


# Media Literacy Against Disinformation: An Analysis of 25 Initiatives Promoted in Spain

## *Alfabetización mediática contra la desinformación: análisis de 25 iniciativas promovidas en España*




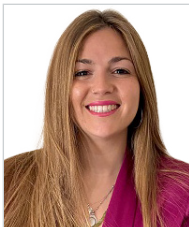
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### How to cite this article:

Verón, J. J.; Sancho-Ligorred, B. and Pérez-Zapater, B. (2025). Media Literacy Against Disinformation: An Analysis of 25 Initiatives Promoted in Spain. *Doxa Comunicación*, 41, pp. 447-467.

<https://doi.org/10.31921/doxacom.n41a2899>



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## Abstract:

Disinformation has emerged as a serious global social issue. As a result, public and private organisations have spent years promoting initiatives and projects aimed at combating and counteracting its impact on society, particularly among vulnerable groups such as young people and older people. This research examines and compares the wide range of educational projects developed in Spain in recent years. Using a qualitative, case-based research methodology, the study identifies the benefits of each initiative and emphasises the importance of education as the primary driver in the fight against disinformation.

## Keywords:

Disinformation; educational innovation; fake news; communication; media literacy.

## Resumen:

*La desinformación se ha convertido en un problema social grave en todo el mundo. Es por ello por lo que organismos públicos y privados llevan años impulsando iniciativas y proyectos para combatir y contrarrestar su impacto en la sociedad, especialmente entre colectivos vulnerables como los jóvenes y las personas de avanzada edad. Esta investigación busca, profundiza y compara la diversidad de proyectos que se han creado en los últimos años desde el ámbito educativo en España. A partir de una investigación cualitativa de metodología de casos, se identifican las bondades de cada una de las iniciativas y se incide en la importancia de considerar el ámbito educativo el motor principal para combatir la desinformación.*

## Palabras clave:

Desinformación; innovación educativa; noticias falsas; comunicación; alfabetización mediática e informacional.

## 1. Introduction

Disinformation emerged as a recognised phenomenon during the Cold War in the 1950s, although its true origins can be traced back to Antiquity. In recent years, it has become a global challenge that significantly affects young people, particularly within the context of multiculturalism and race (UNESCO, 2023).

Several factors have transformed disinformation, which “is not in itself a new phenomenon” (Gelfert, 2018: 93), into one of the “greatest threats facing humanity” (World Economic Forum, 2024).

A key driver of this trend is the widespread accessibility of specific technologies, which have enabled the creation of high-quality false information, as well as the ability to disseminate it instantly on a near-limitless scale. At the same time, traditional intermediaries (media outlets and journalists) have been largely sidelined, while society as a whole has yet to be trained to be autonomous in its ability to discern information from disinformation.

In this context, certain social groups are especially vulnerable. The European Union and UNESCO have highlighted the susceptibility of young people (European Commission, 2020) due to their limited experience with media, which is a key factor hindering their ability to detect deception confidently. In line with this, various studies indicate that a lack of media and critical literacy skills is a significant contributor to this vulnerability (Livingstone, 2004). However, educational programmes aimed at prevention are not being adequately implemented.

This research aligns with Anderson’s (2021) perspective, recognising the risks inherent in the current situation, while also acknowledging the opportunity it offers. Society as a whole is beginning to grasp the importance of communication and with it, the need for education and research in this area. Anderson advocates for a vision of media culture that is not dependent on digital platforms but instead embraces a more humanistic perspective.

Therefore, early intervention through media literacy strategies is crucial. This research aims to gather, organise, and characterise recent media literacy initiatives in Spain, focusing on those launched within the non-formal education sector.

This research builds on a prior, smaller-scale study conducted on a smaller number of initiatives, which served as an exploratory experience. The development of the earlier study enabled the improvement and adaptation of the analysis system, as well as a significant expansion of the sample.

We begin with the premise that media literacy is an effective tool to counter disinformation. Research indicates that such strategies are particularly effective among adolescents, who are in a phase of identity formation and tend to adopt an active stance toward social issues when they feel empowered (Zalve, 2022).

## 2. Theoretical Framework

In recent decades, digital literacy has gained traction as an increasingly essential element for active and effective learning about reality.

In Spain, various educational initiatives have been launched to promote digital literacy among young people, equipping them with the necessary tools to help them avoid falling victim to disinformation. For example, the project “Conecta Joven” engages young people in training adults in digital skills, fostering intergenerational digital literacy (González, 2010). Additionally, programs such as “Alfabetización Digital Hoy” aim to bridge the digital divide, while encouraging a critical and reflective approach to technology use (Vicens Vives, 2021).

These projects primarily target young people and adolescents from Generation Z, characterised by their intensive use of mobile phones and Relationship, Information and Communication Technologies (RICTs). According to a UNICEF report, 90.8% of Spanish adolescents go online almost daily, with 31.5% spending more than five hours a day on the internet during the week (UNICEF, 2022). This frequent and often unsupervised use can lead to problems in social interaction and increased exposure to disinformation.

Recent research has underscored the effectiveness of media literacy in equipping young people with the tools to analyse the content they consume critically (Geers et al., 2020; Wardle & Derakhshan, 2017). Media literacy not only enhances young people’s critical thinking skills but also bolsters resilience against informational manipulation (Livingstone, 2020). Studies show that individuals trained in Media and Information Literacy (MIL) are better able to assess the credibility of information, are less likely to share false information, and are better equipped to make informed judgements about the quality of the information they encounter (Dame Adjin-Tettey, 2022).

To establish the foundation and starting point of this study, a broad definition and conceptualisation of the term “disinformation” have been adopted, understood as any form of dissemination of false or inaccurate information that distorts facts, regardless of the intent behind it.

Some institutions, such as the European Commission, define disinformation as false or misleading information intended to deceive, whether for financial gain or ideological purposes, which can cause public harm (Congress of Deputies, 2023). This concept also includes more specific terms like “hoax” or “fake news”.

The impact of disinformation on the population has become a growing concern for both authorities and the academic community, though their perspectives on the nature of the problem may differ. Various scholars point out that “there is evidence of the negative effects of using networks to spread erroneous information”, which can result in “harmful consequences for global health and well-being” (Pulido et al., 2020, p.2). It is also noted that “disinformation negatively affects public health and safety, erodes democracy, and undermines fundamental rights that cannot be taken for granted and must be safeguarded” (Congress of Deputies, 2023).

Other scholars have focused on the social and political aspects of disinformation (Benavides Vanegas, 2020; Blanco-Alfonso et al., 2022). Disinformation is especially harmful during emergencies, such as the COVID-19 health crisis or the jihadist attacks in Europe. Furthermore, the polarisation fueled or intensified by disinformation on social media contributes to a more tense social climate, an increase in violence, and undermines democracy and its institutions.

Disinformation follows an incremental logic that begins on anonymous websites before spreading to closed networks, organised groups, and eventually reaching mainstream social media platforms and traditional media outlets. Apps like WhatsApp facilitate “the exchange of content, which increases confirmation bias among surveyed adolescents within a trusted environment that lowers their critical assessment of the reliability of received content” (Herrero-Diez et al., 2020, p.11).

Some studies highlight the growing predominance of the emotional dimension over facts in discourse, noting that “this is a fundamental issue underlying the resurgence of criticism toward fake news and, consequently, the phenomenon of the emergence of new journalistic literacy” (Pérez Tornero et al., 2018, p.215).

Thus, on platforms like Twitter (now X), false content is more likely to be shared than accurate information, even “despite individual and network factors favouring the truth” (Vosoughi et al., 2018, p.1151). This trend reflects a significant shift, where society has moved beyond being mere recipients of disinformation to becoming its creators and a crucial vehicle for its spread. This phenomenon is closely tied to the central role of social media and messaging services, where the perceived credibility of the source can “lower critical faculties and position the reader” (Pangrazio, 2018, p.11).

In this context, the media have lost much of their influence as intermediaries between citizens and reality, as evidenced by their declining credibility and the widespread distrust they face. According to a Eurobarometer published in May 2021, Spanish citizens exhibit significantly higher levels of distrust towards their media compared to the EU average (European Commission, 2021).

Despite this climate of distrust, UNESCO asserts that journalism remains “an essential element of our lives” and emphasises the importance of “strengthening the media” to mitigate the effects of disinformation (UNESCO, 2020). However, studies such as that of Tsifti et al. (2020, p.158) caution that although the media attempt to correct disinformation, they sometimes contribute to its dissemination by replicating it.

Consequently, some experts have noted a shift from an informed society to a “society of infoxication or noise” (Tejedor Calvo et al., 2016, p.135). In the context of information overload, citizens need to develop skills to distinguish between reliable and unreliable content. Ramírez Corzo argues that humans are incapable of filtering the information encountered daily, leaving individuals exposed to platforms that have the power to organise content through algorithms tailored to their preferences. According to the author, it is necessary to protect fundamental rights and prevent false information from continuing to build “a

culture of post-truth without any limits” (Ramírez Corzo, 2019). In this regard, Bustos and Ruiz (2020) point out that technology industries should play a more active role in combating this phenomenon.

In this context, Big Data and Artificial Intelligence, along with the development of their algorithms, are viewed as opportunities to address the issue of disinformation, at least in some of its forms, as demonstrated by various initiatives launched across Europe in recent years (Moreno et al., 2024). However, even these more optimistic views regarding technology’s role consider it essential to “carry out workshops and educational seminars in schools and universities to highlight the seriousness of misleading data” (Moreno et al., 2024, 449).

Pérez Tornero et al. (2018) advocate for close collaboration among journalists, researchers, educators, and citizens as a vital strategy to confront this challenge. While projects promoting media literacy have been launched, the authors point to a lack of coherence among existing initiatives and consider the absence of a guiding thread a weakness. They assert that “the field of media literacy emerges strongly, but not only as a task for educational institutions, but also for the media themselves, which must be regulated by political authorities and the different social actors” (Pérez Tornero et al., 2018, p.232).

Five years after these reflections, it is observed that effective coordination in the field of media literacy has yet to be implemented in the Spanish context. Initiatives, primarily targeting young people, have continued to multiply; yet, there has been no systematic effort to collect or analyse them to assess their impact or reach.

Although young people are not the primary transmitters of false information, they are the most exposed due to the large amount of time they spend on social networks, one of the main channels through which such content circulates (Figueira & Santos, 2019). This group is especially vulnerable because, still in the process of forming and socialising, they lack the essential tools and knowledge to analyse information critically. As a result, various problems stemming from exposure to misleading content can negatively influence their personal development. Some studies indicate that students struggle to identify and navigate hate speech, making them susceptible to the influence of both social media and traditional media (Izquierdo-Grau, 2019).

Young people, who primarily access information through social networks, show a greater distancing from traditional media. A survey by Fad reveals that these platforms are the “favourite medium for following current events” among those under 30 in Spain (Barral et al., 2021, p.19).

This is particularly significant given recent research confirming how frequently Spanish youth encounter content classified as disinformation via social networks and instant messaging apps. Thus, Bernardo et al. (2023, p.34) note that misleading information “would reach all respondents (93.4%) at least once a month, and two-thirds every week”, highlighting the widespread nature of this phenomenon.

Consequently, there is a pressing need to consider how this important social group is being prepared to confront the global phenomenon of disinformation they encounter daily, as well as how essential Media and Information Literacy (MIL) are being fostered among these new citizens within a context dominated by an overabundance of misleading content.

Therefore, the research sets out the following objectives:

1. To compile a benchmarking of educational projects aimed at combating disinformation in Spain.
2. To qualitatively examine the nature and characteristics of each initiative.
3. To explore future lines of research on educational innovation in response to the disinformation phenomenon.

### 3. Methodology

The research employs a qualitative methodology through an in-depth and comparative study of initiatives. It adopts a descriptive, explanatory and exploratory approach, based on a keyword search for educational initiatives aimed at mitigating the impact of disinformation in Spain.

The keyword search was conducted using a combination of multiple terms: educational initiatives, disinformation, educational projects, young people, Spain, educational innovation and elderly population. After filtering the results, a total of 25 initiatives and proposals were identified.

Disinformation has become a significant social issue, prompting the emergence of numerous initiatives aimed at mitigating its impact on society. In this context, the study by Tejedor and Sancho-Ligorred (2023) is part of the IVERES project, which focuses on Identification, Fact-checking, and Response. The democratic state facing the challenge of disinterested disinformation identified and mapped 50 initiatives focused on content monitoring and verification. This work has been used as a reference for this research. It is worth noting that the selection of keywords for this study was carried out with meticulous attention to detail and thoroughness, ensuring alignment with the study's objectives. Priority was given to initiatives with an educational or outreach-oriented nature and that remain active today.

Based on the results obtained, each initiative is analysed qualitatively using the categories outlined in Table 1.

**Table 1. Qualitative Analysis Categories of the Study**

Category	Subcategory
Name	
URL	
Managing/Implementing Entity	
Entities involved in the project	
Autonomous Community (or National Scope)	
Year of Creation	
Editions	

Type	Educational materials for teachers. Educational materials for young people. Games. Training workshops. Research project. Others.
Topic	Disinformation. Media literacy. Digital literacy. Social media. Digital health. Others.
Objectives of the project	
Target audience	Older adults. Adults. Teachers. University / Higher education. High school / Vocational Education and Training (VET) programs. Secondary Education. Primary education. Others.
Modality	Online. Hybrid. In-person.
Evaluation method	
Content structure	
Duration	
Complementary materials	

**Source: created by the authors**

The analysis categories enable a more in-depth examination of the selected sample, providing a more detailed understanding of each initiative.

## 4. Results

After applying the analysis sheet to each initiative, the authors extracted the following results.

### 4.1. Organising entities

The sample analysed in this study underscores the need for organisations to develop innovative and educational solutions to combat disinformation. Drawing on a selection of 25 initiatives, these projects emerge from a variety of sources: foundations (AulaCheck, Fundación IberoCivis; Surfear la red or Familias conectadas detectando la desinformación, Fundación FAD Juventud), professional journalism associations and press councils (Desenreda, Infórmate frente a la Desinformación III, Mente crítica, Mayores con wifi, Prensa sin edad, inFORMADOS); from universities (the University of Zaragoza, the University of the Basque Country or Nebrija University); media outlets and fact-checking platforms (Desfake, DoCheck!, Que no te timen con el móvil), private institutions (Mentes AMI, Detectives contra la desinformación, No me los toques, Fake News: la fábrica de mentiras) and public institutions (the Catalan Audiovisual Council, the Government of Catalonia or The Spanish Ministry of Education and Vocational Education and Training (VET) programs).

All the initiatives analysed receive backing from numerous public and private organisations, mainly through funding. Support comes from universities, regional governments, city councils or foundations such as the Spanish Foundation for Science and Technology (FECYT). The European Union is also one of the public entities that allocates the most funding to combat disinformation.

**Table 2. Analysed educational projects**

Educational project	Web page / Reference Information
AulaCheck	<a href="https://aulacheck.ibercivis.es/">https://aulacheck.ibercivis.es/</a>
Desenreda	<a href="https://blogsaverros.juntadeandalucia.es/programasccl/">https://blogsaverros.juntadeandalucia.es/programasccl/</a>
Desfake	<a href="https://desfake.cat/">https://desfake.cat/</a>
EduCAC	<a href="https://www.educac.cat/">https://www.educac.cat/</a>
Learn to check	<a href="https://learntocheck.org/">https://learntocheck.org/</a>
Unidad de Alfabetización Mediática Unizar - APA	Not available
Surfear la red	<a href="https://www.campusfad.org/surfear-la-red/">https://www.campusfad.org/surfear-la-red/</a>
inFORMADOS	Not available
Cazabulos	<a href="https://www.cazabulos.es/">https://www.cazabulos.es/</a>

#NODESinformación	<a href="https://www.educacionfpydeportes.gob.es/dam/jcr:3c54f03c-c0f5-4edd-a2b9-0e320bba0ff3/-nodesinformacion-propuesta-did-ctica.pdf">https://www.educacionfpydeportes.gob.es/dam/jcr:3c54f03c-c0f5-4edd-a2b9-0e320bba0ff3/-nodesinformacion-propuesta-did-ctica.pdf</a>
Qyourself	<a href="https://qyourself.eu/">https://qyourself.eu/</a>
Mayores con wifi	<a href="https://periodistasandalucia.es/mayores-con-wifi-alfabetizacion-mediatica/">https://periodistasandalucia.es/mayores-con-wifi-alfabetizacion-mediatica/</a>
Prensa sin edad	<a href="https://aprensamalaga.com/prensa-sin-edad/portada#:~:text=Prensa%20Sin%20Edad%20es%20un,la%20posible%20brecha%20digital%20existente">https://aprensamalaga.com/prensa-sin-edad/portada#:~:text=Prensa%20Sin%20Edad%20es%20un,la%20posible%20brecha%20digital%20existente</a>
El laberinto de la información	<a href="https://educaixa.org/es/recurso/jugar-laberinto-informacion">https://educaixa.org/es/recurso/jugar-laberinto-informacion</a>
Mentes AMI	<a href="https://fundacion.atresmedia.com/Mentes-AMI/">https://fundacion.atresmedia.com/Mentes-AMI/</a>
Mente Crítica	<a href="https://laboratoriodeperiodismo.org/almeria-acerca-el-periodismo-a-las-aulas-de-secundaria/">https://laboratoriodeperiodismo.org/almeria-acerca-el-periodismo-a-las-aulas-de-secundaria/</a>
Detectives contra la desinformación	<a href="https://laboratoriodeperiodismo.org/detectives-contra-la-desinformacion-el-proyecto-de-un-colegio-de-las-palmas-para-aprender-a-combatir-los-bulos/">https://laboratoriodeperiodismo.org/detectives-contra-la-desinformacion-el-proyecto-de-un-colegio-de-las-palmas-para-aprender-a-combatir-los-bulos/</a>
No me los toques	<a href="https://www3.gobiernodecanarias.org/medusa/edublog/ceiplogiles/2024/02/25/no-me-los-toques-proyecto-para-trabajar-la-desinformacion-mediatica-en-el-cole/">https://www3.gobiernodecanarias.org/medusa/edublog/ceiplogiles/2024/02/25/no-me-los-toques-proyecto-para-trabajar-la-desinformacion-mediatica-en-el-cole/</a>
Fake News. La fábrica de mentiras	<a href="https://espacio.fundaciontelefonica.com/evento/fake-news-la-fabrica-de-mentiras/?utm_source=espacio&amp;utm_campaign=expofakenews07052023&amp;utm_medium=boletin">https://espacio.fundaciontelefonica.com/evento/fake-news-la-fabrica-de-mentiras/?utm_source=espacio&amp;utm_campaign=expofakenews07052023&amp;utm_medium=boletin</a>
Cazadores de bulos	<a href="https://info-veritas.com/cazadores-de-bulos/">https://info-veritas.com/cazadores-de-bulos/</a>
Infórmate frente a la desinformación	<a href="https://fape.es/la-appa-renueva-su-proyecto-de-alfabetizacion-mediatica-con-la-diputacion-de-alicante-por-tercera-vez/">https://fape.es/la-appa-renueva-su-proyecto-de-alfabetizacion-mediatica-con-la-diputacion-de-alicante-por-tercera-vez/</a>
WISE-ME	<a href="https://wiseme.eu/">https://wiseme.eu/</a>
DoCheck!	<a href="https://docheck.org/">https://docheck.org/</a>
Que no te timen con el móvil	<a href="http://estaticos.cibersur.com/cibersur/impe/idi/023038/eset/espana/fundacion/malditaes/unen/combatir/timos/movil/personas/mayores">http://estaticos.cibersur.com/cibersur/impe/idi/023038/eset/espana/fundacion/malditaes/unen/combatir/timos/movil/personas/mayores</a>
Familias conectadas detectando la desinformación	<a href="https://www.campusfad.org/curso/https-www-campusfad-org-proyecto-shield-familias-digitales-detectando-la-desinformacion-y-educando-en-el-pensamiento-critico/">https://www.campusfad.org/curso/https-www-campusfad-org-proyecto-shield-familias-digitales-detectando-la-desinformacion-y-educando-en-el-pensamiento-critico/</a>

**Source: created by the authors**

#### 4.2. Geographical scope of the initiatives

Most of the initiatives studied operate at a regional level within autonomous communities, such as the Desenreda project or Mayores con wifi in Andalusia, the Unidad de Alfabetización Mediática APA - Unizar in Aragon, Desfake or EduCAC in Catalonia, and Detectives contra la desinformación in the Canary Islands. Some projects have a provincial reach, such as Prensa sin edad in Málaga; Infórmate frente a la desinformación III in Alicante. Others are city-based initiatives, like Cazabulos or Fake News: la fábrica de mentiras, operating in Madrid, Vigo, or Vitoria-Gasteiz.

Some projects, such as Desenreda (Andalusia), are currently being replicated in other autonomous regions of Spain (Aragon). Other initiatives, such as No me los toques, have been launched simultaneously across more than ten autonomous communities in Spain, including the Canary Islands, the Basque Country, Cantabria, Castilla-La Mancha, Madrid, the Valencian Community, Catalonia, Murcia, Andalusia, Castilla y León, and Galicia.

Other initiatives such as AulaCheck, Learn to Check, Surfear la red, #NODESinformación, El laberinto de la información and Mentas AMI have a national scope (Table 3).

**Table 3. Geographic Scope of the Initiatives**

Educational project	Target Audience
AulaCheck	National scope
Desenreda	Andalusia
Desfake	Catalonia
EduCAC	Catalonia
Learn to check	National scope
Unidad de Alfabetización Mediática Unizar - APA	Aragon
Surfear la red	National scope
inFORMADOS	Castilla y León
Cazabulos	Madrid, Vigo and Vitoria-Gasteiz.
#NODESinformación	National scope
Qyourself	The Basque Country
Mayores con wifi	Andalusia
Prensa sin edad	Málaga

El laberinto de la información	National scope
Mentes AMI	National scope
Mente Crítica	Almeria
Detectives contra la desinformación	Las Palmas
No me los toques	National scope
Fake News. La fábrica de mentiras	Madrid
Cazadores de bulos	National scope
Infórmate frente a la desinformación	Alicante
WISE-ME	National and European scope
DoCheck!	National and European scope
Que no te timen con el móvil	Madrid
Familias conectadas detectando la desinformación	National scope

Source: created by the authors

### 4.3. Themes and Diversity of Approaches

It is no coincidence that most of the initiatives analysed fall within the context of Media and Information Literacy (MIL). MIL is considered one of the most powerful tools in the fight against disinformation, which is fundamentally rooted in education. For this reason, many of these educational initiatives focus on empowering citizens by fostering critical thinking.

Some of the analysed initiatives are directly linked to specific fields, including journalism and fake news (Desenreda or inFORMADOS); science (AulaCheck, #NODESinformación or Cazabulos); fact checking and data verification (Learn to check, Desfake or Cazadores de bulos) or cybersecurity and online safety (Surfear la red, Mayores con wifi or Que no te timen con el móvil).

Social media plays a crucial role in the disinformation phenomenon. Therefore, many of these initiatives, both from theoretical and practical perspectives, address the relationship between social media and disinformation, as well as how to use these platforms responsibly. For instance, AulaCheck or Cazabulos offer students the opportunity to act as fact-checkers by debunking scientific hoaxes found on social media platforms.

Teachers play a crucial role in addressing disinformation, as they are the primary educators working with young people. Several of the initiatives analysed offer training tools and educational materials for teachers, such as Desfake or Qyourself.

Among the initiatives, Learn to Check stands out for its focus on the critical importance of filtering and verifying information received via social networks to avoid falling into disinformation traps. This initiative has also promoted educational projects in Spain to combat the phenomenon, such as Detectives contra la desinformación and No me los toques.

While many of the analysed projects target young people, there are also initiatives dedicated to protecting older adults, another group vulnerable to disinformation. Programmes like Mayores con wifi or Qué no te timen con el móvil seek to empower older adults by helping them develop stronger critical skills to navigate emerging technologies.

Most of the results focus on training workshops or other hands-on approaches to addressing the issue. However, some projects such as Qyourself, WISE-ME, and DoCheck!- aim for a European reach and tackle the problem from a more global perspective, offering potential solutions or tools to combat the disinformation phenomenon.

#### *4.4. Common objectives of the analysed projects*

So far, we have observed that while the various projects and initiatives vary in approach and methodology, they share a common goal: to enhance citizens' critical capacity to evaluate information and avoid falling prey to disinformation. By empowering the public, these initiatives promote Media and Information Literacy (MIL) to combat the spread of false information and hoaxes circulating online and on social media. Examples include, inFORMADOS, Surfear la red, Qyourself, Cazadores de bulos or DoCheck!

EduCAC aims to promote media literacy in formal and informal educational settings by enhancing knowledge of audiovisual language and fostering skills for the effective use of media. Other initiatives, such as Learn to Check or Desfake, also aim to train students to be critical and learn basic rules for fact-checking.

The introduction of Media and Information Literacy (MIL) into the Spanish educational curriculum remains an unresolved issue. Over the years, experts have emphasised the importance of incorporating MIL training from an early age to combat the disinformation phenomenon. In this regard, #NODESinformación and the APA-Unizar media literacy unit aim to provide educational and training alternatives designed to be incorporated transversally across subjects in the curriculum.

As previously highlighted, in the absence of a specific subject in the educational curriculum, workshops and educational talks have emerged as an alternative means of equipping young people with essential media skills. These initiatives aim to help students understand how media and social networks function. They are among the most numerous, taking place in various provinces of Spain, for example, Desenreda, Desfake, Mente Crítica, and Infórmate frente a la desinformación III.

Beyond workshops and talks, other engaging methods to reach young people and help them acquire knowledge include games (El laberinto de la información), educational videos featuring influencers (Mentes AMI), and educational activities where participants take on the role of "journalists for a day" (Aula Check). These types of projects are innovative and aim to make media literacy more appealing to teenagers.

#### 4.5. Target Audience

As observed throughout this research, the initiatives analysed target a wide range of audiences, including students at various educational levels, families, teachers, and older adults. In this regard, it is essential to highlight the format of some of these projects, which offer educational resources through their platforms, making them accessible to diverse audiences regardless of geographic location: Examples include Learn to Check, EduCAC, Aula Check, Surfear la red, El Laberinto de la información, Cazabulos or Desfake. However, other projects such as Desenreda, Mayores con Wifi, Prensa sin edad, Mente crítica or Infórmate sobre la desinformación III stand out for their in-person delivery.

When analysing the target audiences of each initiative more specifically, three main groups are identified: teachers, students, and older adults (Table 4).

**Table 4. Target audience**

Educational Project	Target Audience
AulaCheck	Teachers of the second cycle of Secondary Education (3rd and 4th year) and 1st year of Baccalaureate.
Desenreda	Students in the second cycle of Secondary Education (3rd and 4th year).
Desfake	Students in the second cycle of Secondary Education (3rd and 4th year), teachers (online), in-person workshops for Baccalaureate and Vocational Education and Training (VET) programs in the Barcelona Metropolitan Area.
EduCAC	Families and schools.
Learn to Check	Teachers and students across Primary and Secondary Education, Baccalaureate and University, along with older adults.
Unidad de Alfabetización Mediática Unizar - APA	Teachers of the 3rd year of Secondary Education.
Surfear la red	Students in Primary and Secondary education, teachers and families.
inFORMADOS	Students in the second cycle of Secondary Education (3rd and 4th year).
Cazabulos	Teachers of the first cycle of Secondary Education (1st and 2nd year).
#NODESinformación	Primary and Secondary Education teachers.
Qyourself	Teachers at multiple stages of the educational system.
Mayores con wifi	Older adults.
Prensa sin edad	Older adults.

El laberinto de la información	Students aged 8 to 12, along with teachers and families.
Mentes AMI	Secondary Education students.
Mente Crítica	Secondary Education students (4th year).
Detectives contra la desinformación	Primary Education students (6th year).
No me los toques	Primary and Secondary Education students and teachers.
Fake News. La fábrica de mentiras	Families and schools.
Cazadores de bulos	University students.
Infórmate frente a la desinformación	Students in the second cycle of Secondary Education (3rd and 4th year).
WISE-ME	Students in Primary and Secondary Education, Baccalaureate and Vocational Education and Training (VET) programs.
DoCheck!	Secondary and Baccalaureate students, families and teachers.
Que no te timen con el móvil	Older adults.
Familias conectadas detectando la desinformación	Families.

**Source: created by the authors**

Another target audience not previously mentioned is families. Given the fundamental role families play in the education of young people, several initiatives are also aimed at them to provide resources to support the development of critical thinking skills in young people.

#### 4.6. Methodology, content and tools

Most of the initiatives analysed employ workshops and training sessions, both in-person and online, as their primary methodological approach. Furthermore, as previously highlighted, some of this content is hosted on digital platforms, providing materials to diverse audiences through various digital resources, such as videos, interactive games, infographics, and other multimedia formats.

The initiative AulaCheck supplies didactic materials designed to support teachers in developing classroom activities. It also offers personalised teacher support via Telegram and provides feedback on content uploaded by educational centres to its platform. Similarly, Desfake provides free classroom resources, with the option to access additional materials through a subscription plan.

Familias Conectadas Detectando la Desinformación is a three-hour, entirely free training programme aimed at families seeking to help their children combat the phenomenon of disinformation. Learn to Check also offers online training workshops and

didactic guides to ensure accessibility across audiences; similarly, EduCAC hosts content and resources on its platform to educate families about audiovisual consumption and the internet.

Surfear la red features a virtual classroom with videos and interactive games suitable for children under 12 and those over 12. Notably, it includes the interactive game Interland, which helps children learn to navigate digital tools safely and securely.

The methodology of in-person workshops emphasises active student participation. These include student-focused projects, such as *inFORMADOS* and *Desenreda*, as well as initiatives geared toward older adults, notably *Prensa sin edad* and *Mayores con wifi*. The latter consists of ten training sessions based on a didactic manual developed by the Colegio Profesional de Periodistas de Andalucía (CPPA), specifically designed to promote media and digital literacy among older people. In general, these initiatives combine practical topics related to current events with playful, dynamic activities to facilitate learning.

Finally, research-based projects aim to create open educational resources with a practical and reflective approach to combating disinformation, enabling students to develop critical thinking skills (*Qyourself*, *DoCheck!* and *WISE-ME*).

#### *4.7. Projects led by journalists*

Journalists play a fundamental role in addressing the phenomenon of disinformation; therefore, it is not surprising that these professionals are actively involved in educational initiatives, delivering training workshops for both young people and older adults. Their participation is directly linked to key topics related to the phenomenon, including disinformation, fake news, information sources, social networks, and hoaxes. Journalists provide a practical and up-to-date perspective on navigating information in an era of emerging technologies.

Projects such as *Desenreda*, *Mente Crítica*, or *Infórmate frente a la Desinformación III* are also examples promoted by journalist associations, which aim to teach students how to distinguish accurate information from disinformation. The projects *Mayores con wifi* and *Prensa sin Edad* are also led by journalists who seek to protect older adults from disinformation by empowering them with tips and strategies to identify hoaxes.

#### *4.8. Complementary Activities*

Innovation is a core principle underlying the initiatives analysed, which is reflected in the inclusion of various materials and activities within a single project. Some initiatives incorporate contests as part of their programme before concluding their activities, such as *Aula Check*, *Mentes AMI*, *Cazabulos*, *EduCAC* or *Cazadores de bulos*.

Another way to foster critical thinking skills in society is through cultural initiatives. *Fake News: La Fábrica de Mentiras* was an exhibition held in Madrid in 2024 that explored disinformation through an immersive experience designed for the whole family.

## 5. Discussion and Conclusions

This research presents a comprehensive analysis of the phenomenon of disinformation in Spain through a detailed examination of 25 initiatives launched by various public and private organisations. This study successfully addresses its initial objectives. Firstly, a wide variety of projects and initiatives aimed at mitigating the effects of disinformation have been identified and classified. These proposals range from educational programmes targeting students at different school levels to workshops for professionals and awareness campaigns, all intended to tackle this phenomenon from multiple perspectives. The selected initiatives provide a broad and representative overview of the collective efforts underway in Spain to diminish the effects of false or manipulated information.

Secondly, the contents, methodologies and target audiences of these initiatives have been analysed, enabling a critical evaluation of their strengths, weaknesses and opportunities for improvement to combat disinformation effectively, especially among the most vulnerable groups. At the same time, common trends, shared weaknesses, and replicable best practices have been identified, contributing to a better understanding of the current state of Media and Information Literacy (MIL) in Spain.

A notable finding is the recent increase in initiatives promoted by both public institutions and private entities. Most aim to reduce the effects of disinformation through educational programmes, leading to the conclusion that education is viewed as a key transformative tool in tackling this issue. This also highlights the urgent need to incorporate MIL transversally and structurally into curricula from the earliest stages of schooling. This finding aligns with European frameworks advocating for MIL integration into educational systems, as well as with the views of Figueira and Santos (2019), who emphasise the importance of equipping young people with tools to detect and critically analyse information.

The training and content implementation designed to detect and combat disinformation, and to develop the skills and competencies necessary for navigating today's media environment, producing content, and critically assessing the information received, should be delivered through innovative and participatory formats. This conclusion is consistent with previous studies, such as those by Tejedor Calvo et al. (2016). These methodologies must also empower teachers, enabling them to address this challenge beyond isolated or secondary subjects, treating it instead as a central pillar of students' education. In this respect, most initiatives align with the humanistic approach to fostering critical thinking proposed by Anderson (2021).

However, despite the growth in initiatives and the considerable efforts by public and private entities, the analysis reveals recurring limitations. These include a lack of continuity, insufficient interinstitutional collaboration, and poor adaptability to more specific social contexts, as previously criticised by authors such as Pérez Tornero et al. (2018).

Although all initiatives are undoubtedly well-intentioned, many suffer from incomplete content and fail to continue beyond their initial funding or implementation phase. These shortcomings inevitably undermine the long-term impact and effectiveness of the human and financial resources invested in their creation.

Moreover, most proposals target young people, leaving a significant gap in training programmes for older adults and those with limited access to technology or educational resources, groups particularly vulnerable to disinformation campaigns. This highlights the need to diversify media literacy programmes to encompass all age groups and social contexts.

The study also reveals a balanced national distribution of initiatives, with some extending to the European level. However, specific communities, such as Andalusia, Aragon, and Catalonia, are investing greater efforts and resources in combating disinformation through educational programmes and training workshops. This differentiated approach reflects a strong regional commitment to media literacy, but also highlights the need to expand such efforts to the underrepresented areas to ensure equitable and effective coverage across Spain.

Ultimately, the study concludes that existing legislation falls short of effectively addressing the challenge of disinformation. Without mandatory, well-structured implementation across Spanish schools and institutions, as well as in resource centres serving older adults and those at risk of digital exclusion, anti-disinformation initiatives will remain well-intentioned but ultimately inadequate. This analysis, therefore, underscores the need for political and social commitment to institutionalise media literacy as a national educational priority. It also highlights the urgency of fostering long-term collaboration between public and private organisations to develop comprehensive programmes that empower citizens with the critical skills to confront the harmful effects of disinformation.

We align with scholars such as Dame Adjin-Tettey (2022), who argue that integrating Media and Information Literacy (MIL) into official educational curricula at all levels is both necessary and urgent. Moreover, this integration should be dynamic, given the ever-evolving nature of the phenomenon.

Another essential advantage of MIL is its potential to reduce reliance on complex and restrictive legislation, a concern raised by Magallón Rosa (2019), which carries the risk of enabling censorship and undermining freedom of expression.

This analysis serves as a starting point for reflection and scientific advancement on one of the most pressing issues of our time: the need to equip citizens with the tools to critically interpret information in an increasingly complex digital environment. In this regard, beyond the qualitative and descriptive analysis conducted, future research should consider mixed or quantitative methodologies to measure the extent to which students' media and information competencies improve after participating in such programmes. It would be equally valuable to explore the perceptions of direct beneficiaries of these initiatives, such as students, teachers, and older adults, to assess their ability to apply what they have learned in their daily lives. Furthermore, this opens new avenues for exploring the role of media and digital platforms in collaborating with these educational initiatives and for examining the development of public policies that ensure their long-term funding and sustainability.

## 6. Acknowledgements

This article has been translated into English by Sophie Phillips, to whom we express our gratitude for her work.

This work has been partially funded by the Department of Employment, Science, and Universities of the Government of Aragon, within the framework of the Research Group on Communication, Journalism, Politics and Citizenship (SO3\_23R). It originates within the Desenreda project, promoted by the Professional Association of Journalists of Aragon/Association of Journalists of Aragon.

## 7. Specific contributions of each author

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Conception and design of the work	Belén Sancho-Ligorred, José Juan Verón Lassa and Brenda Pérez-Zapater
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Data collection and analysis	Belén Sancho-Ligorred
Discussion and conclusions	Brenda Pérez-Zapater
Drafting, formatting, version review and approval	José Juan Verón Lassa

## 8. Conflict of interest

The authors declare that there is no conflict of interest contained in this article.

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