evolved more quickly and favourably in those countries that have good legislation regarding laws of access to public information, or in other words, transparency laws. “Moreover, in countries with a dictatorial past such as ours, there is a long-established habit of hiding data” (Córdoba Cabús, 2018: 138).

Despite approval of the Transparency Law of 2013 in Spain, the true clarity demanded by citizens from administration has not yet been achieved. “The information available online is the main raw material for data journalism. Therefore, the current philosophy of open data with the ultimate goal of free access to information is completely in line with data journalism” (Chaparro, 2014: 45). Thus, it implies a specialisation closely related to transparency and public information. “Everything seems to indicate that this discipline will be one of the future opportunities for the profession, which is why the media will have to enter this new ecosystem, committing to this type of information” (Ferrerías Rodríguez, 2013: 135). The mentioned law has led to the establishment of private organisations that call for transparency in public institutions, such as the *Civio Foundation*. This institution is currently recognised nationally and worldwide, and has won prestigious accolades, such as the Gabriel García Márquez Prize and the Data Journalism Award, both in 2016. “Despite these initiatives, the culture of the traditional journalist, among other factors such as the lack of resources for professional training, have resulted in an ongoing situation in which very few people are devoting time to develop their skills for this kind of journalism. As a result, many of the innovations in data journalism are taking place outside the media, or have started there” (Flores Vivar and Salinas Aguilar, 2013: 27).

1.1. *The digital native press and data journalism*

Digital native newspapers are among those with the highest readership in Spain, and this is largely due to the fact that many of these media were created by journalists who had already built their own base of readers and followers on social networks. Thus, without the burden of publishing paper copies, digital native media today coexist alongside traditional media with more seniority and prestige. In the same ecosystem, newspapers with a long history, some of which have been around for more than a century, live side by side with media that have been recently created, yet have gained large audiences. Mainstream media compete in both print and digital formats, yet the new newspapers are only on the web. Nevertheless, both have had an impact in the same scenario. That scenario is one of large audiences in the unique medium by which both are measured in the 21st century: the Internet (Rius Baró, 2018).

Data journalism in Spain is mostly limited to very specific cases, in contrast to other countries such as the United States, the United Kingdom or Argentina, where this type of journalism has a significant presence in media newsrooms. “Thus, there are several newspapers that work in this field through blogs, specific ‘Data’ sections, or reports included in the multimedia or graphics section” (Ferrerías Rodríguez, 2016: 256).

Some of the most outstanding work in Spain in the field of data journalism has been carried out by media such as *El Mundo*, *El Confidencial* and *La Sexta*. The two latter media were the only Spanish news companies that collaborated with the International Consortium of Investigative Journalists (ICIJ), which carried out the investigation into the Panama Papers in 2016, the most important data leak in the history of journalism, and also the one with the largest

media collaboration. This investigation marked a before and after for the aforementioned organisation, given that “the relevance acquired, together with the considerable increase in the number of benefactors of its daily activity, has served to guarantee its existence as a fully independent institution in the short and medium term” (Parra Valcarce, Edo Bolós and Marcos Recio, 2017: 600).

In the field of political communication, it is worth highlighting that data journalism has become a highly useful tool as it allows for the in-depth analysis of events based on large amounts of data. In this regard, elections present opportunities to study the way in which the digital media publish pieces related to this field. “In the context of electoral campaigns and sociological analysis, this discipline is an ideal breeding ground for deploying its full power” (Teruel Rodríguez and Blanco Castilla, 2016: 1091). The year 2019 was quite intense in terms of political information. Spaniards were called to vote in two general elections, the first on 28 April 2019 and the second just six months later on 10 November 2019, which was simply a repetition of the first.

Electoral events are appropriate scenarios for developing journalistic data projects, “because before the elections with polls, surveys, and comparisons of previous elections, and after the elections with the geographical distribution of the vote, a large amount of material is produced by the public sector through organisations such as the Centre for Sociological Research (CIS), as well as by the private sector through sociological companies hired by the media. All of this together offers an appropriate scenario for representation through visualisation” (Teruel Rodríguez and Blanco Castilla, 2016: 1096).

By using the 10th November 2019 elections as a reference (10N), this paper sets out the following objectives:

1. To analyse the presence of data journalism in the electoral campaign of 10 November 2019 by the digital native press *El Confidencial*, *Eldiario.es* and *El Español*.
2. To identify the characteristics of data journalism as practised in the digital native press and establish a number of differences and similarities regarding its use among the selected media.

These general objectives have led us to other more specific aims, such as determining whether the data journalism pieces published by the digital native media *El Confidencial*, *Eldiario.es* and *El Español* are considered to be of high quality. In other words, whether they offered reports that were well-developed and contextualised, or if they were simply accounts of the data shown in visualisations. To this end, the formal features as well as those of the content of each text will be studied, observing the quantity published, the topics used, the number and types of sources, and the analysis of the visualisations used in order to extract their essential elements.

This study focuses on answering the following research questions:

- RQ1: Do data journalism reports published by the digital native press during election campaigns meet the criteria of journalistic quality?
- RQ 2: Are digital native media taking full advantage of the possibilities that data journalism offers in terms of political reporting?

2. Methodology

By using a descriptive methodology and content analysis, this study provides insight into the situation of data journalism in Spain through the coverage of the electoral campaign for the general elections of 10 November 2019. This campaign had the distinction of lasting eight days instead of fifteen, due to the application for the first time of the legislative reform of 2016, which shortened the electoral calendar from 54 to 47 days¹. Bearing this in mind, the electoral campaign began on 1 November and ended on 8 November, with Saturday the 9th of November being a day of reflection. Therefore, our research covers the news published in the digital native newspapers analysed during the week of the 1st to the 8th of November, 2019.

The descriptive nature of this research is based on the fact that one of the objectives has been to understand and analyse the implementation of data journalism in the Spanish digital native media. The content analysis will allow us to delve deeper into the characteristics of each of the pieces and their quality as well. The convenience sample consists of *El Confidencial*, *Eldiario.es* and *El Español*. As there are more than 50 digital newspapers in Spain today, in order to narrow down the study the research has been limited to the three most prominent digital native newspapers by audience according to data from the digital audience benchmark company Comscore, corresponding to the month of April 2020. These publications have been selected due to the fact that they are regarded as having significant prestige in the Spanish journalistic scene.

They are digital native newspapers, or in other words, media that operate exclusively on the Internet and do not have a print version. It is also interesting to note that they have editorial positions of diverse ideological leanings.

The universe is made up of all the news items that contain information and are related to the elections during the selected period. The study was carried out by exploring the websites of each of the media under study. The analysis sheet to which the journalistic pieces were submitted is divided into three sections: general data, formal analysis, and content analysis. The general data includes the name of the media outlet together with the date of publication and the name of the journalist who signed the news item. In the formal analysis, the number of pieces produced and the number of views were considered. The type of graphics used, interactivity, and the design quality were also studied. Analysis of the visualisations was carried out in a specific section where each of the essential variables were examined: interactivity, legend, colours, usefulness of the graphics, sample size, and margin of error.

In terms of typology, they have been classified into the following charts: bar charts, or comparison of magnitude charts; fever charts, or charts showing the evolution of a value over time; pie charts, or charts showing the composition of a unit; and tables and maps.

The content analysis examined the topics covered, the number and type of sources used, and the journalistic quality of the article. The sources were divided into personal and documentary. Personal sources are those that provide (or can provide) news, while documentary sources are those that serve the journalist to complete or illustrate

¹ Organic Law 2/2016, of 31 October, modifying Organic Law 5/1985, of 19 June, of the General Electoral System: <https://www.boe.es/eli/es/lo/2016/10/31/2/dof/spa/pdf>

the information he or she is gathering. The evaluation of news sources is essential for measuring the quality of journalistic work, since “the development of this function provides an objective criterion for analysing the quality and professional rigour of journalistic production” (Alonso González, 2016: 60).

In our study, we have taken into account the research carried out by Teruel Rodríguez and Blanco Castilla (2016) on the analysis of the informative quality of each of the pieces, differentiating between works that are mere data listings and those of greater journalistic elaboration in which the data presented is contextualised and analysed in depth.

3. Results

3.1. In-depth media analysis

A total of 34 news items and 76 visualisations were selected for the fieldwork. It is important to point out the difficulty in searching for news items related to data journalism, as each media outlet analysed publishes these items in a different section, and none of them has a specific category as such.

The following table shows the existing relationship in each of the digital media between the following: news pieces with visualisations (in other words, news articles containing some kind of infographics); news pieces without visualisations (news items with only text where data is analysed without being represented by any kind of infographics); and visualisations without text (the opposite of the latter, in which infographics are shown without any explanatory text); and finally, the total number of both the news pieces and the visualisations analysed is shown. The total number of pieces includes visualisations without text.

Table 1. Number of items and views in each medium

Media	<i>El Confidencial</i>	<i>Eldiario.es</i>	<i>El Español</i>	Total
News pieces with visualisations	8	10	4	22
News pieces without visualisations	7	2	2	11
Visualisations without text	0	1	0	1
Total number of visualisations	22	44	10	76
Total number of pieces analysed	15	13	6	34

Source: Prepared by the author

The results are shown below for each of the media analysed individually.

3.1.1. *El Confidencial*

Founded in November 2013 by journalists José Antonio Sánchez and Jesús Cacho, *El Confidencial* has become a benchmark for its innovative proposals, design, and its work in data and investigative journalism. This media also pays special attention to audience research and “has made progress both in the development of innovative

projects for external companies as well as in training, thus opening up new and interesting business models that are alternatives to the exhausted advertising-based model, and that explore the current difficult situation of media financing” (Trillo Domínguez and Alberich Pascual, 2020: 371).

As for the staff, the head of the data unit is Jesús Escudero. He is joined by Juanma Romero in the Graphics department along with editors Raquel Cano, Ainhoa Murga, Xabier Miguelez and Roberto R. Ballesteros.

In the eight days of the election campaign, a total of 15 news pieces related to data journalism were found. Of the 15, eight contain visualisations combined with their corresponding explanatory text. The remaining seven are pieces without visualisations.

With regard to the subject matter, the following issues were addressed: possible political pacts between parties, pre-election polls, analysis of the electoral debate, the perceived mood on social networks, and the percentage of postal votes. *El Confidencial* does have something similar to its own data journalism section under the leadership of Escudero. However, the news items analysed are not found in this section, but instead are scattered throughout each of the sections of the media under different labels: “General Elections 10N”, “Spain”, “Television/Audiences”, etc.

With regard to sources used, those that predominate are of a documentary and institutional nature, with little or no recourse to personal sources or expert consultations. Normally, a single source is cited to present the data, although there are cases of pieces being elaborated with two or three sources as well.

We have found only one case in our study in which documentary and personal sources are combined. This refers to the report entitled, “Vox almost doubles its authorised representatives from 28 April to 10 November, from 10.900 to 17.000²” (*Vox casi duplica sus apoderados del 28-A al 10-N y pasa de 10.900 a 17.000*), where together with the documentary sources used to carry out the surveys, personal sources from members of the Vox party are also included.

The total number of published visualisations was 22. Of these, 13 are bar graphs, four are fever graphs, and four are tables, which basically consist of text diagrams. Only one visualisation stands out from the rest, namely the piece that deals with political parties and social networks, where the interaction of each party with the users of the different social networks is shown by means of an explanatory diagram drawn up by the medium itself³.

Regarding interactivity, of the 22 visualisations analysed, only three are interactive and 19 are static. Those that are interactive are the so-called fever charts. In this way, by means of an interactive fever graph, we can discover interesting data, an example of which is the evolution of participation in general elections since 1977, or the increase in the cost of organising a general election. The interactive visualisations allow the reader to search and organise data, while static bar charts are largely used to display the results of polls and surveys.

Most of the visualisations of *El Confidencial* have been created using the free tool known as Datawrapper. This media also provides a link through which you can download all of the data in CSV format. The pre-election survey

² <https://bit.ly/305kRsf>

³ <https://bit.ly/2zMWfKq>

published on 4 November (the final day for publishing election polls with voter intentions), was conducted by *IMOP Insights*, and was carried out during the week of 29 October to 2 November 2019, based on 1,639 telephone interviews. At the bottom of the media website there is a fact sheet with all the details about how the methodology was applied: universe, sample design, margin of error, etc. *IMOP Insights* adheres to *CODIM*, a code of conduct that allows for the protection of personal data.

3.1.2. *Eldiario.es*

This digital media is known for being a pioneer in putting data journalism into practice. Established in September 2012, its director Ignacio Escolar is also the founder and former director of *Público*, which is why its staff consists mainly of former editors of that publication. Its data journalism team is rather small: names that stand out include Belén Picazo, Raúl Sánchez and Juan Tomás Sánchez, who are in charge of visualisations, design and data. In addition to these three people, there is a section that deals with both the design of the front page and the latest news on the networks. According to a survey-based report that assesses the audience and credibility of the world's leading media outlets, published annually by the Reuters Institute for the Study of Journalism (a journalism research centre at the University of Oxford), *Eldiario.es* is already the most widely read digital native media in Spain, ranking third among all newspapers, surpassed only by *El País* and *El Mundo* (Newman et al., 2019).

Special mention should be made of the collaborative agreements that the newspaper establishes with other media, such as The Guardian, which consists of translating several items of news and opinion pieces per day into Spanish. The London-based media outlet has a blog on its website called Datablog, which specialises in data journalism and has published numerous reports accompanied by maps and other interactive tools. The blog was launched in 2009 and has become a benchmark for any publication that wants to get started in this specialisation (Chaparro Domínguez, 2013). Another interesting agreement is the one with the website *Filtra.la*, which is similar to the International Consortium of Investigative Journalists, but at the local level, through which the newspaper receives all kinds of documentation. Finally, *Desalambre* should be highlighted as well. This section was created in May 2013 as an example of the ideological commitment of the digital media to the defence of human rights, which “is part of the offer with which the outlet positions itself in society” (Toro Peña, Hernando Gómez and Contreras Pulido, 2017: 63).

In terms of formal analysis, from the 1st to the 8th of November 2019, a total of 13 pieces related to data journalism were found. Of these 13, a total of 10 were works with visualisations combined with explanatory text. Of the remaining pieces, two are articles without visualisations, and the last one is an infographic without any kind of explanatory text, consisting of a map showing the candidates' route during the electoral campaign, city by city. *Eldiario.es* is the only one of the three media analysed to include this kind of article.

In terms of content, the topics published dealt with the following issues: results of the pre-election polls and surveys, analysis of the electoral debate between the five candidates, audience figures generated by the television debate, the rise of *Vox*, the increase in postal vote applications, and the massive flight of *Ciudadanos* voters.

Eldiario.es does not have its own data journalism section, so the news items analysed were found in different sections of the newspaper, mainly in the “Politics” section, but also in others such as “Television”, or those from different offices such as *Canarias Ahora* or *eldiarionorte.es*.

Regarding the use of sources, as in the case of *El Confidencial*, most of them are documentary and institutional, occasionally resorting to personal sources and statements by experts, although it was limited and rather scant overall. Even in those works with an abundance of charts, the sources are still brief. For example, in an article on the hits and misses in the 28 April and 26 May polls, 16 semi-circular graphs were published, the only source of which was the Spanish Centre for Sociological Investigation (CIS) (*Centro de Investigaciones Sociológicas*).

Quite the opposite occurs with the work produced by *Maldita.es*, a journalistic project in which messages on social networks and political discourse are analysed to check their authenticity through the application of data journalistic techniques. In the news item entitled, “*Las 18 falsedades de Sánchez, Casado, Rivera, Iglesias y Abascal en el debate electoral de la Academia de Televisión*” (The 18 falsehoods stated by Sánchez, Casado, Rivera, Iglesias and Abascal in the electoral debate of the Television Academy⁴), which dealt with the inaccurate statements of the five candidates during the electoral debate, a total of nine sources are cited, eight of which are documentary and institutional, and one of which is personal, with the latter being the opinion of an economist who is an expert on one of the topics covered in the debate.

Similarly, in the journalistic report that analyses the data on the alleged link between immigration and crime propagated by Vox in its election campaign, *Eldiario.es* refutes these claims, relying on documentary and institutional sources, such as the National Institute of Statistics (*Instituto Nacional de Estadística*)(INE), and the Ministry of the Interior, among others, along with a personal journalistic source, which was a statement made by a female university professor who specialises in the issue in question.

In terms of the number of visualisations published, the total number was 44, with *Eldiario.es* having the highest number of infographic genres published of the three media analysed. Of these 44, 19 were semi-circular pie charts, which were static and represented the semi-circular form of the Spanish Congress of Deputies according to the distribution of votes. The news piece from 2nd November entitled, “*El CIS frente a la realidad: aciertos y fallos en las encuestas del 28A y el 26M*” (The CIS versus reality: successes and failures in the 28 April and 26 May polls), include up to 16 of this type. The rest of the visualisations are distributed as follows: 10 bar graphs; nine fever graphs; three tables; two maps; and an explanatory diagram.

The graphics are created by the media itself using the free tool known as Datawrapper. However, unlike *El Confidencial*, it does not have a link through which you can download all the data. In the case of polls, the methodology section at the end of each article provides information on how data collection is conducted, the adjustment and averaging, the extrapolation of data to electoral districts, and how to add uncertainty and simulate elections. This kind of modelling is carried out by analyst Endika Nuñez.

4 <https://bit.ly/2XuE2dG>

Regarding interactivity, of the 44 visualisations analysed, 12 are interactive and 32 are static. As in the case of *El Confidencial*, those that are interactive are fever graphs, although two of them are bar graphs. Interactive graphs allow the reader to search and organise data, while static bar charts and tables are used to display the results of polls and surveys.

3.1.3. *El Español*

In the case of *El Español*, we are dealing with a newspaper that was created in October 2015 as an ambitious undertaking during the crisis in Spanish journalism. It is the third newspaper founded by its publisher Pedro J. Ramírez, who previously founded *Diario16* and *El Mundo*. This newspaper had an initial investment of 18 million euros and a staff of nearly 100 people. Its financing uses a mixed uses based on advertising on the one hand and subscriptions on the other.

The newspaper began on the day that its founder announced on Twitter his intention to create a daily newspaper. This was on the 1st of January 2015. Ten days later, a crowdfunding campaign was launched to raise funds, which would mark a double milestone: on the one hand, there was the issue of the funds raised. On the other hand, there was the purpose of the action, which was to launch a publication. "At the beginning of March 2015, a total of 5,624 shareholders had contributed 3.6 million euros, to which one must add, in the words of Pedro J. Ramírez, the 5.3 million he received in his severance package from *El Mundo*" (Del Arco Bravo; Yunquera Nieto; Pérez Bahón, 2016).

Taking a formal point of view, during the eight days of the election campaign, a total of six pieces of news related to data journalism were found, with *El Español* being among the three media analysed that published the least. Of these six, four are news items with visualisations combined with explanatory text. The other two are pieces without any type of graphics.

As far as the staff is concerned, there are only a few people on the editorial team in charge of data analysis and infographics. Some names that stand out include Marta Espartero and Daniel Basteiro (currently director of *infoLibre*). Of the six pieces that were published from the 1st to the 8th of November, four of them are signed by Basteiro, although two of them are merely a data display and are not accompanied by any kind of visualisation. *El Español* does not have a data journalism section or department, and all the articles related to this specialisation were published under different labels, such as "*Elecciones Generales 10-N 2019*" (General Elections of 10 November 2019) or "*Debates Electorales*" (Electoral Debates).

In terms of content, the topics published deal with issues similar to those of the media analysed previously: the decrease in postal voting applications, the results of the electoral debate between the five candidates, the increased number of *Vox* voters, the latest *SocioMétrica* poll commissioned by *El Español*, and possible electoral alliances.

As for the sources used, they are documentary in nature, and on no occasion do they resort to personal sources or expert consultations. Usually, a single source is cited to present the data, although there are some cases of pieces elaborated with two sources. Of the six news items selected, three are pre-election polls carried out by the company *SocioMétrica* for the newspaper. At the bottom of the newspaper's website is the technical sheet of the methodology.

The interviews consist of online surveys conducted through different social networks. The results are balanced by province, gender, age, employment status, and voter awareness. The total number of visualisations published was 10. Of these, four are bar graphs, three are fever graphs, two are tables, and one is a pie chart. In terms of interactivity, only two are interactive and eight are static. Those that are interactive are the so-called fever graphs. Therefore, using graphs with these characteristics makes it possible to discover interesting data such as the increase or decrease of electoral seats since the previous elections of 28 April, and the evolution of the different blocks of each one of the candidates in the debate on 4 November. These kinds of visualisations have been created using the Flourish tool. Ana Blanco, head of design at *El Español*, was in charge of creating all of them (interactive and static).

3.2. A comparative study

The first thing that stands out from the research conducted is that none of the media analysed has its own data analysis section on its web page or a data team dedicated to this area, so the difficulty in finding these types of pieces, which are spread across different sections (national, political, television, etc.), is yet another sign of the media's lack of interest in promoting the use of this discipline in their editorial rooms. Of the three digital native newspapers under study, the one that published the most news items related to data journalism was *El Confidencial* (15), closely followed by *Eldiario.es* (13), and lastly, in the case of *El Español*, with only six news items were found during the period analysed.

Of the 15 pieces found in *El Confidencial*, eight contain well developed visualisations, which are combined with corresponding explanatory text. The result is similar in *Eldiario.es*, where 10 of the 13 news items combine text with different types of graphics. Also noteworthy in *Eldiario.es* are pieces where there is hardly any text yet a large number of visualisations, and on one occasion a news item with 16 graphics and only three or four paragraphs of text was published.

As for *El Español*, of the six pieces published, four include some kind of visualisation. In terms of formal analysis, *Eldiario.es* published the most graphics, with a total of 44, followed by *El Confidencial* with 22, and *El Español* with just 10.

Regarding analysis of the visualisations, the bar graph is the most common among the three digital media, since it is used to compare different degrees of magnitude, examples of which include forecasts of the votes or seats for 10 November, the participation of political parties in social networks, or the assessments made of their leaders after the electoral debate was held.

Of the 22 visualisations seen in *El Confidencial*, 13 are bar graphs; in *Eldiario.es*, the number is 10, and in *El Español*, four. The remaining graphs found in the analysed media are fever graphs, followed by tables and pie charts. *Eldiario.es* is the only media outlet to publish a graph in the shape of a semicircle during the election campaign, which could represent the Spanish Congress of Deputies according to the distribution of votes.

As far as interactivity is concerned, a large part of the visualisations in the analysed media are of the static type. The interactive graphics found are fever and bar graphs. Thus, *El Confidencial* published only three interactive fever

graphs with the aim of checking the participatory evolution in general elections since 1977, and the increase in the cost of organising elections. *Eldiario.es* included 12 interactive visualisations of the 44 published. Of these 12, eight are fever graphs, three are bar graphs, and one is a map showing the candidates' route during the electoral campaign, city by city. *El Español*, on the other hand, only published two interactive visualisations: one was a fever graph showing the increase or decrease in the number of seats from the last elections on 28 April until the poll held on 3 November, and the other displayed the participation of the different leaders in the only electoral debate held.

As far as the use of sources is concerned, most of them have been classified as documentary and institutional sources, with personal sources being rather scarce. In the works published by *El Confidencial*, only one of them combines documentary sources with a personal source. *Eldiario.es* combines documentary with personal sources in two of its news items. Finally, all of the citations by *El Español* were from documentary sources and did not use any personal sources or expert consultations. In general, the three digital media cite a single source for their information, although some pieces were produced using two and three sources.

If we look at the journalistic quality of the published works, with quality being defined as information that is well developed and contextualised, that uses diverse sources, that includes extensive data analysis, and finally, that presents the data through visualisations, we have found few items that meet these criteria in the digital media included in this study. We found only three articles in *El Confidencial*; three in *Eldiario.es*; and none in *El Español*. We can therefore conclude that the first two media have come the closest to quality data journalism.

4. Conclusions

In order to achieve the first objective of this study, which was to analyse the presence of data journalism in the election campaign of 10 November 2019 by the digital native press, 34 pieces related to this specialisation and a total of 76 visualisations were examined in the three digital media under study: *El Confidencial*, *Eldiario.es* and *El Español*.

The detailed analysis of the published works has allowed us to achieve the second objective of this research, which was to identify the differences and similarities found in the use of data journalism in the selected media, as well as to establish the characteristics of this modality in digital native newspapers. We have observed that there are more similarities than differences. The main similarities lie in the subject matter, the combination of sources in the text, the types of visualisations, and the explanation of the methodology applied. The differences can be found in the statistical models used and in the downloading and publication of the raw data. *Eldiario.es* offered more variety in its graphics, although it did not allow data to be downloaded, something that was possible in the visualisations of *El Confidencial*, although both used the same tool known as Datawrapper to produce the graphics. *El Español*, on the other hand, uses its own statistical models or predictions, while the other two newspapers use external statistics companies.

In answer to the first research question posed in this paper on whether or not the pieces published meet journalistic quality criteria, we have seen how the three media analysed have opted to include data journalism in terms of

electoral information, although the number of articles that meet the quality indicators established in this study has turned out to be quite limited. The approach of the digital media to data journalism can be confirmed by the use of certain resources, such as having qualified data analysis personnel on staff, the number of visualisations, and the use of some personal sources combined with those that are documentary and institutional in nature. Generally speaking, however, this practice has not proven to be enough, because as we pointed out earlier, only five of the total number of pieces analysed have met the quality parameters indicated. These pieces of news come from *El Confidencial* and *Eldiario.es*, so we can affirm that both newspapers have covered the 10 November election campaign in a similar way. On the other hand, *El Español* has diverged from the ideal of quality data journalism on this issue.

With regard to the second research question on whether digital media are making the most of the possibilities offered by data journalism, the answer is that they are not taking full advantage of the resources provided by the Internet in terms of political information. The use made of this discipline by digital media remains cautious, and largely insufficient. The media selected in this study have a team dedicated to this specialisation, but they do not have their own department as such, and as a consequence, the difficulty in finding each of the works indicates a lack of criteria on the part of those in charge when it comes to organising the content produced by the data unit. This is combined with other factors, such as the cost of setting up such a department, the shortage of data-trained staff, and the fact that the returns it produces are not immediate but long-term. As this paper has shown, they have reduced data journalism to the production of visualisations or simpler articles and neglected in-depth analysis. Overall, there has been a lack of more well-developed pieces in which data is put into context and various kinds of sources are combined. Instead, the predominant form has been statistical analysis of the electoral polls carried out.

While 2019 had already seen an election in April, the repetition of the elections on 10 November in the same year was a highly newsworthy event throughout the country. After the election results, the possible government alliances that could have been reached between the left-wing bloc, composed of the *PSOE* and *Unidas Podemos*, and the bloc that brought together the three right-wing parties, which are the *Partido Popular*, *Ciudadanos* and *Vox*, provided an ideal scenario for the production of news pieces related to data journalism by the digital media.

In a world where objectivity in journalistic discourse is valued more than anything else, data journalism has become a powerful defence mechanism for political reporting, as it allows such reporting to distance itself from the possible manipulation of information and to publish news events based on the use of data. Despite having experienced a slight increase over the last decade, data journalism currently seems to be suffering from a certain degree of sluggishness in the newsrooms of Spanish digital native media which, on the other hand, is not to say that it does not continue to arouse interest and expectation, both nationally and worldwide.

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