

Javier Guallar

Universitat de Barcelona
jguallar@ub.edu

Rafael Pedraza-Jiménez

Universitat Pompeu Fabra
rafael.pedraza@upf.edu

Mario Pérez-Montoro

Universitat de Barcelona
perez-montoro@ub.edu

Curation Analysis System (CAS): A method for analysing digital media content curation

<https://doi.org/10.3145/indocs.2022.3>

Guallar, Javier; Pedraza-Jiménez, Rafael; Pérez-Montoro, Mario (2022). Curation Analysis System (CAS): A method for analysing digital media content curation. In: Freixa, Pere; Codina, Lluís; Pérez-Montoro, Mario; Guallar, Javier (ed.). *Visualisations and narratives in digital media. Methods and current trends*, (pp. 26-46). Barcelona: DigiDoc-EPI.
<https://doi.org/10.3145/indocs.2022.3>

Abstract

We present a method or system for the analysis and evaluation of content curation in the digital media, which we call the Curation Analysis System (CAS). The system comprises two main dimensions – namely, Curation and Content – which, in turn, are made up of a series of parameters and indicators to which we assign a score. Each parameter is described in detail under the following four headings: Definition, Explanation, Procedure, and Examples. Procedure includes a list of indicators, and for each of them an analytical question and its corresponding scoring system. In Examples, a set of good content curation practices for use in the digital media are presented, in this case, related to the same format, that of newsletters.

Keywords

Content curation, news curation, digital media, newsletters, information sources, evaluation systems, indicators.

Título

Curation Analysis System (CAS), método para analizar la curación de contenidos en medios digitales

Resumen

Este trabajo presenta un método o sistema para el análisis y la evaluación de la curación de contenidos en medios digitales, denominado Curation Analysis System (CAS). Este sistema se basa en dos dimensiones (Curación y Contenido), que agrupan una serie de parámetros y de indicadores a los cuales se les ha asignado una puntuación. Para cada parámetro se señalan los siguientes elementos: Definición, Explicación, Procedimiento y Ejemplos. En el Procedimiento se incluye una relación de indicadores, y para cada uno de ellos una pregunta de análisis y una puntuación. En Ejemplos, se presentan un conjunto de buenas prácticas de curación de contenidos por parte de medios digitales, en este caso, en un mismo formato, newsletters.

Palabras clave

Curación de contenido, curación de noticia, medios digitales, boletines, fuentes de información, sistemas de evaluación, indicadores.

1. Introduction

The concept of “content curation” is of recent origin, usually attributed to an article published in 2009 by marketing professor, Rohit Bhargava, entitled “Manifesto for the Content Curator” (Bhargava, 2009). In these times of exponential growth in digital content, the author defends, the need for a new professional activity – “the next big social media job” – specialised in selecting the most relevant content for a given audience, sharing it with that audience in the best way possible, and endowing it with added value.

Since its emergence in the digital marketing sector, the concept has been adopted in other fields that work with digital information, most notably in the Information Sciences, Journalism and Communication, Education, and Engineering and Computer Science. Today, more than a decade after its first appearance, the concept of content curation is well established in the professional and academic literature of various disciplines and specialties.

In the specialist literature, for example, we find works ranging from studies of curation in a broad and transversal sense, including professional monographs (Rosenbaum, 2011; Guallar and Leiva-Aguilera, 2013) and essays (Bhaskar, 2016), to those that address the application of content curation in different sectors, including journalism and digital media, the specific area that concerns us here.

In this field, several studies are worth highlighting, most notably Bradshaw (2013); Guerrini (2013); Cappelletti Júnior and Domínguez Quintas (2014); Diaz Arias (2015); Cui and Liu (2017); Guallar (2017a, b); Bruns (2018); Codina (2018); Guallar and Codina (2018); Guallar et al. (2021a, b); Silva-Rodriguez, 2021; Sixto-García, Escandón Montenegro and Luchessi (2022).

Here, however, we seek to take a different approach to these earlier studies and propose a system for the analysis and evaluation of content curation in digital media, which we baptise, the Curation Analysis System or CAS, and which can be applied in various contexts. An initial version of this method was first described in Guallar et al. (2021b) and a number of reports of its implementation have since been provided (Guallar et al., 2021a; Guallar et al., 2022).

In its development, we have adopted methodologies employed in systems analysis and the analysis of information products as well as in expert observation (Glaser and Strauss, 1967; Creswell, 2009; Denzin and Lincoln, 2011; Pedraza-Jiménez et al., 2016; Ferran-Ferrer et al., 2017; Morales et al., 2020). In this way, we identified a series of elements that enable us to characterise, analyse and evaluate the object of study. Based on this work, we were able to design and build our new system – CAS – for the evaluation of content curation in the online news media.

In an analytical system of this type, the parameters identified refer to general aspects of online journalism products that can be studied. Each parameter, in turn, consists of a set of indicators and it is the analysis of the latter that enables us to make a value judgment about the corresponding parameter. Here, each indicator is assigned a specific scoring system. This might be binary (i.e. 0–1), when assessing the simple presence or absence of a particular feature, or multiple (e.g. 0 – 3), when a more detailed evaluation of the feature in question is required – ranging, for example, from 0 – poor – to 3 – very good.

To obtain the indicators, we conducted an in-depth study of existing proposals in the specialised literature – specifically Deshpande (2013), Barnhurst (2013), Cui and Liu (2017), Guallar (2017a), Orero and Cebríán-Enrique (2019), Guallar et al. (2021b) – which, from a variety of different research angles, have employed a rich diversity of elements in their analyses of content curation. In the following sections, we present the CAS and indicate, for each parameter, the bibliographical references considered and their specific contributions in each instance.

2. Curation Analysis System: general characteristics

The system, as discussed, is based on a set of parameters and their corresponding indicators, which in turn have been grouped into two dimensions: Content and Curation, as shown in Table 1.

A. Content	
A1. Amount of content	A1.1. Quantity
A2. Time range	A2.1. Retrospective or timeless information A2.2. Recent information A2.3. Current information A2.4. Real-time information
A3. Origin	A3.1. Own content A3.2. External content
A4. Source by type of organisation	A4.1 Official sources A4.2 Corporate sources A4.3 News media A4.4 Private citizens

A5. Source by morphology	A5.1 Web sites A5.2 Blogs A5.3 Social networks A5.4 Secondary sources
B. Curation	
B1. Authorship	B1.1. Authorship
B2. Sense making technique	B2.1. Retitling B2.2. Summarising B2.3. Commenting B2.4. Quoting B2.5. Storyboarding B2.6. Parallelising
B3. Function of the hyperlink	B3.1. Without modifying B3.2. Describing B3.3. Contextualising B3.4. Interpreting B3.5. Quoting source B3.6. Citing author B3.7. Calling to action

Table 1. CAS – System for the analysis of the curation of journalism content. Summary of its dimensions, parameters and indicators.

The system is described in detail in section 3 below. For each parameter, we provide the following information:

- **Definition:** brief definition.
- **Explanation:** detailed description.
- **Procedure:** methodology to be employed in the evaluation of its use, including its corresponding list of indicators, and for each of these, the specific analytical question that needs to be asked and the scoring system to be used.

- **Examples:** examples of the application of the CAS to digital media. In this study, our examples are of the same type of journalism product – that is, newsletters – from different online news media outlets and countries.

The system seeks to be exhaustive, that is, it aims to cover all aspects that might affect the quality of curation in digital media; moreover, in so doing, it uses a scoring method that does not assign greater weight to any one particular quality. Indeed, it is left to the discretion of the individual analyst or evaluator as to whether they opt to make a total or partial use of the system – that is, if they are only interested in some of the parameters – or whether they prefer to modify the scores proposed – that is, if they wish to give greater weight to one or more of the indicators. For example, in the case of the parameter time range (which captures the temporal quality of the curated content), an evaluator might attach greater importance to retrospective content than to real-time content and so opt to score them differently, on the grounds that (from their particular perspective) the better online news media use retrospective information systems.

3. Dimension A: Content

A1. Amount of curated content

Definition

Amount of curated content found in a journalism or information product.

Explanation

Here, when referring to journalism or information products, we understand those units of analysis that constitute the specific object of study – they might include, for example, home page news items, news stories from a given section of the newspaper, newsletters, etc. – and, moreover, the parameter can only be applied in comparative analyses of like products: for example, if we wish to compare the newsletters of different news media outlets or, alternatively, their home page news, etc. In order to identify the curated content in a certain journalism product, we need to determine whether a link exists (be it in the text, in an image or in the form of embedded content) to content that is independent of and external to the content being analysed. If there is, in fact, no link giving access to other original content, even though it might be mentioned, it cannot be considered curated content.

One of the clearest distinctions that can be made between curated journalism products and other types of products is the amount of curated content they offer. In our system of evaluation, a score (from 1 to 3) is assigned on the understanding that the amount of curated content available within a product is in and of itself a criterion of the quality of that product.

Procedure

Only one indicator – that of the amount of curated content – is considered to measure this parameter.

A1.1. Quantity of curated content.

CAS question: How much curated content is there in the analysed product?

Score: 0–none; 1–lower tercile; 2–middle tercile; 3–upper tercile

First, the products analysed need to be of the same type: for example, home pages in digital news media, a given section of the same news medium, a newsletter, etc. Then, a score is assigned corresponding to one of three distinct levels (terciles) of curated content, with the highest number of curated sources being considered the benchmark of good journalistic curatorial practices. This number is then broken down into three parts, with 3 points being assigned to products with an amount of curated content in the upper tercile, 2 points to those in the middle, and 1 point for those in the lower tercile.

Examples

- “Coronavirus Briefing”, *The New York Times*, 24/04/2020. A1: 3 points
- “VOX Care”, VOX, 24/04/2020. A1: 1 point

For an online newsletter, based on the observation of the digital press, a possible score for this indicator might be established as follows: 1 point for amounts of curated content ranging from 1–10 per newsletter, 2 points for amounts ranging from 11–20; and 3 points for amounts above 21.

Applying this system of scoring to two US newsletters of the same type (specialising in providing coronavirus briefings) and published on the same day in 2020: *The New York Times’* “Coronavirus Briefing” included 33 pieces of curated content and so would be assigned 3 points for this indicator, whereas VOX’s “VOX Care” included 10 pieces and would be assigned 1 point.

A2. Time range of the curated content

Definition

Time range in which the curated content can be delimited based on the date on which it was originally published.

Explanation

Four time frames can be distinguished: retrospective or timeless information (from previous months or years); recent information (from the last few days or weeks), current information (from the last few hours), and real-time information.

In the case of *journalistic curatorial practices*, it is useful, and relatively straightforward, to differentiate information according to these time frames: the first (i.e. retrospective information) is very closely related to the traditional practice of documentation in journalism, while the rest have grown exponentially in recent years as the social media and real-time information have gained in importance in the news habits of audiences.

Procedure

Four indicators are considered, one for each of the time frames established.

A2.1. Retrospective or timeless information.

CAS question: Does the product have retrospective curated content, from previous months or years, or what can be considered timeless content?

Score: 0–No; 1–Yes

A2.2. Recent information.

CAS question: Does the product have recent curated content, from the last few days or weeks?

Score: 0–No; 1–Yes

A2.3. Current information.

CAS question: Does the product have current curated content, from the last few hours?

Score: 0–No; 1–Yes

A2.4. Real-time information.

CAS question: Does the product have any real-time curated content?

Score: 0–No; 1–Yes

The indicators resulting from the application of this parameter are not mutually exclusive, but rather compatible with each other, and, moreover, a measure of quality of a journalism product when it is capable of offering content in all four frames. Thus, the minimum score that a curated product can obtain for this parameter is 1 and the maximum is 4.

Examples

- “Crisis del coronavirus”, ABC, 24/04/2020. A2: 2 points
- “Coronavirus: lo que debes saber hoy”, Eldiario.es, 24/04/2020. A2: 4 points

In the Spanish newsletter “Crisis del coronavirus”, published by the newspaper ABC on 24 April 2020, its curated content can be assigned to two-time frames (current and retrospective) and so is awarded a score of 2 points, whereas “Coronavirus: lo que debes saber hoy”, published by Eldiario.es presents content in all four time frames and so is awarded the maximum score of 4 points.

A3. Origin of curated content

Definition

The origin of the curated content in terms of the media outlet or organisation that publishes it.

Explanation

The curated content can originate from one of two sources as far as the organisation that produces the analysed product is concerned: it might be either content external to the media outlet itself or its own content. Usually, an outlet’s own curated content is very much in the majority in the links of journalism products, although some studies point to the need to qualify this claim in some cases: for example, Guallar et al. (2022) report that pure digital products tend to have more external content than is the case in the legacy media.

Procedure

Two indicators are considered in the assessment of this parameter, one for each of the categories established.

A3.1. Own content.

CAS question: Does the product contain its own curated content?

Score: 0–No; 1–Yes

A3.2. External content.

CAS question: Does the product contain external curated content?

Score: 0–No; 1–Yes

The indicators of this parameter are not mutually exclusive, but rather compatible with each other, and, moreover, in this context, a measure of the quality of a journalism product when it is capable of offering both types of content. Thus, the minimum score that a curated product can obtain for this parameter is 1 and the maximum is 2.

Examples

- “Das 18-Uhr-Update zur Corona-Krise”, *Die Welt*, 24/04/2020. A3: 2 points
- “F.A.Z. Newsletter Coronavirus”, *Frankfurter Allgemeine Zeitung*, 24/04/2020. A3: 1 point

In the newsletter “Das 18-Uhr-Update zur Corona-Krise”, published by the German media outlet *Die Welt*, we find both own and external curated content, and so we assign it 2 points, whereas the “F.A.Z. Newsletter Coronavirus”, published by the *Frankfurter Allgemeine Zeitung*, only contains content from the newspaper itself, so it is assigned just 1 point.

A4. Source of the curated content by type of organisation

Definition

The source of the curated content in terms of the media outlet or organisation that produces it.

Explanation

Our proposal considers two distinct parameters in relation to the source of the information: first, according to the type of organisation responsible for producing it and, second, according to its formatting characteristics or morphology. Here, in section A4 – type of organisation – a distinction is drawn between official sources (Government and public agencies), corporate sources (companies or other private organisations), the news media, and private citizens/online communities (collaborative wikis, hashtags, online forums, etc).

Procedure

For this parameter, four indicators are considered for each of the categories established

A4.1. Content originating from official sources.

CAS question: Does the product contain curated content from official or government sources?

Score: 0–No; 1–Yes

A4.2. Content originating from corporate sources.

CAS question: Does the product contain curated content from corporate sources, companies or other private organisations?

Score: 0–No; 1–Yes

A4.3. Content originating from the news media.

CAS question: Does the product contain curated content originating from the news media?

Score: 0–No; 1–Yes

A4.4. Content originating from private citizens

CAS question: Does the product contain curated content from personal sources or from private citizens?

Score: 0–No; 1–Yes

This parameter, like the previous two, comprises indicators that are not mutually exclusive and where the variety of sources can be considered a criterion of quality. Thus, 1 point indicates a product with a minimum variety of curated sources, while 4 points indicates a product with a great variety of sources.

Examples

- “Politico Nightly. Coronavirus special edition”, *Politico*, 0/04/2020. A4: 4 points
- “Coronavirus now”, *Boston Globe*, 3/04/2020. A4: 1 point

In these US news media newsletters “Politico Nightly. Coronavirus special edition” published by *Politico* and “Coronavirus now” published by the *Boston Globe*, the former presents four source types by organisation, and so is assigned 4 points, while the latter only uses news media sources and so is assigned 1 point.

A5. Source of the curated content by morphology

Definition

This parameter evaluates the morphology or formatting characteristics of the source of the curated content.

Explanation

A distinction is drawn between web sites, blogs, social networks and secondary sources (including data bases, catalogues, etc.).

It should be stressed that these two parameters – A4 and A5 – of curated content sources based on the type of organisation and their morphology, respectively, are not overlapping parameters, because while they both refer to sources of information, they are classified in accordance with distinct criteria. Thus, for example, the curated content originating from a blog (parameter A5), could originate from an official source, a corporate source, a news media outlet or a private citizen (parameter A4).

Procedure

For the assessment of this parameter, four indicators are considered, one for each of the categories established.

A5.1. Content originating from web sites.

CAS question: Does the product contain curated content originating from web sites?

Score: 0–No; 1–Yes

A5.2. Content originating from blogs.

CAS question: Does the product contain curated content originating from blogs?

Score: 0–No; 1–Yes

A5.3. Content originating from social platforms.

CAS question: Does the product contain curated content originating from social platforms?

Score: 0–No; 1–Yes

A5.4. Content originating from secondary sources.

CAS question: Does the product contain curated content originating from secondary sources, such as data bases, catalogues, etc.?

Score: 0–No; 1–Yes

As in the previous parameter, the variety of source types according to the formatting characteristics of the curated content is considered a criterion of quality and, thus, a score of 1 indicates a minimum and a score of 4 indicates the maximum of variety possible.

Examples

- “Coronavirus Updates”, *Washington Post*, 10/04/2020. A5: 3 points

- “Coronavirus Updates”, *Washington Post*, 13/11/2020. A5: 1 point

The newsletter of the US newspaper, the *Washington Post*, in the edition published on the 10 April 2020, curates' content from three source types (websites, blogs and social networks), and as such is assigned 3 points, whereas the newsletter corresponding to the 13 November 2020 edition has content from just one type (websites), and so obtains 1 point.

4. Dimension B: Curation

B1. Authorship of curation

Definition

This parameter determines whether the curated product has a signed author.

Explanation

A key element in evaluating the quality of any digital product or service is a clear, unequivocal identification of its authorship.

Procedure

This parameter includes an indicator of the unequivocal identification of the authorship of the journalism product.

B1.1. Authorship of the curated content.

CAS question: Is the authorship of the product analysed visible?

Score: 0–No; 1–Yes

In the case of a product of curated content, the assessment of its authorship has similar implications to those associated with any other kind of digital content. Thus, it is considered an element of quality if its authorship is made clearly and accurately known to the reader.

Examples

- “Coronavirus: l’essentiel à savoir”, *Le Parisien*, 27/11/2020. B1: 1 point
- “Coronavirus: l’essentiel à savoir”, *Le Parisien*, 24/04/2020. B1: 0 points

In the newsletter published by the French newspaper, *Le Parisien*, the edition dated 27 November 2020 is signed by Laurence Lefour and Joffrey Vovos, whereas the edition dated 24 April is unsigned – thus the former is assigned 1 point and the latter 0 points.

B2. Sense making techniques

Definition

This parameter assesses the visible use made of techniques of sense making, that is techniques that add value to curated content.

Explanation

The following techniques – drawing above all on Deshpande (2013) and Guallar et al. (2021b) – are taken into consideration:

- retitling: (usually, only applied in the case of using a single source) curating the content with a different title to that used in the original.
- summarising: providing an informative or objective summary of the curated content.
- commenting: providing a personal or subjective summary or a text expressing an opinion.
- quoting: including a textual quote from the curated content.
- storyboarding: combining in one product various pieces of content in different formats (for example, text extracts, photos, tweets, videos) with the text itself.
- parallelising: presenting two or more pieces of content that apparently have no link but for which the curator finds a relevant relation and justifies this link.

These techniques can be used independently of each other or in combination. For example, the use of the last two, which require a considerable degree of elaboration, normally require the use of one or more of the other techniques from the list.

Procedure

For the evaluation of this parameter, six indicators are considered, one for each of the techniques described above.

B2.1. Retitling.

CAS question: Does the analysed product change the title – retitle – of the original curated content?

Score: 0–No; 1–Yes

B2.2. Summarising.

CAS question: Does the analysed product include an informative or objective summary of the curated content?

Score: 0–No; 1–Yes

B2.3. Commenting.

CAS question: Does the analysed product include a personal or subjective summary or a text expressing an opinion?

Score: 0–No; 1–Yes

B2.4. Quoting.

CAS question: Does the analysed product include a textual quote from the curated content?

Score: 0–No; 1–Yes

B2.5. Storyboarding.

CAS question: Does the analysed product combine various pieces of content in different formats?

Score: 0–No; 1–Yes

B2.6. Paralleling.

CAS question: Does the analysed product relate two or more pieces of content that previously presented no apparent link?

Score: 0–No; 1–Yes

This parameter for evaluating the curation quality can cause the score of the evaluated product to vary between 0 points, if the curation is fully automated, and a maximum of 6 points, should all six techniques be combined. However, a high combination of these techniques is very rare.

Examples

- “Coronavirus: lo que debes saber hoy”, *Eldiario.es*, 17/04/2020. B3: 4 points
- “Especial Coronavirus”, *El Mundo*, 17/04/2020. B3: 0 points

In the Spanish newsletter “Coronavirus: lo que debes saber hoy”, published by *Eldiario.es* on 17 April 2020, we find four sense making techniques being used (summarising, commenting, quoting and storyboarding), for which 4 points are assigned; and on the same day in “Coronavirus Special”, published by *El Mundo*, no techniques are used given that it is an automated newsletter, and so it is awarded 0 points.

B3. Informative function of the hyperlink

Definition

This parameter assesses the function that the curated content fulfils within the analysed product from a journalistic or informative perspective.

Explanation

Here, we are concerned with the intentionality or the purpose of each piece of curated content within the analysed product. Three of the categories are taken from Cui and Liu (2017) – namely, sourcing curation, contextualising curation and interpreting curation – while the others are based on our direct observations of the digital media. This parameter focuses exclusively on the function of each hyperlink – not on that of the rest of the content written by the curator – and which can be considered as completing the product in question. We include the following categories:

- Without modifying: original content unmodified by the curator. Two types have been identified: hyperlinks in which the text corresponds to the original title of the document, without undergoing any modifications by the curator; and embedded documents originating from social platforms.
- Describing: curated content as description or summary. The hypertexts of the articles reflect, partially or totally, the content of the linked source and without clicking on the original content the reader should be able to form a general idea about it. This function is related with the sense making technique of summarising.
- Contextualising: the curated content is used fundamentally to contextualise information (contextualising curation): while the content might not be directly related to the news story, it can help explain its social, cultural or historical contexts, etc. It exploits the curation of timeless or retrospective information sources.
- Interpreting: the curated content is interpreted by the curator (interpreting curation), that is, the hyperlinks do not have to provide descriptive or contextual information but rather interpretations of the content. This function is directly related with the sense making technique of commenting.

- Quoting source: when the hyperlink text does not refer to the subject matter of the content that is accessed, but rather it identifies the source where it has been published.
- Citing author: as in the case above, but it identifies the author.
- Calling to action: a call to enter a hyperlink, via a text of the type “click here”.

Procedure

For the evaluation of this parameter, seven indicators are considered, one for each of the functions described above.

B3.1. Without modifying

CAS question: Does the analysed product provide access to curated content without any modifications in its title or directly as embedded content?

Score: 0–No; 1–Yes

B3.2. Describing.

CAS question: Does the analysed product provide access to curated content with a descriptive or summary type hyperlink or embedded link?

Score: 0–No; 1–Yes

B3.3. Contextualising.

CAS question: Does the analysed product provide access to curated content with a contextualised hyperlink or embedded link?

Score: 0–No; 1–Yes

B3.4. Interpreting.

CAS question: Does the analysed product provide access to curated content with an interpretative or opinion-type hyperlink or embedded link?

Score: 0–No; 1–Yes

B3.5. Quoting source.

CAS question: Does the analysed product provide access to curated content by indicating the source?

Score: 0–No; 1–Yes

B3.6. Citing author.

CAS question: Does the analysed product provide access to curated content by indicating the author?

Score: 0–No; 1–Yes

B3.7. Calling to action.

CAS question: Does the analysed product provide access by making an explicit call to action?

Score: 0–No; 1–Yes

These are non-exclusive functions and they are likely to complement each other, although it is unlikely to find a combination of all seven in one product. The minimum score is therefore 1 point and the maximum is 7.

Examples

- “Themenspezial Coronavirus”, *Süddeutsche Zeitung*, 20/11/2020. B3: 4 points
- “F.A.Z. Newsletter Coronavirus”, *Frankfurter Allgemeine Zeitung*, 20/11/2020. B3: 2 points

In the newsletter published by the German newspaper, *Süddeutsche Zeitung*, entitled “Themenspezial Coronavirus”, we find four types of function being used in the links (sourcing curation, calling to action, citing author and without modifying), and, as such, it would be awarded 4 points, while in “F.A.Z. Newsletter Coronavirus”, published by *Frankfurter Allgemeine Zeitung*, we find two types (sourcing curation and without modifying) and so it is awarded 2 points.

5. Conclusions

This system of curation analysis or CAS is the first to be proposed in the academic literature for the evaluation of content curation in digital media. The system does much more than simply describe this process of curation, as it also enables the analyst to identify the specific components of journalistic curatorial practice, to undertake assessments of quality, and to create derived products, for example, rankings, etc.

The CAS promotes the value attached to the variety of content curation practises, in the belief that a greater variety results in an enhanced quality of that content. For example, parameter A4, Sources of curated content according to the type of organisation, understands that

a journalism product that curates content from different types of source – such as official organisations, private organisations, associations, citizens and news media – will be of a higher quality than a product that only offers content from a single type of information source, e.g. the news media (something that is currently very common). In this case, therefore, the greater the variety of source types, the better the curation is likely to be.

Indeed, more generally, we consider that the greater the variety of use made of each of the elements that combine to make up the curatorial practice, that is, from the source types to the types of sense making techniques, will have an impact in terms of improving the quality of curation and, by extension, the quality of journalism offered to the readership.

As with any analytic system, the CAS needs to be subject to constant testing and fine tuning. Future studies related to its use might profitably involve its application to bounded samples of digital media or journalism products, for example: 1) the digital media of a given country, the main news media outlets of a given geographical area or even globally; 2) given journalistic products, such as newsletters, multimedia reports, social media networks, etc.; or 3) thematic news content, which might include politics, sport, technology, etc.

In short, with this proposal and via successive applications, the aim is to provide a better understanding of the potential of content curation, which, in turn, should result in the improvement of its use by digital media, both in the professional world and in that of academia and research.

References

- Barnhurst, KG.** (2013). Newspapers experiment online: Story content after a decade on the web. *Journalism*, 14, 3–21. <https://doi.org/10.1177/1464884912448898>
- Bhargava, R.** (september 30, 2009). Manifesto For The Content Curator: The Next Big Social Media Job Of The Future?. *Rohit Bhargava.com*. <http://www.rohitbhargava.com/2009/09/manifesto-for-the-content-curator-the-next-big-social-media-job-of-the-future-.html>
- Bhaskhar, M.** (2016). *Curation. The power of selection in a world of excess*. [ebook] <https://www.curationthebook.com>
- Bradshaw, P.** (september 30, 2013). Journalism *is* curation: tips on curation tools and techniques. *Online journalism Blog*. <http://onlinejournalismblog.com/2013/09/30/curation-tools-tips-advice-journalism>
- Bruns, A.** (2018). *Gatewatching and news curation: Journalism, social media, and the public sphere*. Peter Lang.
- Cappelletti Júnior, M. & Domínguez Quintas, S.** (2014). La curaduría de contenidos y la narrativa colaborativa en el Ciberperiodismo: estudio del caso de Storify en el diario digital elpais.com. *Estudios del mensaje periodístico*, 20(1) <https://revistas.ucm.es/index.php/ESMP/article/view/45216>
- Codina, L.** (2018). *Curación de contenidos para periodistas: definición, esquema básico y recursos*. Universitat Pompeu Fabra, Facultad de Comunicación, Área de Formatos Digitales e Interactivos. <https://repositori.upf.edu/handle/10230/34369>

- Creswell, J.W.** (2009). *Research Design. Qualitative, Quantitative and Mixed Methods Approach*. Sage.
- Cui, X. & Liu, Y.** (2017). How does online news curate linked sources? A content analysis of three online news media. *Journalism*, 18(7), 852–870. <https://doi.org/10.1177/1464884916663621>
- Denzin, N. K. & Lincoln, Y. S.** (2011). *The Sage handbook of qualitative research*. Sage.
- Deshpande, P.** (August 13, 2013). Six content curation templates for content annotation. *The Curata blog*. <https://www.curata.com/blog/6-content-curation-templates-for-content-annotation>
- Díaz Arias, R.** (2015). Curaduría periodística, una forma de reconstruir el espacio público. *Estudios del mensaje periodístico*, (21). <https://revistas.ucm.es/index.php/ESMP/article/view/51129>
- Ferran-Ferrer, N.; Guallar, J.; Abadal, E. & Server, A.** (2017). Research methods and techniques in Spanish library and information science journals (2012–2014). *Information Research*, 22(1). <http://eprints.rclis.org/32191/>
- Glaser, B. & Strauss, A.L.** (1967). *The Discovery of Grounded Theory*. Aldine.
- Guallar, J.** (2017a). Artículos de curación de contenidos. Categorías y ejemplos. *Anuario ThinkEPI*, 11, 210–216. <https://doi.org/10.3145/thinkepi.2017.38>
- Guallar, J.** (2017b). Content curation in digital media: Between retrospective and real-time information. In: Campos Freire, F. et al. *Media and Metamedia Management*, (pp. 37–46). Springer International Publishing.
- Guallar, J.; Anton, L.; Pedraza-Jiménez, R. & Pérez-Montoro, M.** (2021a). News curation by email: Analysis of the Spanish journalistic newsletters. *Revista Latina de Comunicación Social*, (79), 47–64. <https://doi.org/10.4185/RLCS-2020-1488>
- Guallar, J. & Codina, L.** (2018). Journalistic content curation and news librarianship: Differential characteristics and necessary convergence. *El profesional de la información*, 27(4), 778–791. <https://doi.org/10.3145/epi.2018.jul.07>
- Guallar, J.; Franch, P; Boté, J.J. & Anton, L.** (2022). How do legacy and digital media curate coronavirus content? An assessment of newsletters from the USA and four European countries. *Profesional de la información*. [in press].
- Guallar, J. & Leiva-Aguilera, J.** (2013). *El content curator. Guía básica para el nuevo profesional de internet*. Profesional de la información & Editorial UOC.
- Guallar, J.; Pedraza-Jiménez, R.; Pérez-Montoro, M. & Anton, L.** (2021b). Curación de contenidos en periodismo. Indicadores y buenas prácticas. *Revista española de documentación científica*, 44(2). <https://doi.org/10.3989/redc.2021.2.1742>
- Guerrini, F.** (2013). *Newsroom curators & independent storytellers: content curation as a new form of journalism*. Reuters Institute for the Study of Journalism, University of Oxford. <https://reutersinstitute.politics.ox.ac.uk/our-research/newsroom-curators-and-independent-storytellers-content-curation-new-form-journalism>
- Karlsson, M.; Clerwall, C. & Örnebring, H.** (2015). Hyperlinking practices in Swedish online news 2007–2013: The rise, fall, and stagnation of hyperlinking as a journalistic tool. *Information, communication & society*, 18(7), 847–863. <https://doi.org/10.1080/1369118X.2014.984743>
- Morales-Vargas, A.; Pedraza-Jiménez, R. & Codina, L.** (2020). Website quality: An analysis of scientific production. *Profesional de la información*, 29(5), e290508. <https://doi.org/10.3145/epi.2020.sep.08>
- Orero, P. & Cebrián-Enrique, B. J.** (2019). Evolución del uso del hipertexto en la prensa española (2002–2016). *El profesional de la información*, 28(2), e280225. <https://doi.org/10.3145/epi.2019.mar.25>
- Pedraza-Jiménez, R.; Codina, L. & Guallar, J.** (2016). *Calidad en sitios web: método de análisis general, e-commerce, imágenes, hemerotecas y turismo*. Editorial UOC.
- Rodríguez-Martínez, R.; Codina, L. & Pedraza-Jiménez, R.** (2010). *Cibermedios y web 2.0: modelo de*

análisis y resultado de aplicación. *El profesional de la información*, 19(1), 35–44. <https://doi.org/10.3145/epi.2010.ene.05>

Rodríguez-Martínez, R.; Codina, L. & Pedraza-Jiménez, R. (2012). Indicadores para la evaluación de la calidad en cibermedios: análisis de la interacción y de la adopción de la Web 2.0. *Revista Española de Documentación Científica*, 35(1), 61–93. <https://doi.org/10.3989/redc.2012.1.858>

Rosenbaum, S. (2011). *Curation Nation: how to win in a world where consumers are creators*. McGraw-Hill.

Silva-Rodríguez, A. (2021). Emergencia de newsletters especializadas en Covid-19: información curada y actualizada en el email. *Profesional de la información*, 30(4). <https://doi.org/10.3145/epi.2021.jul.10>

Sixto-García, J.; Escandón Montenegro, P. & Luchessi, L. (2022). Co-creation and Curation of Contents: An Indissoluble Relationship?. In: Vázquez-Herrero, J. et al. *Total Journalism: Models, Techniques and Challenges*, (pp. 227–238). Springer Nature. <https://doi.org/10.1007/978-3-030-88028-6>