

The Information Professional's Role in the Fake News Phenomenon

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Abstract. The goal of this paper is to analyze the main characteristics of the Fake News phenomenon in the Information Science field. With the digital era and the use of new technologies, new information consumption habits have appeared, which favor the dissemination of distorted or false information on digital platforms.

Information professionals traditionally had control of the resources to satisfy the informational needs of their users. Reference sources were reliable and there was a certain guarantee and control of the information. In the digital era, informational professionals have lost the information monopoly and have been forced to share knowledge with Internet sites and social network sites that offer a broad array of information. The dissemination of this knowledge has led to the emergence of a new concept: Fake News.

Information professionals cannot ignore fake News and two essential tasks can be used to ensure truth. First, the use of resources that allow the information professional to filter and curate information to provide an adequate informational resource for users. Secondly, to provide strategies to fight fake news. Accordingly, we propose a guide that provides tools and resources to help users to check information obtained through new technologies. Additionally, these resources, tools and recommendations could enable information professionals to digitally curate information that could later be offered to end users.

We have reviewed papers and recommendations from a wide variety of institutions as well as international media to create an implementation guide for the information that is our workspace.

Keywords: fake news, librarians, information professionals, information literacy, information evaluation.

1 Introduction

Information professionals have traditionally had reliable information sources at their disposal. These information sources allowed librarians, documentalists, archivists and other information professionals to meet the information needs of different users.

The emergence of the digital era with the Internet and other new technologies has changed the habits of our society and how information is transmitted and received. Information is broadcast from traditional media such as radio and print, as well as through digital age tools.

Information sources on the Internet include Social Networking Sites (hereafter SNS) which permit a user to generate content, share information and have a space for communicating with others. Established sites such as Facebook and Twitter seem to have started the growth of so-called Fake News. This has been a big problem because users sometimes cannot distinguish whether the information they receive, watch or read is true or false.

Information and documentation professionals cannot ignore this phenomenon and are inevitably involved in it. Our involvement is generally in two ways: filtering information and curating content for users and providing different strategies to spot fake news.

In this paper, we review a number of publications from institutions and international media regarding how to spot fake news in order to create an implementation guide in the field of information and documentation.

2 Fake News: Information or Misinformation

The term “Fake News” has been growing more prominent in recent times. False information has existed as long as there have been media to disseminate it. However, before the advent of the Internet, false news was hidden or deleted before it could reach many people. The problem has emerged with new digital media that make it easy to create and disseminate stories relating to many different topics. According to experts, this wide variety of content makes it very difficult to determine if the content is informing or misinforming the reader. The democracy of content creation presented by SNS allows a rapid dissemination of information when compared to traditional media such as radio, television and print media, which has resulted in the spreading of fake news. One of the consequences of fake news is that users of SNS are subject to clickbait techniques that are monetized with online advertising (Alvarez, 2017). In addition, there is evidence of an industry of websites publishing misleading political articles targeting the United States (Oxenham, 2019).

Alonso-Arevalo and Castilla (2019) researched the information overload phenomenon and the connection to new digital technologies which give rise to disinformation. SNS provides enormous quantities of information on such diverse topics that cause people to be overinformed, and at the same time uninformed, because they cannot process such diverse news on a topic. In addition, the authors suggest that if they added a malicious intent, the Fake News appears to spread virally in most cases.

The spread of fake news may cause a lack of reliable information. For instance, Digital News Report 2019 (Newman, Fletcher, Kalogeropoulos, & Nielsen, 2019) explains that only 43% of Spanish Internet users say they usually rely on the Internet as a news source, despite the Internet’s growth as a source of information. This report also shows the growing use of SNS, although only a quarter of the respondents think that these networks’ information is reliable.

Another report published in 2018 by the Spanish section of Reporters without Borders (Campoamor, Macu de la Cruz, Fuertes, Fibla & Alonso, 2018) showed a growing concern for the phenomenon of fake news, which threatens press freedom and leads to massive harassment of online journalists. The report suggests that there are hidden individuals working behind the scenes as online mercenaries for specific interests or for government. This report also mentions the impact that this may have on journalists who are attempting to be objective. Consequently, their work may be obscured by the overload of information coming from questionable sources.

One of the best-known examples in the field of Fake News relates to the U.S. presidential campaign in 2016 that led the world's largest power to elect Donald Trump. In this electoral campaign, online sources were allegedly used by Russians for the creation of false news with multiple profiles and bots. The goal of the creation of false news was to change voting trends and influence the campaign which Trump finally won. This campaign was studied by the U.S. Congress and Senate, particularly in relation to the online publication of 3,000 advertisements on SNS with false news, estimated to have reached about 126 million Americans, representing about half the eligible U.S. voters. (Levin, 2017; Washington, 2017). Similarly, a study analyzed 14 million Twitter messages during the U.S. 2016 campaign, concluding that bots spread massive amounts of misinformation, making it shareable by humans (Shao et al., 2018).

For his part, Trump uses the term Fake News in response to the criticism he receives in his management and to discredit the media who talk about his policies and facts that do not favor him (McCarthy, 2017; Wong, 2019).

There are several types of fake news and a classification of the different typologies have been proposed (Lopez-Borrull, Vives-Gràcia, & Badell, 2018). However, other types of Fake News are produced with an advanced use of technology, the Deep Fakes. This content uses advanced video techniques combined with artificial intelligence (hereafter AI). As an example, BBC published a story that there was a social video where Boris Johnson and Jeremy Corbin each

endorsed the other for Prime Minister (BBC, 2019). Similarly, in relation to the past Spanish elections in 2019, some deep fakes with candidates went viral (Llanos, 2019).

As can be observed on the aforementioned examples, it seems that fake News surrounds us. The current phenomena such as the political situation in Catalonia, Brexit and many other daily topics, generate considerable information through social networking sites and likely distort the information. Consequently, as information professionals, we need to spot this phenomenon to have objective and real information available.

3 Projects and initiatives to deal with information and documentation

In the field of information and documentation, professional associations in the field are aware of the problem and lead different projects and initiatives.

The International Federation of Library Association (hereafter IFLA) created a 2007 infographic called *How to Spot Fake News* which is a good practice guide (Figure 1). It is translated into 37 languages and, according to IFLA, it is a tool based on the belief that with education it is easy for users to acquire confidence and governments do not need to impose censorship (IFLA, 2019). In addition, IFLA has carried out campaigns to participate in debates on the subject and about information, such as that carried out in Brussels in February 2018, where, in conjunction with the European Union, Internet disinformation was debated, concluding that there is a need for training policies in digital skills (IFLA, 2018).

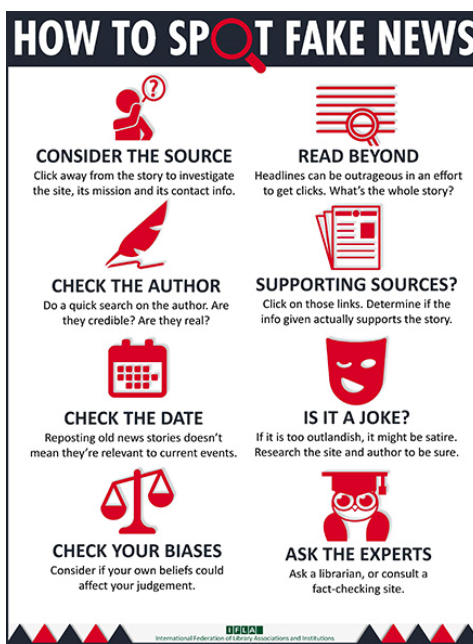


Fig. 10. IFLA infographic to detect *Fake News*.
Source: <https://www.ifla.org/publications/node/11174>

CILIP (*the Library and Information Association*) also places much importance to information literacy, to the extent that in 2018 it modified the definition it made in 2004, in order to adapt it to the phenomenon of fake News:

“Information literacy is the ability to think critically and make balanced judgments about any information we find and use. It empowers us as citizens to reach and express informed views and to engage fully with society” (CILIP, 2018)

The *American Libraries Association* (ALA), through the *Programming Libraries* initiative (ALA, 2019), collects resources for guiding and advising national libraries in order to offer users education to distinguish fake news. Among the resources on offer, there are webinars where participants may discuss fake news. *Libguides* are library guides discussing different aspects of the topic, such as the evaluation of information, detection of false news, and the comprehension and identification of fake News. It also provides a series of links to news published in digital media on the matter and to studies about it.

In many university libraries in the United States, it is quite common to find guides offering tools and information to guide and help users in detecting fake news, such as “*Fake News, Misinformation, and Propaganda*” (Harvard Library, 2019) or “*Real News/Fake News: About Fake News*” (Berkeley Library, 2019). We easily found more than one hundred university-published guides on this topic. In some cases, it is implied that professors were involved in the library guides, in other cases only librarians developed these guides as no professors are mentioned.

In a review of Spanish libraries, we have not found literature or guides about initiatives to spot fake news. There are blogs written by some professional librarians about the initiatives mainly taken in the United States. In the case of Spanish universities, only a few universities have published guides.

4 How do we cope? How to spot misinformation?

The process to detect and verify fake News is fact-checking. However, this is not currently possible in all languages and is still not currently possible for all social media platforms. There are some experimental tools under development which are mainly focused on one platform. In Germany Fraunhofer-Gesellschaft developed software that focused on Twitter to analyze and filter out Fake News and disinformation (Fraunhofer-Gesellschaft, 2019). A fact-checking tool was developed as part of a study to detect fake news in Greek (Katsaounidou, Vryzas, Kotsakis, & Dimoulas, 2019). A system called *FakeNewsTracker* was proposed for the Twitter platform, based on the analysis of linguistic and social engagements features in published information (Shu, Mahudeswaran, & Liu, 2019). Finally, another study proposed a system to predict and report bias in news media sources (Baly, Karadzhov, Alexandrov, Glass, & Nakov, 2018).

Users also have tools to spot misinformation, to detect fake news or to discover that news is biased. However, these tools are not very well known and, in most cases, are not promoted enough. For instance, there are browser extensions like Official Media Bias Fact Check Icon (available in Chrome or Firefox browser) that detect how biased a political news story is, built by Media Bias Fast Check (<https://mediabiasfactcheck.com/>). Another tool is *FakerFact*, available for Firefox and Chrome browsers (<https://www.fakerfact.org/>). In the case of Spanish, 19 fact-checking tools were compared and analyzed to determine, whether the reporting was textual, visual or chromatic, with the conclusion that not all analyzed tools were recurrently active (Herrero & García, 2019).

Another option to spot fake news is the use of Blockchain technology. This technology employs information blocks where each block contains basic information (sender, receiver, date, amount, etc.), the block hash (an ID number that is unique and unrepeatable) and the hash of the previous block so that each block is connected to the previous one and the next one. The Blockchain operation is based on the hash with numbering that is generated at the time of its creation, so that if you modify the information from the blog, it automatically varies the hash and invalidates the string because it will cease to fit the previous and subsequent blocks. The security and certification of documents using this technology is decentralized since it is provided by users, so when you want to add a piece of information or a block to the chain, it is the users themselves who validate it,

checking the authenticity. An example of the use of this technology is the CIVIL (<https://civil.io>) platform, which uses blockchain technology to provide the user with trustworthy news while also protecting journalists being censored (Pavía Martínez, 2019).

With these issues in mind, along with tools under development, the possibility to use browser extensions and the use of blockchain technology, we propose three ways to combat misinformation: information literacy, content curation, and the use of tools to evaluate information.

- 1 Information literacy taught by information professionals would permit users to classify the media information, evaluate it and choose truthful and objective information. In this section we could include different activities such as practical workshops and seminars on detecting Fake News, subscriptions to quality media or online training. Similar activities were proposed by other authors (Caridad-Sebastián et al., 2018; Lopez-Borrull, A., Vives-Gràcia, J., & Badell, J., 2018)
- 2 Content curation is a technique to manage the enormous quantity of information helping users with information overload. Using the 4S strategies (search, select, sense making and share) (Guallar & Leiva, 2013), information professionals may select sources of reliable information according to the information needs of users, choosing and distributing curated information. An example is blogs in libraries with thematic categories to disseminate quality content selected by information professionals.
- 3 The creation and use of information evaluation tools. Evaluation tools could include blockchain technology to allow information distribution platforms to provide readers with validated and reliable information regarding content and its source (Huckle & White, 2017). However, developing platforms with this technology is costly and requires funding to make them sustainable.

5 Conclusion

Information professionals have faced different obstacles throughout history that have made it difficult to offer users information that is better suited to current needs. The use of social networking sites means that we currently receive massive amounts of information and we are exposed to fake news.

Spotting fake news must mobilize a range of professional strategies for staff working in the field of information and documentation. As professionals, we are experts because of the academic training allowing us to combat this new challenge. It is necessary to insist that users be trained in information literacy, while also offering them curated content. In addition, it would be beneficial to promote and provide users with tools such as fact-checkers along with back end technologies such as blockchain to obtain and validate information in a secure way.

However, the problem of fake news is at the junction of information dissemination and economic or political interests, so as information professionals we are in a complex and difficult struggle. We think it would be beneficial to develop common strategies among information professionals along with documentation that would help to spot fake News on the most common SNS such as Facebook or Twitter.

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