

Article

Libraries Fight Disinformation: An Analysis of Online Practices to Help Users' Generations in Spotting Fake News

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Abstract: The work of libraries during the COVID-19 pandemic, as facilitators of reliable information on health issues, has shown that these entities can play an active role as verification agents in the fight against disinformation (false information that is intended to mislead), focusing on media and informational literacy. To help citizens, these entities have developed a wide range of actions that range from online seminars, to learning how to evaluate the quality of a source, to video tutorials or the creation of repositories with resources of various natures. To identify the most common media literacy practices in the face of fake news (news that conveys or incorporates false, fabricated, or deliberately misleading information), this exploratory study designed an ad hoc analysis sheet, validated by the inter-judge method, which allowed one to classify the practices of N = 216 libraries from all over the world. The results reveal that the libraries most involved in this task are those belonging to public universities. Among the actions carried out to counteract misinformation, open-access materials that favor self-learning stand out. These resources, aimed primarily at university students and adults in general, are aimed at acquiring skills related to fact-checking and critical thinking. Therefore, libraries vindicate their role as components of the literacy triad, together with professors and communication professionals.

Keywords: libraries; librarians; disinformation; fake news; literacy practices; open-access resources



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1. Introduction

The relevance of libraries as allies against fake news has been evidenced, unfortunately, amid the pandemic caused by COVID-19. In this period, they have provided their support to citizens in their queries about numerous of hoaxes, rumors, and suspicious contents that they received or found through their devices when they were connected. However, this role is not new; in the fight against information disorders ('misinformation', 'disinformation', and 'malinformation'), libraries have assumed a leadership role for years by creating great variety of materials, tools, and resources for those users [1], from the smallest children, to young university students, to adults, so that they can critically face any type of content (disinformative, pseudohistorical, and pseudoscientific) and learn to evaluate it before giving it credibility.

For researchers, this is a natural role; the libraries of the XXI century must educate and help users to become critical and intelligent consumers and producers of information and defend the importance of the veracity and reliability of the information [2] that librarians provide; together with teachers and journalists, they constitute "the Triad of Truth-Workers" [3]. In this sense, librarians feel competent to guide users in the face of fake news [1] because they are concerned about the phenomenon of disinformation and other related challenges, such as an overproduction of digital content—which is unattainable—that they should deal with; bots that mimic academic writing and are capable of creating seemingly scientific documents; the proliferation of databases with predatory journals; or the use of unreliable sources in academic papers, among other threats [2,4]. Furthermore,

we cannot forget that prestige is at stake, since “the way libraries classify materials related to the past, that is, history, fiction, beliefs, counterfactual narratives, etc., has an impact on the credibility and legitimacy of what has been classified” [5] (p. 960).

In this context, and taking into account the perception that users have of the service provided by libraries—approximately eight out of ten adults consider that public libraries help them to find reliable information, to learn new things, to obtain information and to take decisions [6]—the scientific community proposes to raise the information literacy skills of librarians to a completely new level [7], to produce professional trained and dedicated staff to meeting the needs of information users [8]. The most recent initiatives include the updating of the syllabus of the public examinations for library staff stands out, to incorporate the fake news topic, with the aim of covering the knowledge and skills necessary for the professional profiles that currently manage and energize libraries [9]; the creation of a model to automate the evaluation of digital content that librarians classify [4]; the claim of librarians as influencers [10]; and the repositioning of the profession in the public sphere through the reinforcement of librarians’ professional identity, as experts, so that they form part of the circle where the fight against disinformation is discussed [1]. Having acquired this role as members of mediating institutions [11], librarians must work on designing practices that allow people to develop skills so that they themselves can identify false information [12], critically evaluate sources, and find sources of reliable and authoritative information [13].

This research aims to find out, in an exploratory way, what the practices are (videos, tools, resources, materials, events, etc.) that librarians make available to citizens to help them deal with misinformation. For this reason, this article examines the repositories of 216 libraries of different characteristics. The results point to a wide range of checklists, video tutorials, guidelines, workshops, etc. Regarding the content of these resources, it is also diverse; while some place emphasis on activities that promote critical thinking, others do so on those that allow the acquisition of skills and abilities proper to verification.

2. Literature Review

2.1. *Libraries’ Authority to Face Disinformation*

There are a great many libraries in the world: 320,000 public libraries and more than one million parliamentary, national, university, scientific and research, school, and special libraries. They all ensure that the information and knowledge to use information are available to all, making them fundamental institutions in the digital age [14]. However, according to Bridget Forster, a library teacher at Strathcona Girls’ Grammar School in Melbourne’s eastern inner suburbs, libraries’ relevance will depend on their ability to upgrade and modernize [13]. For the teacher, the increase in disinformation on the Internet and the accentuated use of social networks to be informed show the necessary intervention of libraries to teach students to critically evaluate content. In the case of university libraries, the researchers also claim to reflect on the role of the librarian in relation to fake news and its relationship with ALFIN (media literacy) and the training of users [15]. At Forster’s school, where the teacher-librarian professional category exists, they are training students against disinformation: “We’re equipping students to be discerning consumers of information and that entails not only being able to identify fake news and the like, but also knowing where to go to find reliable, authoritative sources of information” [13]. In university libraries, they try to do the same, even in a timid way [16].

This enormous challenge posed by disinformation for librarians, which has opened the debate on expanding the concept of Media Literacy and its methodological application [16], has become clear during the health crisis caused by COVID-19, due to its proven capacity to act as an intermediary between users and access to reliable information: from raising awareness, teaching how to search for information, filtering false information, supporting researchers and teachers, providing consultation services or sending documents, to solving doubts about questionable content or pseudoscientific content. On the other hand, the confinement of the population in their homes, also motivated by the health situation,

exponentially increased user access to electronic resources related to health [17], which in turn shows that innovation and permanent modernization in libraries has made it possible to offer quality information when it is most needed (hence its relevance). All this invites, therefore, one to promote more open-access projects [15] and to rethink the provision of new services and pedagogical actions to train the different agents in the new context of digital information [16].

2.2. Anti-Misinformation Practices

In the era of “factual recession” [3], libraries, as social services integrated in plural communities, must propose collaborative actions to help people develop the capacity to use information effectively and preserve information to guarantee permanent access for future generations, as set out in Goal 16 of the 17 Sustainable Development Goals (SDG), of the new United Nations 2030 Agenda [18]. In addition, this goal says that librarians are committed to promoting literacy-related skills in the use of data to ensure that they are used and interpreted correctly; generate strict standards on information ethics; guaranteeing digital inclusion through access to ICT, with the help of specialized personnel to promote new digital capabilities in its user community; and taking charge of processing, preserving, and making available information acquisition procedures that users need, among other responsibilities.

In recent years, there have been numerous libraries that, in addition to providing proven and reliable information, have tried to respond to these demands by building websites and guides to help both the general and specialized public to recognize fake news, beyond its function as a mere facilitator of bibliographic tools. Moreover, they have encouraged students to work more in the research and evaluation process. However, there is still a need to develop programs to help community members detect fake news (such as false or misleading statements, videos, or images displayed out of the proper context; questionable statistics; manipulated content; partisan propaganda; or satire) and evaluate information online [17]. This last practice is where the experts place the greatest emphasis because, when teaching information literacy, librarians must focus on something more than the reliability of the editor or author of the news; the reliability of the news sources used by the author also must be evaluated [19]. It is necessary to develop a strategy that affects an evaluation of the source based on authority; librarians must promote critical thinking by making use of educational tools and actions aimed at information literacy to discern what information may be true or false [20]. For all the above, first, it is important to analyze the tangible practices of libraries, discuss their efficiency, and provide a categorization of those practices [21].

To date, libraries have included among their training proposals sessions on the use of electronic resources aimed at developing skills and abilities to respond to the informational needs of users [22]. For example, the library staff has produced updated material in multiple formats and has focused on the importance of the verification of information and the use of sources, for the responsible and committed consumption of information by users. These initiatives are complemented by the European Higher Education Area with the training of students in transversal skills related to information management. However, it is up to libraries to lead strategies that exercise a continuous evaluation of the quality of the information [18].

The most recent research [10] includes some proposals with the aim of reducing the effect of fake news and protecting the veracity of information: permanent collaboration from childhood, in schools, to awaken critical thinking from an early age, for the youngest to question, reason, and discuss approaches and sources and distinguish between quality and truthful information and doubtful or partially or totally false information; training to learn to distinguish sources and citations; promotion of media literacy to recognize misleading elements not only in texts but in all information records, such as photographs, videos, and infographics, among other formats; and transmitting and sharing with the user the knowledge and techniques that the librarian has developed to identify authority over

content (this is the prestige and recognition of the source), as well as learning to find out the purpose of the information (political, economic, propaganda, etc.).

3. Method and Materials

The general objective of this research, which is of an exploratory nature, is to know the role of libraries as mediators in the fight against disinformation, through the observation of the websites in which they host practices (events, training, guides, resources, contents, etc.) to assist users in this task. To achieve this goal, the following research questions were posed:

RQ1: What kinds of libraries have practices to help users deal with disinformation?

RQ2: What are the practices undertaken by libraries to help patrons deal with disinformation?

RQ3: Who owns the authorship or intellectual property of the practices that libraries make available to users to help them deal with misinformation?

RQ4: What user profile is the recipient of the practices that libraries make available in their web spaces to combat disinformation?

RQ5: Who is the mediator between the practices offered by the library to combat disinformation and the user who receives them?

RQ6: What skills favor the practices that libraries make available to users to deal with misinformation?

3.1. Procedure

To answer the research questions, a content analysis sheet was designed. The categories of this instrument were defined in the code book. These categories were divided into two large groups: firstly, those related to the contents of the library's website—date of publication, authorship, target, initiative, mediator, action, competences, and link to the action—and, secondly, those corresponding to the type of library—name of the library, type of ownership, and country.

To verify the reliability of the instrument, first a pilot was carried out with experts in the field: researchers, documentalists from private university libraries, coordinators of a network of public libraries, and school librarians, who were given the analysis sheet together with the coding book and told how to observe the website. Five selection criteria were considered [23]: independence, professional solvency, research activity, geographic diversity, and level of responsibility. These responses were collected in the statistical software STATA in which the Kappa coefficient of Fleiss (1971) [24] was applied to know the robustness of the instrument. This statistic yielded a significant degree of inter-judge agreement [25,26] and was of significance (alpha) with a p value of 0 (<0.05). Finally, two researchers were involved in the process of coding the content of 216 libraries.

3.2. Sample Selection

To locate disinformation treatment practices on library websites, a random sample of websites was carried out by searching for keywords (always using the same nomenclature, in different languages) and using the same search engine [25]. The search for these practices and their categorization was carried out during June 2021.

4. Results

The statistical results, which are of a descriptive nature, allow us to describe the state of the art about this research through the calculation of relative frequency (f_i). In total, the study sample is made up of $N = 216$ libraries geographically distributed in countries such as Argentina (1%), Australia (1%), Canada (5%), France (20%), Ireland (2%), Italy (8%), Netherlands (2%), Spain (8%), United Kingdom (8%), United States (42%), Qatar, New Zealand, and Costa Rica, whose practices against disinformation originated in 2017 (8%) and continued thereafter in 2018 (6%), 2019 (4%), 2020 (8%), and 2021 (8%); the majority—65%—do not have a specific date (undated). The fact that we find the first ones from 2017

is justified in that it was that year when the term fake news was used the most, which is why the prestigious Oxford Dictionary designated it as word of the year. Previously, in 2016, post-truth had been the chosen word and, already then, there was talk of the need to combat hoaxes.

Regarding libraries that have resources to help users deal with misinformation (RQ1), we find different types of ownership (Figure 1), with public university libraries (56%) being the most active in this regard, among which we find names such as “Penn State University Libraries” (United States) or the “University of Amsterdam Library” (Netherlands). In second place are the public libraries (24%) such as “Biblioteca Pública de Navarra” (Spain) or “La bibliothèque publique d’Information (Center Pompidou)” (France). Behind these, there are also the private university libraries (9%); this is the case of the “High Point University Library” (United States) or the “Bodleian Libraries Oxford University (United Kingdom), while libraries constituted as a non-governmental association represent 6% of the sample, such as the “American Libraries Association” (United States) or “Biblioteca de Caudete” (Spain). The public libraries association (3%) includes the “Network of municipal libraries of Seville” (Spain) and, finally, the digital libraries (1%), including the “Network of municipal libraries of Barcelona (Virtual Library)” and the “School Library Association” (United Kingdom), represent the most minority models.

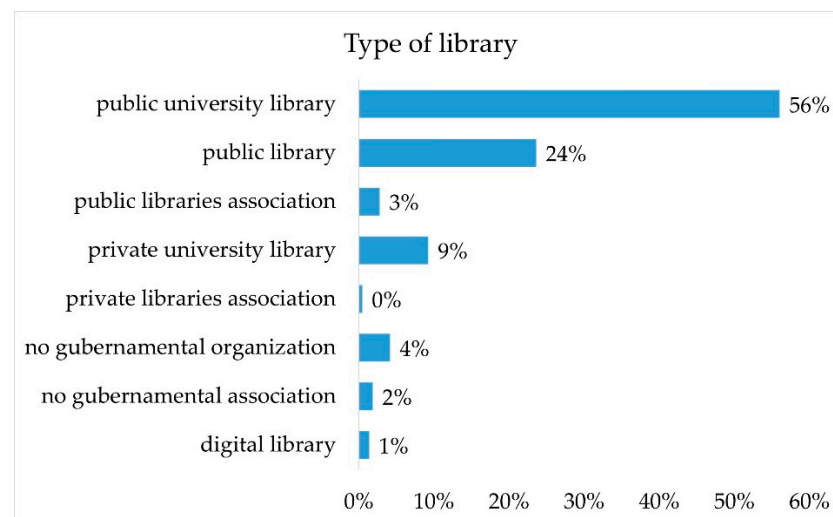


Figure 1. Type of library. Source: prepared by the authors.

Eighty-six percent of the practices are an initiative of the library itself; 7% are in cooperation with a public entity/institution; 3% are in cooperation with a media communication; 1% are in cooperation with a private institution; and the remaining 3% represent public and private institutional cooperation.

These libraries stand out for their work in helping users cope with disinformation (RQ2). Among the most common practices, we find a model that is repeated, as can be seen in Figure 2: 56% of libraries have a kind of open-access container on their web pages, with very varied resources, including audiovisual materials (videos, audios, interactive, and quizzes), guidelines (guidelines to identify informational disorders, on how to evaluate the credibility of a source, learn about concepts related to the phenomenon of misinformation, etc.), links (to web pages reference), reports (on the state of the art, such as what is post-truth, what is fake news, what we face, and how vulnerable users are), and bibliographies (catalogs of topics with the latest scientific publications and information that explain the phenomenon of disinformation).

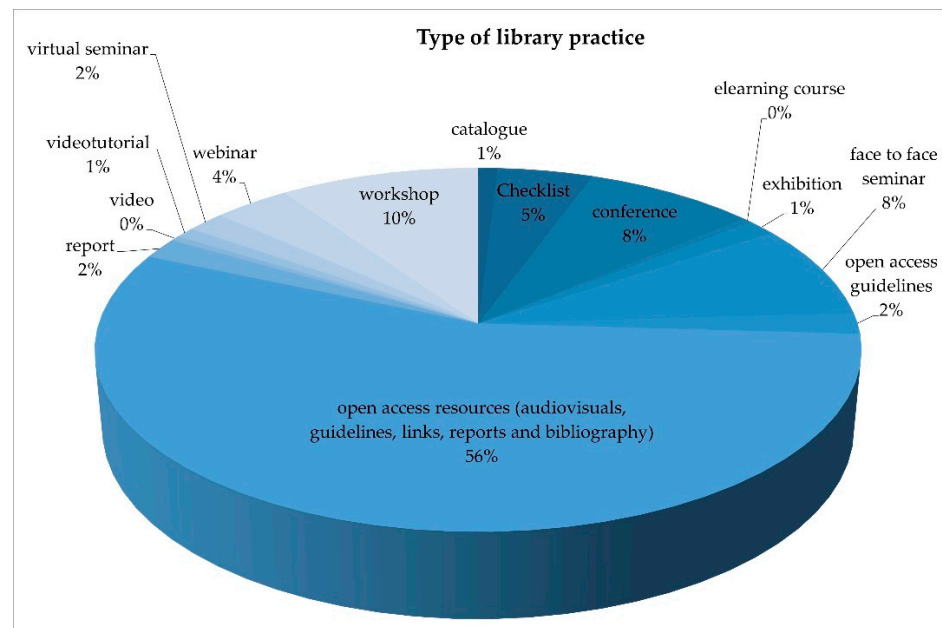


Figure 2. Type of library practice. Source: prepared by the authors.

To classify these practices, their titles were also considered. Some examples are listed in Table 1:

Table 1. Libraries’ practice name.

Library	Type of Library Practice	Practice Name
Houston Community College Libraries	catalogue	Fake News: Ebooks
Maastricht University Library	checklist	Tips and tricks for dealing with fake news
Library of London South Bank University	conference	This Is Not A Fake Conference
University of Michigan Libraries	eLearning course	Fake News, Lies, and Propaganda: The Class
La bibliothèque publique d’Information (Centre Pompidou)	exhibition	Exposition “Fake news: art, fiction, mensonge”
Biblioteca Università di Bologna	face to face seminar	Incontro: Il labirinto delle fake news. Come trovare un altro filo d’Arianna
Biblioteca regional de Murcia	open-access guidelines	Reflexión. Guía de lectura para el pensamiento crítico
Vancouver Public Library	open-access resources	Fake News and the Disinformation Age
House of Lords Library UK Parliament	report	Research Briefing Fake news
Biblioteca di Marghera Casa di quartiere	video	Come individuare le fake news e limitarne la diffusione in rete-1-4
Bibliothèque Université Toulouse III Paul Sabatier	videotutorial	Fake news: le tuto de la BU
Lake Forest Library	virtual seminar	Fake news and fact checking: how to be a conscious
Australian Library and Information Association	webinar	The Impact of Digital Technologies: beyond fake news (webinar)
American Libraries Association	workshop	New Workshop—Fake News, Real Concerns: Developing Information Literate Students

Source: prepared by the authors.

These contents (RQ3) are presented under different formulas; half (50%) genuinely belong to the library (many of them include the librarian’s signature). An example of this is checklists such as the CRAAP test, created by Sarah Blakeslee (University of Chico Library,

California, 2004); the TRAAP-Source Evaluation, created by Caitlin Stewart (Library of Washington, 2020); the SIFT-Source Evaluation, a four-step method to quickly ascertain the accuracy of social media posts and websites by using fact-checkers' strategies of cross-referencing information, created by Carol Fisher (University of Washington Library, 2020); and the checklist of the International Federation of Library Associations and Institutions (IFLA, 2017). Other libraries (38%) include, in addition to library resources, third-party materials (this is when their own content is added or enriched with links to reference web pages, fact-checking media, prepared media literacy videos by the media, etc.). For example, some libraries embed on their websites video tutorials produced by media such as BuzzFeed, CNN, Poynter, BBC, and Find the Facts, and even materials generated by institutions or organizations (such as First Draft), or others that are the result of competitive projects against disinformation (such as the European projects We Verify, Debunker, Co-Inform, etc.). Finally, there are those library websites that directly host third-party open-access resources (12%) or are limited to linking to reference sites.

The recipients of these practices (RQ4) are university students (55%), in line with the results obtained on the type of ownership of the library. As discussed above, more than half are public university libraries. The explanation for this may be that it is in the university stage when students need to resort to more sources to prepare their academic works or to complete their notes and, therefore, they make more intensive use of library services during this time.

The second most frequent profile for which these initiatives are designed is adult users of libraries in general (22%), which also corresponds to the fact that the second most common category of library is publicly owned, as has already been mentioned. Third, in a small percentage, 7%, it is found that librarians themselves are the target audience of libraries. This result may respond to the need expressed by researchers, in the theoretical section, to train library experts so that they can help users (Figure 3).

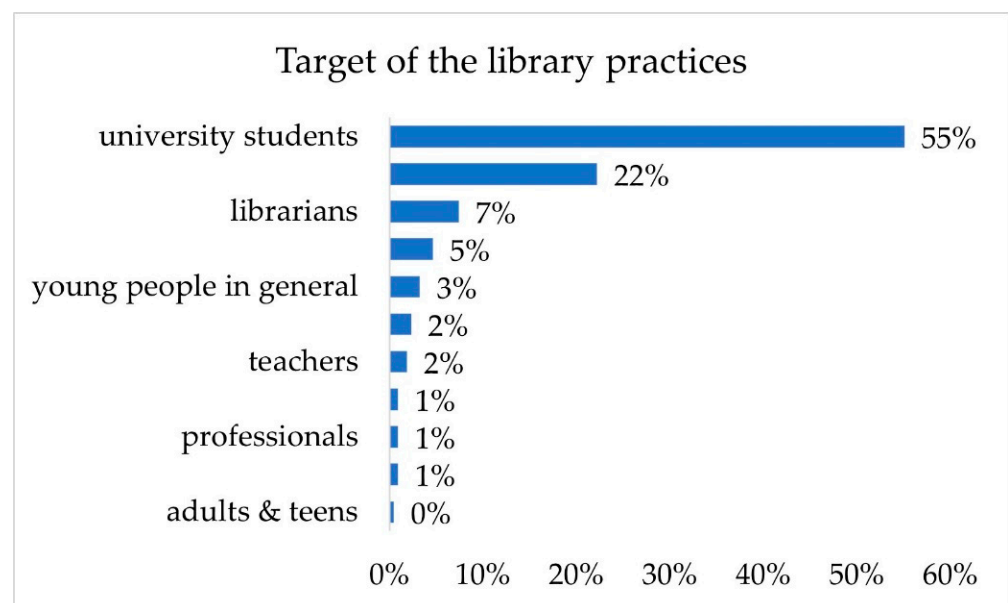


Figure 3. Type of library. Source: prepared by the authors.

Regarding the learning model that these practices favor (RQ5), it is worth highlighting self-learning above the rest of the formats (64%), which undoubtedly requires an effort on the part of the user who must navigate through these contents autonomously. The reason for this learning to be individual is that, at present, it is not compulsory training, although some institutions are beginning to include related contents among their regulated/compulsory training. On the other hand, we have become accustomed to being self-taught online. To facilitate this experience in acquiring knowledge, the resources, materials, etc., are

perfectly organized and hierarchical for on-demand learning, in such a way that the menu is designed so that each topic/exercise makes sense on its own alone, but as a whole, if you interact with everything, the user's vision is much more complete and the level of learning, therefore, is greater. As can be seen in Figure 4, the librarian also plays a fundamental role as a mediator of these activities (23%). Most of the practices offer a form to contact the librarian or, directly, their corporate contact information. This reveals, as defended in theory, the figure of closeness that these professionals represent for users.

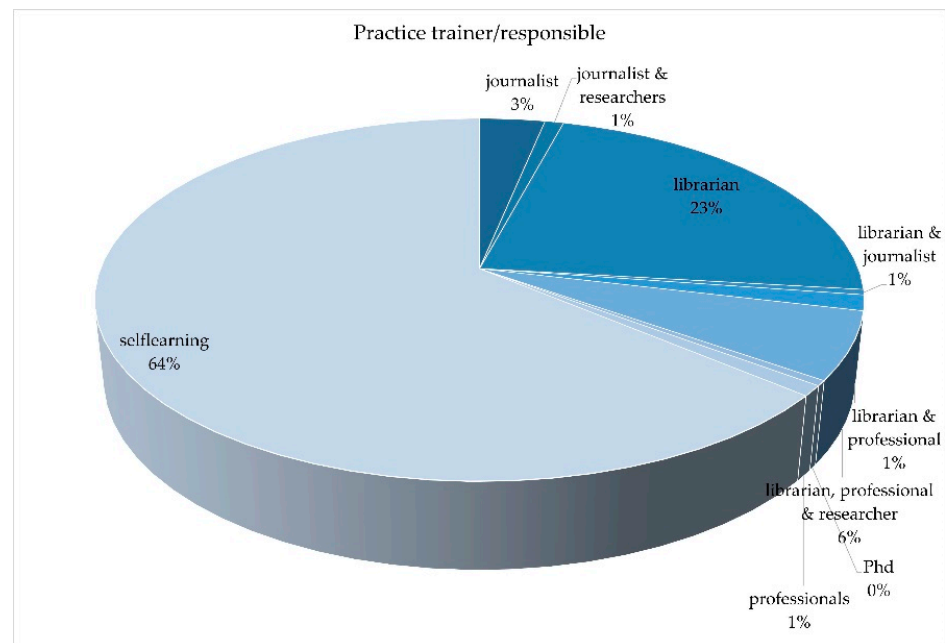


Figure 4. Libraries' practice trainer or responsible. Source: prepared by the authors.

Already to a lesser extent, an association that seems to work in the fight against disinformation is that of the popular "Triad of Truth-Workers" [3], since 6% are librarians, professor-researchers, and journalists who watch over the truth from their field of knowledge.

Finally, and taking into account the definition of competencies related to disinformation [27] (RQ6), the results obtained show that the most frequent practices offered by libraries are those that combine fact-checking skills and critical thinking (67%), followed by those specific to spot fake news (19%), as seen in Figure 5.

Among the former are, for example, exercises to learn to search for information; evaluating the credibility of sources; training the gaze through manipulated or distorted images; lateral reading to check understanding of a text and its purpose/intention; and understanding in depth the effects of misinformation. In the case of practices categorized as spot fake news, it is observed that the competences are more limited, and they focus on automating the activation of certain senses and mechanisms to learn to discern reliable content from that which tries to deceive us.

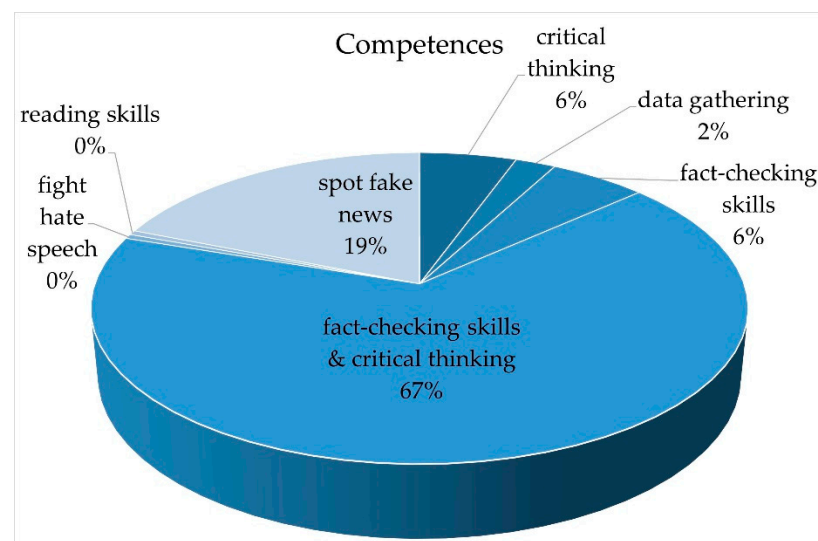


Figure 5. Competences that favor library practices. Source: prepared by the authors.

5. Discussion and Conclusions

In 2019, within the framework of the 15th International Library Congress entitled Fake News: Information and Libraries, the workshop “Libraries that fight against fake news” was held. In this context of exchange of experiences, many of the practices that this article collects, with their limitations, came to light. This exploratory research collects and describes all those ways in which librarians are developing all their creativity and knowledge to contribute to the solution of global problems such as infodemic and disinformation [28]. Thus, they will be able to enter with solvency and knowledge into the circles in which the conversation about contributions against disinformation takes place [1] because, as authors say, librarians are essential in this mission, together with teachers and journalists [3].

The skills and abilities that are activated with the use of the tools, instruments, resources, materials, activities, examples, videos, tutorials, eLearning courses, checklists, etc., provided from the libraries, are the most effective tools for learning to seek information and evaluate it according to its rigor, thus responding to the demand of the scientific community for tangible learning [21]. In fact, many of these resources are based on the practices and routines of verification professionals.

On the other hand, all this effort by libraries demonstrates a self-demand to continue being useful to citizens, and they have proven to be so; during the largest known wave of infodemic, generated because of COVID-19 [28], they have been a fundamental ally. An example of this can be found in the seminar entitled: “Incertitude, vérité, débat: on parle Fake News dans le séminaire #BiblioCovid19”, organized by L’École nationale supérieure des sciences de l’information et des bibliothèques de l’Université de Lyon; in the open-resource guide prepared by the Public Library of Navarra (Spain), “COVID-19 What should we know”; in the resources provided by the American Libraries Association in the repository: “Libraries Respond: Fighting Xenophobia and Fake News in Light of COVID-19”; or in the open materials of the École nationale supérieure des Sciences de L’information et des bibliothèques de l’Université de Lyon (France) under the name: “Fake News à l’heure de la covid 19”. The case of specialized health libraries that have partnered with journalism professionals to offer truthful and contrasted information on the virus or vaccines, such as the Public Health England Library, is significant.

This work also talks about the flexibility of the institutions and library staff when responding to upcoming informational phenomena born from the digital context. All this is done the sole intention of laying the foundations of a well-informed, critical, and responsible society in the consumption and creation of information. In this sense, libraries have another challenge, such as facing the unaffordable production of digital documents that will affect their work routines because it will be increasingly difficult to decide, due

to their quality, which sources are most reliable. Accordingly, libraries may need to incorporate verifying journalists among their professionals to work in cooperation with librarians, archivists, and documentation specialists in the future.

Just as in Spain there is the Instituto Salud Sin Bulos, through which medical professionals report, together with information professionals, about rumors, hoaxes, myths, and fake news related to health, work for which they have received training from fact-checkers, librarians could constitute a reference group to disseminate keys that help public opinion to function in a more informatively complex world.

Finally, future studies should approach the users of libraries to really measure the effectiveness of the practices analyzed in this work [21], asking them directly about their perceived self-competence before and after using the resources provided by these institutions.

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