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Fact-checkers on social networks: analysis of their presence and content distribution channels

Abstract

Fact-checking is a thriving journalistic discipline that, in recent years, has gained great prominence as a tool in combating disinformation. The effectiveness of the work carried out by these journalistic initiatives depends not only on the quality of their content, but also on their ability to reach large audiences through the same channels by which disinformation spreads. In this context, we consider it important to know to what extent fact-checkers use social networks and other types of digital channels in order to deliver their fact-checks to a wide audience, whether there are differences between the practices developed by these actors according to the type of organisation to which they belong and whether there is a distinguishing element in this regard for Ibero-American fact-checkers. This article focuses on analysing the presence on social networks and the use of content distribution tools by 104 fact-checkers from all over the world pertaining to the International Fact-Checking Network in 2020. The results show significant differences in terms of network presence based on the type of entity to which fact-checkers belong, the independent fact-checkers being the ones using a wider variety of distribution channels. It has also been confirmed that Ibero-American fact-checkers have a greater presence on social networks, use more digital tools and provide more channels to share their content than the rest of the international sample.

Keywords
Fact-checking, journalism, disinformation, misinformation, fake news, social networks.

1. Introduction: the importance of fact-checking

According to Walter *et al.* (2020), fact-checking consists in the systematised practice of checking statements made by public figures and institutions and publicising the results. Although fact-checking is traditionally associated with politics, it may be extended –and it increasingly is so– to the content disclosed in the public sphere (regardless of who the issuer is). The aim of this is to guide users on how credible online content is (Brandtzaeg, Følstad & Chaparro Domínguez, 2018) and to promote the truth in public discourse (Humprecht, 2020), regardless of partisan interests (Elizabeth, 2014).

Fact-checking has always been inherent to journalism since its origins. However, global concerns about the effects of disinformation and manipulating public opinion as a geopolitical weapon and as a major threat to democratic systems (Bechmann, 2020; Bradshaw, Bailey &

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Howard, 2021) means fact-checking is more socially prominent today than ever before (Guallar *et al.*, 2020). Thus, although its origins may be traced back to the beginning of the 20th century, only in the mid-2010s did it emerge as a phenomenon within the information ecosystem (Graves, 2016; Graves & Cherubini, 2016; Vázquez-Herrero, Vizoso & López-García, 2019).

This social interest in fact-checking is clearly visible in the steady growth in recent years –which slowed down only in 2020, due to exceptional circumstances– of this type of initiatives (Stencel & Luther, 2021a) and in the volume of content that they have been publishing (Ramahí-García, García-Crespo & Dafonte-Gómez, 2021). Moreover, their significance in the public sphere is patent through partnerships with Google or Facebook (Brandtzaeg, Følstad & Chaparro Domínguez, 2018) ; the advice they give to legislative or governmental bodies such as the European Commission (*A Multi-Dimensional Approach to Disinformation. Report of the High Level Group on Fake News and Online Disinformation*, 2018) ;and the academic research which has sprung from the phenomenon itself (Rodríguez-Virgili, Serrano-Puche & Fernández, 2021).

One of the key aspects of this research on fact-checking is on how effective it is in combating disinformation; a factor that directly affects its relevance as the subject matter of research.

Academic research presents fact-checkers as an important tool in the struggle against disinformation (Amorós, 2018; Brennen *et al.*, 2020; Guess, Nyhan & Reifler, 2020; Walter *et al.*, 2020), which can inhibit political lies (Haigh, Haigh & Kozak, 2018; Nyhan & Reifler, 2015; Young *et al.*, 2018) and change biased perceptions of reality induced by disinformation (Hameleers, 2019; Wood & Porter, 2019), even if this change does not affect voting intentions or candidate assessments (Barrera *et al.*, 2020; Nyhan *et al.*, 2020). However, researchers warn just because facts are revealed to audiences after being exposed to a piece of disinformation does not mean the subjects of the initial content they had contact with did not have any influence. This is what is known as the continued influence effect (Ecker, Butler & Hamby 2020; Lewandowsky *et al.*, 2012).

One of the main strategies used by citizens to avoid spreading dubious information is seeking and contrasting different sources (Rodríguez-Virgili, Serrano-Puche & Fernández, 2021). However, even though correct and accessible information should make citizens refresh their beliefs from a rational point of view –and part of the research indicates so–, there is also evidence that "people are inclined to resist or ignore new factual information" (Kuklinski & Quirk, 2000, p. 172). This phenomenon concerns different concepts. One of these is cognitive dissonance (Festinger, 1962). What is meant by this is the inner tension that people experience when faced with facts, opinions and behaviours that challenge their beliefs or attitudes. Another is the *backfire effect* (Nyhan & Reifler, 2010) whereby verification processes and corrections made to a piece of disinformation may, in some individuals, not only fail to shatter misconceptions but even result in reinforcing their preconceptions in an attempt to protect pre-existing belief systems. However, it should be noted that, although this concept is popular, there are diverging perspectives on this in the literature (Nyhan *et al.*, 2020). Wood & Porter (2019, p. 160) affirm that the *backfire effect* is very difficult to induce and that the average subject "overwhelmingly" accept corrections made to misleading statements, even when it has been made by a like-minded politician. Thus, it is "unlikely to be a characteristic of the public's relationship to factual information."

Walter, Cohen, Holbert and Morag, after conducting a meta-analysis of the research on how effective fact-checking is at combating disinformation (k=30, N=20963), conclude that, despite having limited effects, verifications published by fact-checkers positively affect beliefs, regardless of political ideology, pre-existing views, context and of whether the whole false statement is refuted or only parts of it:

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> Simply put, the beliefs of the average individual become more accurate and factually consistent, even after a single exposure to a fact-checking message. To be sure, effects are heterogeneous and various contingencies can be applied, but when compared to equivalent control conditions, exposure to fact-checking carries positive influence (Walter *et al.*, 2020, p. 18).

In 2021, Calvo and Aruguete present the report *Chequeado en Argentina. Fact checking y la propagación de noticias falsas en las redes sociales* [*Chequeado in Argentina. Fact-checking and the spread of disinformation on social media*]. This is an unprecedented work in which the fact-checker itself has commissioned research on the impact of its activity on the 2019 Argentinian presidential election. Calvo and Aruguete (2021) observe that the contents that *Chequeado* considers truthful obtain an engagement rate much higher than those that it debunks. This denotes that fact-checking leads to a cognitive reinforcement of one's own beliefs. However, they also confirm that *Chequeado* helps to significantly reduce the spread of misleading contents it debunks. Thus, although there are no data confirming that the activity of the Argentine fact-checker leads to a change in how audiences perceive a public statement, it does, at least, reduce the capacity disinformation has to spread to wider audiences (Vosoughi, Roy & Aral, 2018), which is one of its main objectives (Mena, 2020; Nekmat, 2020). Ecker, Butler and Hamby (2020) remark that fact-checks are more effective if they come from a credible source, if they contain a lot of details or if they provide a high number of counterarguments. However, Kuklinski and Quirk (2000, p. 173) are of the view that: "If people are given correct information, they likely will ignore it –unless it is presented in ways that virtually compel attention and reflection."

Therefore, the challenge for fact-checkers lies in not only managing reliable sources, analysing databases and contrasting the information delivered, but also in making their content attractive and reaching those who are not always willing to listen or who will do so not to protect themselves from disinformation but to reinforce their views with appropriate counterarguments (Edgerly *et al.*, 2020).

1.1. *Fact-checkers and social networks*

In today's society, it is increasingly common to access information via social networks (Ardèvol-Abreu, Delponti & Rodríguez-Wangüemert, 2020; Díaz-Campo, Segado-Boj & Fernández-Gómez, 2021; Tandoc, Lim & Ling, 2020). In recent years, *Digital News Report* (Newman *et al.*, 2018, 2019, 2020, 2021) has confirmed the important role social networks have as an information gateway for a large share of population –particularly young people–, both deliberately when used for this purpose or incidentally through recommendations and posts from friends. The latest version of that report states that, although conventional media are still very significant, networks are a space where they compete with other broadcasters, such as politicians and influencers (Andı, 2021) to capture the attention of the audience. These new means of distribution through social networks, together with less formal presentations, interactive and immersive narratives or a wider range of topics dealt with, are some of the main instruments with which media aims to attract audiences (Costera Meijer, 2020).

Fact-checkers also need to reach audiences. This is not only a matter of financial viability, but also because by acting reactively against disinformation, they need their fact-checks to reach those affected (Humprecht, 2020). This is the first step they need to take without which their work would not be effective. The report *The Long Fuse: Misinformation and the 2020 Election* shows that, inasmuch as audiences consume content on different networks, actors who wish to influence public opinion also do so by "leveraging different platforms for different parts of their information strategies, and often intentionally moving content from one platform to another" (2021, p. 147).

The presence of fact-checkers on social networks means they can spread their contents organically (Robertson, Mourão & Thorson, 2020). They are often distributed by interactions

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through network of contacts, thereby multiplying their reach (Margolin, Hannak & Weber, 2018) in the same spaces where disinformation circulates. It is also recommended that fact-checkers have a presence on networks, according to Brandtzaeg, Følstad and Chaparro Domínguez (2018), inasmuch as it enables them to become involved in social conversations regarding their own published fact-checks.

Research by Dafonte-Gómez, Corbacho-Valencia and García-Mirón (2021) indicates that, in Ibero-America, independent fact-checking initiatives have a larger "online presence" (understood as aggregated profiling on social networks, use of newsletters, podcasts and video platforms) than those that are part of media companies, which leads us to propose as the first hypothesis of this research that this may also be the case on a global scale:

H1. Independent fact-checking initiatives have a larger online presence on a global scale than those that are sections of media companies.

Furthermore, according to data from Digital News Report (Newman et al., 2021), social networks that users preferably choose (last week) to search, share and discuss news are Facebook (44%), YouTube (29%), Instagram (15%), Twitter (13%), TikTok (4%) and Snapchat (2%); thus, it could be assumed that fact-checkers would focus on spreading their corrections via these same channels. On this premise, we posed the second hypothesis:

H2. Global fact-checking initiatives have a larger presence on those networks that users choose to a larger extent to keep informed.

1.2. *Fact-checking in Ibero-America*

Technology promotes changes that have a comprehensive impact on the media ecosystem, both in terms of organisational structures and production, distribution, and receiving content. This digital revolution does not occur evenly throughout the world and is largely determined by the economic and political development in each country, albeit it is not exclusive to developed economies. Despite its political, social and economic challenges, Latin America is one of the regions where this technology-driven media trend has been most marked (Salaverría *et al.*, 2019). In this area there has been a large number of innovative journalistic projects launched in recent years (Mioli & Nafría, 2017, 2018; Schmitz Weiss *et al.*, 2020). There is also a strong presence of fact-checking initiatives within the global context (Vizoso & Vázquez-Herrero, 2019). Cueva Chacón and Saldaña (2021) emphasise the high quality of data journalism (supported by innovative technological tools and work routines) that have been carried out in Latin America in recent years. They also indicate that associative projects between different entities are a sign of the ground-breaking nature of journalism in the region (Cueva Chacón & Saldaña, 2021; Mesquita & de-Lima-Santos, 2021).

Regarding fact-checking, Duke Reporter's Lab census for 2020 confirms the strength of South America [*sic*], with 38 recorded initiatives showing an increase of 111% compared to 2019. They also stress the capacity the region has to build partnerships between different individual projects that can serve as an example for other areas, such as Comprova, RedCheq or Bolivia Verifica (Stencel & Luther, 2021b)

These data alone justify research on the reality of journalism in Latin America. However, in addition to this is the need to introduce alternative views in the academic field, complementary to the prevailing "Global North" (Mitchelstein & Boczkowski, 2021; Valenzuela *et al.*, 2019). This is because, despite being significant, Latin-American fact-checking initiatives have not yet been adequately studied (Molina-Cañabate & Magallón-Rosa, 2021). In this research, we decided to approach Ibero-America (Latin American countries, plus Spain and Portugal) This is because as well as the cultural and linguistic ties binding the countries under this name, there is a large amount of collaboration between Latin America and Iberian fact-checkers. In particular, this is due to cultural affinity and because, they face the same challenges. This can be seen, for instance, with the LatamChequea Coronavirus case (Dafonte-

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Gómez, Míguez-González & Martínez-Rolán, 2021). As a result of these data, we set out the third and last hypothesis of this study:

> H3. Ibero-American fact-checking initiatives use a wider variety of content distribution resources than seen in the global sample average in terms of online presence and options for sharing posts with other users.

2. Materials and methods

The sample consists in those initiatives that on 7th December 2020, were part of Poynter Institute's International Fact-Checking Network (IFCN), either as signatories or as entities yet to be renewed, since the auditing process is conducted annually. Reuters and Faktencheck were excluded from the initial list because they are news agencies that only provide fact-checking services to third parties and do not directly publish their content.

Thus, the research sample is composed of a total of 104 fact-checking entities.

Based on the analysis model used by Dafonte-Gómez, Corbacho-Valencia and García-Mirón (2021), an information sheet was created for each entity, whose items included: characteristics of the organisation, online presence, content sharing tools, instant messaging tools, other digital tools, training services and digital literacy resources.

Regarding the characteristics of the organisation, each entity's country of origin and date of creation were recorded. A classification was also drawn up according to the type of organisation the fact-checker belonged to. Regarding this, four different categories were established: fact-checkers belonging to media or news agencies; fact-checkers incorporated into or dependent on private companies unrelated to the field of communication; fact-checkers incorporated into or belonging to non-profit organisations; fact-checkers arising from academic initiatives.

As for online presence, each entity's website URL was recorded, and their websites were checked to see whether they had explicit links to the IFCN. On the basis of these websites and through an inductive process (without starting from pre-established categories), we identified whether each sample fact-checker was present on social networks or other type of digital channels. This was carried out without including profiles or accounts that, despite being linked to the fact checker website, had a parent media company and were not specific to the fact-checker. Once this process was completed, a direct search was performed on social networks, in order to detect possible fact-checkers' accounts which were not linked to from their sites.

With regard to content sharing tools, we directly checked their sites –both mobile and computer versions– by looking at the options provided by the entities for sharing their published fact-checks. In those cases where the use of social media button panels were detected, each of the social networks included were individually recorded, up to a maximum of six; beyond that number, we chose to directly identify them as social media button panels. Our view was a high number of options displayed made them less visible and hence less significant to the reader.

Regarding instant messaging tools, we tracked their use as content delivery mechanisms (for instance, WhatsApp or Telegram newsletters). We also monitored whether use was bidirectional, for receiving messages sent by users, provided that fact-checkers explicitly mentioned on their sites their willingness to receive content via these channels. As for other digital tools, we simply identified the presence or absence of any tool on the website.

Finally, it was also determined whether the entities provided training services to users (courses, workshops, seminars, etc.) as well as open educational resources on their websites in order to promote digital literacy in that regard.

Data were collected between February and May 2021 and were processed using Excel and the statistical software R (frequency tables, p-value, mean, median and standard deviation).

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3. Results

3.1. *Characteristics of fact-checkers: origin, organisation and dependency*

The sample comprises a total of 104 fact-checkers from 55 different countries. Among them, 19.2 percent belong to Ibero-America, represented by the following countries: Spain (5 entities), Brazil (4 entities), Portugal and Colombia (2 entities), and Argentina, Bolivia, Ecuador, Mexico, Peru, Uruguay, and Venezuela, with one fact-checking entity each.

When analysing their management system, an initial distinction can be made between fact-checkers belonging to media or news agencies (36.5%), whose work is subject to the communicative activity of the parent company or agency, and independent fact-checkers (63.5%). The latter have full autonomy or depend on entities unrelated to creating news content. Among these are fact-checkers incorporated as non-profit organisations or belonging to such entities (37.5% of the total sample); fact-checkers incorporated as, or dependent on, private companies unrelated to the field of communication (23.1%); or fact-checkers, such as Media Wise, arising from academic initiatives (2.9%). This distribution, in percentage terms, of fact-checkers according to the type of organisation is very similar both in Ibero-American entities and ones outside this area; it should be emphasised that none of the 16 Ibero-American initiatives were of an academic nature, compared to the 3 from other parts of the world, which were indeed academic.

Although all the fact-checkers in the sample were IFCN members in 2020, 14.4% of them made no mention of such membership on their websites. The remaining 85.6% include the association's logo or, at least, allude to it in some of their descriptive texts (Who We Are, About, Methodology, etc.). In the case of Ibero-American entities, only Observador Fact-Check does not make explicit reference to its relationship with IFCN.

3.2. *Presence on social networks and use of digital channels*

All the fact-checkers analysed were present on the Internet either with their own website or with a section within their parent entity's website. Moreover, most of them (85.6%) also appeared on one or more social networks. The number of networks on which there were Ibero-American fact-checkers was higher on average than those from other parts of the world (3.8 networks *vs.* 2.97). However, the most significant difference lied in the type of organisation: fact-checkers dependent on media or news agencies were only present, on average, on 1.5 social networks (Table 1b). This might have been due to the fact that media tend to use their own accounts on social networks to disseminate refutations and verifications from their fact-checkers; to this end, they generally add some hashtag or statement to identify their posts as fact-checks, such as the French newspaper 20 Minutes' "Fake Off."

Now, looking at to what extent each particular social network is used (Table 1), we can see that the highest percentage of fact-checkers are present on Twitter and Facebook (75% and 72.12%, respectively). Slightly more than half of them sampled have an Instagram account and 49% of them appear on YouTube (either with their own channel or through a playlist). Also, 46.2% of them appeared on LinkedIn. It should be mentioned that, on several occasions, we found fact-checkers' accounts on Facebook, Twitter, Instagram, YouTube and LinkedIn that were inaccessible from their websites because no links had been added. Just over a tenth of the sample used networks other than those with the strongest international presence and only a minority used video platforms apart from YouTube: Maldito Bulo, Media Wise and Newtral had a TikTok account (in addition to its YouTube channel); Newtral also had a Twitch channel and Polígrafo used Sapovideos, a platform widely used in Portugal.

When the data was broken down according to network and type of organisation, they revealed that the presence of fact-checkers dependent on media or news agencies was lower in percentage terms than that of any other type of organization in all social networks considered. A comparison of results between fact-checkers from Ibero-America and other

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parts of the world revealed that the former were more present on all networks, except for those less frequently used, grouped under the name "Other networks" (such as Ekşi Sözlük, Tumblr or Medium). We differentiate "Other networks" from "Other video networks" because in the latter category there are emerging networks (such as TikTok or Twitch) and although they were a minority at the time this study was carried out, they should be monitored in the medium term. In "Other networks" we mainly find general networks that are either in decline or restricted to specific geographical areas.

Table 1. Presence of fact-checkers on social networks.

		Total	Academic initiatives	Business	Media and news agencies	Non-profit orgs.	*p*	Ibero-American	Non-Ibero-American	*p*
		n=104	n=3	n=24	n=38	n=39		n=20	n=84	
a)	Twitter	75%	100%	91.7%	44.7%	92.3%	***	95%	70.2%	*
	Facebook	72,1%	100%	83.3%	39.5%	94.9%	***	85%	69%	***
	Instagram	51%	66.7%	79.2%	15.8%	66.7%	***	70%	46.4%	
	YouTube	49%	33.3%	75%	21.1%	61.5%	***	55%	47.6%	
	LinkedIn	46.2%	100%	66.7%	26.3%	48.7%	**	55%	44%	
	Other networks	11.5%	33.3%	12.5%	2.6%	17.9%		0%	14.3%	
	Other video networks	3.9%	33.3%	8.3%	0%	2.6%	*	15%	1.2%	**
b)	Mean	3.1	4.67	4.29	1.5	3.87		3.8	2.97	
	Median	3	4	5	1	4		4.5	3	
	S.D.	1.96	1.15	1.65	1.43	1.56		1.85	1.96	

a) Percentage of fact-checkers with presence on each social network
  *p-value<0,05 **p-value<0,01 ***p-value<0,001
b) Nº of social networks on which fact-checkers are present: media, median and standard deviation

Source: Own elaboration.

Regarding the use of other digital channels (Table 2), a third of fact-checkers invite users to subscribe to a newsletter through which they receive specific information on fact-checks. Also, a fifth disseminate content through one or more podcasts. Use of these two tools is more widespread between those fact-checkers linked to academic initiatives or non-profit organisations than with companies or those dependent on media companies. Bots are also rarely used, since only Aos Fatos, Estadão Verifica, Maldito Bulo and Real or Not have access to them. Ibero-American fact-checkers stand out, once again, in using these channels, with a significant difference with podcasts and bots. Furthermore, it should be noted that all the fact-checking entities that do not have any of the aforementioned tools are outside Ibero-America.

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Table 2. Number and percentage of fact-checkers using other digital tools.

	Total	Academic initiatives	Business	Media and news agencies	Non-profit orgs.		Ibero-American	Non-Ibero-American	
	n=104	n=3	n=24	n=38	n=39	*p*	n=20	n=84	*p*
Newsletter	33.7%	66.7%	33.3%	7.9%	56.4%	***	50%	29.8%	
Podcast	20.2%	33.3%	20.8%	10.5%	28.2%		45%	14.3%	**
Bots	3.9%	0%	4.2%	2.6%	5.1%		15%	1.2%	**
*p-value<0,05 **p-value<0,01 ***p-value<0,001									

Source: Own elaboration.

3.3. *Digital tools*

13.5% of the fact-checkers analysed have developed and/or implemented technology to boost the speed, scale and impact of their own fact-checking and/or that of third parties. Thus, they used state-of-the-art artificial intelligence and machine learning to automate certain stages of the verification process; software (search engines, browser extensions, mobile applications, and so on) to evaluate how reliable sources were; online visualisation and mass data analysis tools (real-time database visualisation, interactive maps, etc.) for processing information in a user-friendly manner. Among the fact-checkers which used any of these types of fact-checking digital tools, only one (Les Décodeurs) represented a section of a media company; the others were private companies or non-profit entities functioning as independent fact-checkers. One of them (the only Spanish fact-checker with such tools) was Maldito Bulo. As for Ibero-American fact-checkers, a quarter of them used any of these tools. However, in other parts of the world, this figure dropped to 10.7%.

3.4. *Resources provided by fact-checkers for sharing contents*

One key mechanism extending the dissemination of fact-checks to counter hoaxes and fake news is to enable users to easily share their content. For this reason, on their websites most fact-checkers provided the possibility of directly sharing posts on social networks. Facebook (91.4%) and Twitter (89.4%) icons were those that could be used most frequently. Forty-nine percent of fact-checkers also enabled sharing content by email, 34.6% included the LinkedIn icon, and 27.9%, the WhatsApp icon. It should be noted that 11.5% of the fact-checkers added an option for sharing content in the mobile version of their websites that was not available on the computer version; the most prominent tool in this regard was WhatsApp which was included by 10.7% of fact-checkers on their mobile versions. Finally, 6.7% of them provided a social media panel with more than six elements (Table 3).

There were no particularly significant differences in the use of most of these mechanisms according to the type of organisation. It is worth mentioning, in any event, that business initiatives were more inclined to using WhatsApp and the only ones that included the Facebook Messenger icon; likewise, media companies tended to use the most traditional mechanisms to share content, such as email or URL copy links (Table 3).

Only Demagog.cz (Czech Republic), Media Wise (USA), Suara.com (Indonesia), Tempo.co (Indonesia), Källkritikbyrån (Sweden), Re:Baltica (Latvia) and Maharat News (Lebanon) – which accounted for 6.7% of the sample– did not provide any options for sharing content.

Regarding the geographical scope, we noted that all Ibero-American entities provided at least two options for sharing content: Facebook and Twitter. More than two thirds included the email icon and half also enabled sharing content through WhatsApp, compared to 22.6% for entities from other parts of the world. However, no Ibero-American fact-checker chose mechanisms such as Telegram, Facebook Messenger or downloads and bookmarkers, which were used by some organisions from other countries (Table 3).

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Table 3. Percentage of fact-checkers based on resources provided for sharing contents.

	Total	Academic initiatives	Business	Media and news agencies	Non-profit orgs.	p	Ibero-American	Non-Ibero-American	p
	n=104	n=3	n=24	n=38	n=39		n=20	n=84	
Facebook	91.4	66.7%	87.5%	94.7%	92.3%		100%	89.3%	
Twitter	89.4%	66.7%	83.3%	92.1%	92.3%		100%	86.9%	
E-mail	49%	33.3%	50%	68.4%	30.8%	*	70%	44%	*
LinkedIn	34.6%	33.3%	29.2%	34.2%	38.5%		30%	35.7%	
WhatsApp	27.9%	33.3%	41.7%	21.1%	25.6%		50%	22.6%	*
Copy URL	14.4%	0%	12.5%	28.9%	2.6%	**	5%	16.7%	
Others	12.5%	33.3%	12.5%	7.9%	15.4%		50%	13.1%	
Added in mobile	11.5%	0%	20.8%	10.5%	7.7%		30%	7.1%	**
Pinterest	10.6%	0%	16.7%	5.3%	12.8%		5%	11.9%	
Download	9.6%	0%	16.7%	13.2%	2.6%		0%	11.9%	
Social media buttons	6.7%	33.3%	12.5%	5.3%	2.6%		10%	6%	
Google +	6.7%	0%	4.2%	5.3%	10.3%		5%	7.1%	
Facebook Messenger	5.8%	0%	15.8%	0%	0%	*	0%	7.1%	
Bookmark	5.8%	0%	8.3%	7.9%	2.6%		0%	7.1%	
Telegram	5.8%	0%	16.7%	2.6%	2.6%		0%	7.1%	
*p-value<0,05 **p-value<0,01 ***p-value<0,001									

Source: Own elaboration.

3.5. *Use of instant messaging tools for delivering content and receiving inquiries*

The use of messaging tools for delivering content (newsletters, daily reports, alerts, etc.) was very limited, with only 11.5% of fact-checkers resorting to them: Aos Fatos, Chequeado, Colombiacheck, Digiteye, Ecuador Chequea and FactCrescendo used WhatsApp, while Boom, Fatabyyano Project, Maldito Bulo, Newsmeter, Newtral and VoxCheck used Telegram. Maldito Bulo delivered content through both tools, although on WhatsApp, instead of sending daily reports or alerts, this was managed through a chatbot to which users had to submit queries. These were all independent fact-checkers, whether private companies or non-profit organisations; thus, no media company provided this service.

As for fact-checkers that stated on their websites that they received queries or corrections through instant messaging tools (Table 4), this percentage rose to 37.5%. In relation to the total sample, 28.9% of fact-checkers indicated on their websites that they accepted WhatsApp queries, 12.5% used Facebook Messenger and less than 4% did so through Telegram. Only Maldito Bulo used all three channels to receive information.

Ibero-American fact-checkers on the whole displayed higher percentages than from other areas across all indicators, especially with regard to sending and receiving content via WhatsApp. Likewise, 56.7% of organisations outside Ibero-America did not have any of these instant messaging tools, while this percentage dropped to 25% with Ibero-American organisations (Table 4).

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Table 4. Percentage of fact-checkers that used instant messaging tools for delivering content and receiving inquiries.

	Total	Academic initiatives	Business	Media and news agencies	Non-profit orgs.		Ibero-American	Non-Ibero-American	
	n=104	n=3	n=24	n=38	n=39	*p*	n=20	n=84	*p*
WhatsApp reception	28.9%	0%	41.7%	26.3%	25.6%		70%	19%	***
F. Messenger reception	12.5%	33.3%	12.5%	10.5%	12.8%		15%	11.9%	
WhatsApp emission	6.7%	0%	12.5%	0%	10.3%		25%	2.4%	***
Telegram emission	5.8%	0%	16.7%	0%	5.1%		10%	4.8%	
Telegram reception	3.9%	0%	8.3%	2.6%	2.6%		10%	2.4%	

*p-value<0,05 **p-value<0,01 ***p-value<0,001

Source: Own elaboration.

3.6. *Training services and digital literacy resources*

28.5% of the initiatives provided digital literacy resources or educational content on their websites and 18.27% of them some kind of training services.

Concern and dedication to digital literacy were particularly noticeable among independent fact-checkers. These were mostly academic initiatives, although there were only three in the sample. Media Wise, which belonged to the Poynter Institute for Media Studies, offered several online courses, in addition to educational videos; Africa Check (University of the Witwatersrand, Johannesburg) organised workshops and online training on fact-checking and data verification, although there were no educational materials on its website, while Factcheck.org (University of Pennsylvania) had a complementary political literacy site, FlackCheck.org.

As for non-profit organisations, more than half of them provided different types of educational materials, a quarter of which also had some training programme. There were eight entities, including the Spanish Maldito Bulo and Verificat.

In terms of private companies, this percentage dropped. Aos Fatos and Agência Lupa (both from Brazil) were two of the organisations that provide both training and educational resources, while other initiatives such as Pagella Politica or Newtral had some training programme, but no open educational resources.

Out of the 38 initiatives operating as sections of a media company, only Vishva News provided training services and only Les Décodeurs, which belonged to Le Monde, offered educational material.

These percentages are higher with Ibero-American fact-checkers, especially in terms of providing training.

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Table 5. Number and percentage of fact-checkers that provided training services and/or educational resources.

	Total	Academic initiatives	Business	Media and news agencies	Non-profit orgs.		Ibero-American	Non-Ibero-American	
	n=104	n=3	n=24	n=38	n=39	p	n=20	n=84	p
Training offer	18.3%	66.7%	25%	2.6%	25.6%	**	35%	14.3%	*
Educational resources	28.9%	66.7%	25%	2.6%	53.8%	***	35%	27.4%	

*p-value<0,05 **p-value<0,01 ***p-value<0,001

Source: Own elaboration.

4. Discussion and conclusions

Fact-checking is a phenomenon that has spread globally, in particular since 2016 coinciding with Donald Trump's first presidential election campaign. Moreover, according to Vázquez-Herrero, Vizoso and López-García (2019, p. 5), it also spread with the global expansion of the debate on post-truth and fake news. At present, there are IFCN-certified fact-checking initiatives in over 50 countries. With this research, which is part of the project *Digital narratives against disinformation, a study of networks, themes and formats in Ibero-American fact-checkers*, we wanted to contextualise the activity of Ibero-American fact-checkers within this set of initiatives. At the same time, we wanted to give an overview of communicative behaviour patterns regarding the use of internationally recognised social networks and other content distribution channels.

Generally speaking, it must be remembered that slightly over a third of IFCN-certified fact-checkers worldwide are dependent on media and news agencies. This implies that verifying facts and debunking fake news cannot be fully entrusted to entities such as news agencies or conventional media. Fact-checking has transcended those boundaries and is now a role that can be undertaken by any type of organization, whether this be a public or business enterprise.

Regardless of where fact-checkers originated in terms of how they are organised or their purpose, the need to publicise the results of their work is an inherent part of their *raison d'être*. Thus, it seems pertinent to analyse the communication mechanisms they use.

This need becomes quite evident in the case of independent fact-checkers. They have a much larger presence on social networks and digital channels than those belonging to media companies. As stated previously, the latter tend to use their own network accounts. Thus, we have confirmed the first hypothesis raised in this study.

Social networks position themselves as being the preferred tools for online communication by fact-checking organisations: Twitter and Facebook are the most used channels by fact-checkers, followed by Instagram and YouTube. These four social networks are also preferred by users when searching for news; therefore, the second hypothesis can be considered valid. However, we deem it necessary to briefly mention the discrepancy observed in the order of preference: while, for the general public, Twitter ranks fourth as a network for searching for information –behind Facebook, YouTube and Instagram– (Newman *et al.*, 2021), it is (as well as Facebook) the first option for fact-checkers, both in terms of their online presence and content-sharing options on their websites. Such data, seem to present us with a paradox, and must be qualified with other indicators. These may prove how significant Twitter is within the information ecosystem, as a network whose users claim to use it mainly for finding and discussing the latest news. This is opposed to other networks, with a higher volume of users, which are mainly focused on entertainment (Newman *et al.*, 2021).

Meanwhile, more innovative communicative resources, such as using bots on social networks and messaging applications –which would enable a much more personalised and

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receiver-centred communication–; podcasts, which have a growing number of followers and have great potential to counter disinformation (Moreno-Espinosa & Román-San-Miguel, 2021); and other digital tools we mentioned previously that could expand and enrich user experience, are still not significant enough within the communicative activity of these entities. Nevertheless, they are still interesting from the point of view of narrative innovation, for instance.

The vast majority of entities, regardless of their category, clearly recognise the value in enabling users to share content. This helps fact-checking go viral and draws traffic to their websites. However, it would be especially interesting to review and update these elements so as to remove obsolete icons such as Google + (shut down in 2019) in some of the cases studied, harmonise content-sharing options on websites and mobile phones and facilitate content-sharing between individuals and private groups through the most common messaging applications in each country (mainly WhatsApp).

Considering the rise of these messaging tools as sources of information and disinformation (Newman *et al.*, 2017, 2018, 2019, 2020, 2021), their use for receiving and especially delivering content also has significant room for growth.

Regardless of how capable fact-checkers are in communicating and disseminating their contents, their work implies, according to Buchanan (2020), an important push for literacy. This is essential for the information professionals and general public to learn how to identify hoaxes and fake news and stop contributing to their dissemination. However, most fact-checkers in the sample, particularly those dependent on media and news agencies, have not yet undertaken that role, as can be seen by the limited supply of educational materials and training proposals.

With specific regard to the work by Ibero-American fact-checkers, it should be noted that their activity stands above that of the general sample or that from entities in other areas in terms of almost all aspects referred to in previous paragraphs. This is true in relation to their presence on and use of social networks and digital literacy. All Ibero-American fact-checkers have an account on a social network and have a stronger presence than those from other areas on nearly all social networks and digital channels considered. They have significantly higher percentages in using more innovative elements, such as bots or podcasts. They also make greater use of messaging services and other digital tools and have a wider range of content-sharing mechanisms. Likewise, in percentage terms, they provide a larger supply of educational materials and training programs. Therefore, this confirms the third hypothesis raised in this study.

One limiting factor in this study is that the group of non-Ibero-American fact-checker (accounting for almost 81% of the sample), includes initiatives from a wide range of countries. Their communicative resources may often be more limited than those for entities from more developed countries. Therefore, the results could be perceived as being biased. However, this does not detract from the efforts made by Ibero-American fact-checkers, who have become international points of reference, both in terms of communication and training.

This thorough research on the presence of IFCN-certified fact-checking initiatives on social networks on a global scale (and on the role played by Ibero-American entities) provides a comprehensive map of the content distribution channels used by fact-checkers combating disinformation. It also provides a sound basis for undertaking new studies on more specific aspects of this topic, such as the characteristics of the content posted by fact-checkers or the reactions from their audiences. The power fact-checkers have to combat disinformation depends on their ability to distribute content. Thus, it seems essential to gain more insights into this side of the information ecosystem.

This study is part of the research project "Digital narratives against disinformation, a study of networks, themes and formats in Ibero-American fact-checkers / Narrativas digitales contra la

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