

Media and information literacy in the post-truth era: mapping adult education programmes through an emotion-based approach in Spain's largest cities

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Abstract

Media and Information Literacy (MIL) has emerged as a pivotal approach to addressing the information disorders of the contemporary communication landscape, such as the prevailing crisis of trust in media outlets and the pervasive dissemination of disinformation. Research has consistently demonstrated an inherent role for emotions in them. A variety of training programmes for adults have been developed with the aim of cultivating MIL competencies, thereby providing citizens with the means to defend themselves against such challenges. The objective of this study is to ascertain the extent to which emotional dimensions are taken into consideration within such programmes. In order to achieve this objective, an examination of training initiatives implemented in Spain's three largest cities (Madrid, Barcelona, and Valencia) has been undertaken, with a view to assessing the public MIL education available for adults. The present study investigates whether the emotional component is mentioned, the degree to which it is addressed, whether its instruction is theoretical or also practical, and whether specific methodologies are applied. The methodology employed is founded upon a content analysis of 69 teaching guides from the selected training initiatives, complemented by a series of 17 interviews with instructors responsible for delivering these training initiatives. The findings indicate a pervasive technocentric approach that prioritises digital skills while neglecting to foster profound engagement with the information ecosystem. The absence of concrete and standardised MIL curricula for adult learners is also highlighted, as is the predominantly retired student population and the paucity of specific techniques for addressing emotional components.

Keywords: fake news, disinformation, post-truth, media literacy, information literacy, adult population

1. Introduction

«And our historical context is marked by the contemporary processes of globalization and the rise of the network society, both relying on communication networks that process knowledge and thoughts to make and unmake trust, the decisive source of power» (Castells, 2009)

The field of journalism is currently facing significant challenges related to what Manuel Castells (2009) defines as "the decisive source of power" for citizens: trust. In the media sphere, trust has reached its lowest recorded level (31%) according to data from the past decade in Spain (Sierra et al., 2025). Furthermore, a pervasive perception has emerged (70%) that it is becoming increasingly difficult to discern whether a news item originates from a credible informational source or from an actor deliberately seeking to deceive (Edelman Trust Institute, 2025).

Trust is an integrative factor, dependent both on media activity and on the ways in which media institutions relate to society (Serrano-Puche, Rodríguez-Salcedo, & Martínez-Costa, 2023). Its crisis has been identified as a contributing factor to the proliferation of information disorders, given that informed decision-making requires not only the rejection of false or misleading information but also the acceptance of accurate and

reliable content (Altay, de Angelis, & Hoes, 2023). In essence, this process entails a fundamental belief in the principles and practices of journalism.

Media and Information Literacy (MIL) constitutes part of the solution, but with an important caveat: it cannot be considered a panacea, but rather “one frame in a complex media and information environment” (Bulger & Davison, 2018, p. 2). Moreover, challenging contexts should be regarded as opportunities for the development of new strategies and the establishment of optimal practices (Barranquero-Carretero, 2013; Beckett, 2017).

In particular, MIL emerges as a response to the circumstances described and as an ally of journalism, as it enables “the enhancement of participation levels” and “the strengthening of media capabilities” necessary to foster a genuine “conversation of trust” between media outlets and audiences (Pérez Tornero, Samy Tayie, Tejedor, & Pulido, 2018, p. 228).

However, the complex media and information environment previously referenced is now manifest in the current post-truth era, where the relevance of information is not solely determined by objective facts, but also by appeals to “feelings, passions, emotions, prejudices, and beliefs”, which often exert a stronger impact (García-Roca & de Amo Sánchez-Fortún, 2023, p. 104). Consequently, it is imperative to explicitly consider the emotional dimension when investigating MIL.

Concurrently, a review of the scientific literature confirms the existence of a substantial lacuna in research on disinformation literacy targeting adult populations (Boler et al., 2025). Moreover, “a proportion of extant literature has been observed to attribute emerging technological pathologies, including technostress and behavioural addictions, to the Millennial and Gen Z cohorts. This tendency overlooks the challenges faced by other age demographics and frames technology as essentially a youth-oriented phenomenon” (Barranquero, 2023, p.15).

In Spain, this oversight implies neglecting a substantial segment of the citizenry: according to the most recent data published by the National Institute of Statistics (INE, 2024), there are more than 30 million individuals over the age of 40, representing over 60% of a total population of 48,619,695. It is therefore pertinent to question whether the challenges posed by the media trust crisis and information disorders can be effectively addressed within the field of MIL - proposed here as part of the solution - without explicitly engaging this population segment.

The objective of this article is to examine the implementation of MIL in Spain for adult learners, and to what extent emotional dimensions are considered in the design of content and learning processes. To this end, training initiatives in the three most populous cities - Madrid, Barcelona, and Valencia - were selected as case studies. The following research questions are thus proposed, based on these contexts:

RQ1. What is the nature of public MIL education for adult learners in Spain’s three largest cities?

RQ2. To what extent is the emotional component considered in such training, and if so, in what manner?

The findings permit both a general evaluation of MIL training for adults and a specific evaluation of the inclusion of the emotional dimension: whether it is mentioned, the depth of its coverage, whether its instruction is theoretical or also practical, and whether specific methodologies are applied to foster the development of critical capacities related to emotions within the informational domain.

2. Literature Review

2.1. The Concept of Media and Information Literacy (MIL)

In order to establish the starting point of this study and the perspective from which it is approached, it is necessary to undertake a review of the concept of MIL. Given the extensive range of meanings attributed to the term, it cannot be assumed that authors and readers share a common definition. Consequently, it is imperative for researchers to articulate their understanding of the concept with clarity, thoroughness and precision (Potter, 2022).

The term MIL can be divided into two main components: information literacy and media literacy. With regard to the former, one of the most frequently cited definitions in the scientific literature is that proposed by the American Library Association (1989), which describes it as "the ability to recognise when information is needed and to locate, evaluate, and use it." However, this definition does not encompass the media component, which is essential in contemporary communicative flows.

In the field of media literacy, Patricia Aufderheide is widely recognised as a pioneering scholar who has made significant contributions to its conceptualisation. She stated that "a media-literate person (everyone should have the opportunity to become one) is able to decode, evaluate, analyse, and produce both print and electronic media. The fundamental objective of media literacy is critical autonomy in relation to all media" (Aufderheide, 1992, p. 9).

Current European legislation provides a concise and operational definition: "the ability to access the media, to understand and critically evaluate various aspects of both the media and their content, as well as to establish forms of communication in diverse contexts" (European Commission, 2009, p. 10).

In the academic literature, some authors have explored the relationship between these two notions and consider media literacy to be a component of information literacy (Bawden, 2001). In this study, however, Tyner's (1998) perspective is adopted, distinguishing between literacies focused on tool use (technological, computer, or network literacy) and those related to representation and meaning (information, visual, and media literacy).

The definition of MIL guiding this research conceives the media and information dimensions as complementary and integrated. In this regard, the framework proposed by Wilson et al. (2011, p. 185) is adopted, which understands MIL as "the essential competencies - knowledge, skills and attitude - that allow citizens to engage with media and other information providers effectively and develop critical thinking and life-long learning skills for socializing and becoming active citizens".

This conceptualisation has been further enriched by contributions from various scholars in the field of MIL over the years. For instance, Renee Hobbs (1998) emphasised that media and information literacy is a fluid practice, not a form of protection against negative messages, but a civic empowerment to interact meaningfully with the media.

David Buckingham (2019, p. 39) has emphasised that MIL is an essential life skill, given the pervasive nature of media in all spheres of society. It is therefore vital to understand how media operate and to be able to use them effectively. As he himself states, "If we are media literate, we can exercise a degree of power and control that we would otherwise not have."

This study also emphasises the critical dimension of MIL, which involves developing the skills to analyse media codes and conventions, the capacities to question stereotypes, dominant values, and ideologies, as well as the competencies to interpret the multiple meanings and messages conveyed by media texts (Kellner & Share, 2005).

In a similar vein, the present study adopts a conception of MIL that is not confined to defensive knowledge in relation to the media. Rather, it is understood as “a risk management strategy” aimed at discerning, deconstructing, constructing, and engaging with messages, in order to make informed decisions about whether to accept, reject, or share them (Jolls, 2023, p. 49). It is from this perspective that MIL can contribute to the establishment of a partnership between citizens and journalists in the production, distribution, and reception of information (Muratova et al., 2019).

In summary, the concept of MIL adopted in this study is based on the idea that media represent the world (Masterman, 1989); that decoding this mediation requires the development of a range of complex skills, including critical thinking; that it constitutes an ongoing and collective educational process inherent to civic engagement; and that its ultimate goal is to strengthen the relationship between society and the media ecosystem for the benefit of the common good.

2.2. The emotional aspect in MIL

The rationale for incorporating the emotional dimension in this research is particularly relevant in the current post-media public sphere, “which is characterised by the fragmentation and multiplicity of messages, actors, and audiences; the rise of the Internet and social media; and the diminished capacity of mass media to mediate and influence public discourse” (López-García & Valera, 2025, p. 99).

Contemporary technological and communicative transformations are reshaping social bonds and the public sphere itself, where “emotions circulate under discursive forms and cultural practices are amplified by the dynamics of the contemporary media ecosystem, and where disinformation, in many different forms, can easily breakthrough” (Serrano-Puche, 2021, p.239).

It has been observed that emotion has become a central aspect of the dissemination of digital content, “including false and provocative political memes and stories”. Consequently, it has been argued that “it is critical that news literacy education more strongly emphasize critical thinking about the feelings generated by news, not just about the facts provided within it” (Currie Sivek, 2018, p. 124).

Drawing upon the findings of academic research in this field, a body of literature has emerged positing the notion that “media literacy strategies should encompass not only technical competencies but also the psychological motivations and predispositions of users” (Martínez Verdú, 2024, p.11). This standpoint asserts that media education is deemed deficient if it “neglects to address the emotional aspect of individuals engaging with screens. It is posited that reason, and consequently critical thinking, is profoundly susceptible to the influence of emotions of opposing valence” (Ferrés & Piscitelli, 2012, p. 78).

From this standpoint, MIL is regarded as a pivotal competence for democratic societies and for education, with the capacity to tackle the issue of fake news (Osuna, 2023). In this context, the affective dimension plays a crucial role, as feelings and emotions are “inextricably intertwined with misinformation, thus confirming their important roles in the automated detection of fake news and rumors” (Liu et al., 2024, p. 6).

Indeed, with the advent of digital communication, the concept of "affective publics" has emerged to denote networked formations that mobilise, connect, identify, and potentially dissipate through "expressions of sentiment" (Papacharissi, 2016, p. 311). This perspective emphasises that audience participation is not solely influenced by the dissemination of information, but is also mediated by the circulation of shared affect.

In addressing this perspective, the present study on MIL integrates the Media Literacy Theory of Change with the Message Interpretation Process (MIP) framework. This integration enables consideration of the involvement of "both cognitive and affective components of message interpretation processes and skills that can be taught, engaged, and adapted" (Austin & Domgaard, 2024, p. 167).

Even when considering a classical reference such as Celot and Pérez-Tornero's (2009) levels of media literacy, the affective dimension does not present a conflict; rather, it can be conceived as transversal across all levels, from media recognition and literal comprehension of messages (basic level), through critical reading and content analysis (intermediate level), to active participation and content production (advanced level).

Finally, these perspectives are complemented by the findings of the largest study conducted in Spain on MIL, *Competencia mediática. Investigación sobre el grado de competencia de la ciudadanía en España* (García Matilla et al., 2011). The study involved a sample of 6,626 participants from various geographical locations throughout the country. The study concluded that media education must incorporate the management of emotions in both their cognitive and mobilising dimensions. This is a matter that continues to warrant further review and deeper exploration.

2.3. MIL for Adult Populations

Adult learners also require "the opportunity to gain the skills they now find missing in their educational background" (Thoman & Jolls, 2004, p. 22). Media institutions should address adults as critical and reflective learners, while simultaneously providing the means for them to become such (Dinkelaker, 2024). This suggests that "journalists should practice media literacy in their newspapers and audiovisual outlets, to train their adult readers and viewers" (Frau-Meigs, 2022, p. 919).

When considering generational cohorts, the technological transition from analog to digital is a notable factor, with differences evident beginning with Generation X and earlier age segments (approximately those aged 40 and above). These individuals experienced late exposure to the Internet and digital technologies compared to the Millennial generation and subsequent cohorts. This phenomenon is reflected in their patterns of engagement and consumption within the information ecosystem, underscoring the need to develop MIL that addresses the specific needs of the adult population in general.

Furthermore, older adults have been identified as a "potentially vulnerable group" for whom research and the "design of interventions and strategies remain highly limited" (Sádaba, Salaverría, & Bringué-Sala, 2023, p. 3). In contrast to theories developed for children's media education, theories of media literacy for adult learners offer little guidance on "levels, standards, or progression", making "the evaluation of policy initiatives over time particularly challenging" (Livingstone, van Couvering, & Thumim, 2005, p. 56).

The scientific literature provides evidence that MIL exerts a positive impact on adult populations in terms of combating disinformation. For instance, it has been demonstrated that MIL enhances the capacity to discern between accurate and inaccurate news reports (Sádaba, Salaverría, & Bringué-Sala, 2023; Moore &

Hancock, 2022). Furthermore, MIL has been shown to reinforce individuals' practical judgment when selecting media sources to verify received information (Morata-Santos, Egaña, Zuberogoitia, & Vilasís-Pamos, 2025).

In addition, the incorporation of an affective perspective into media literacy training, as proposed in this study, may assist in addressing a recent trend observed among adult audiences, particularly those over 60 years of age, though also evident in the 45–59 age group. Despite possessing full discernment regarding false news, these individuals exhibit a heightened propensity to endorse hyperpartisan and biased content (Lyons, Montgomery, & Reifler, 2024).

It is evident from the observations presented here that further investigation is required into MIL with a focus on adult learners. Such investigation would entail the creation of interventions that are more specific and effective in addressing generational gaps. In addition, it would be necessary to integrate the affective component. This dimension is complementary to cognitive skills and can assist in the management of biases that influence the interpretation and acceptance of informational messages.

3. Methodology

The present study focuses on the analysis of Media and Information Literacy (MIL) educational programmes aimed at adult learners. The sample selected for this research comprises all the courses offered in Spain's three most populous cities: Madrid, Valencia, and Barcelona. This sample consists of all the publicly accessible educational offerings, understood as those guaranteeing universal access to citizens, corresponding to the 2024–2025 and 2025–2026 academic years. The objective of the present study is twofold: firstly, to assess continuity over time, and secondly, to identify recently launched initiatives.

In order to systematize the analysis and facilitate comparisons among the three cities, programmes affiliated with four types of institutions were included:

- University system, including university programmes for older adults.
- Popular universities, understood as publicly covered non-formal education spaces.
- City councils, which provide training to citizens through municipal services.
- Regional governments, responsible for adult education programmes at the regional level.

The initial selection was carried out through a systematic search of the official portals of these institutions, considering the programmes' apparent relevance to new technologies and communication. This procedure enabled the identification of a total of 94 initiatives, with the majority being offered by regional governments (50%), followed by the university system (26.6%), city councils (21.28%), and, finally, popular universities (2.13%) [Table 1].

Table 1: Composition of the study sample

	City councils		Regional governments		University system		Popular universities		Total	
	n	%	n	%	n	%	n	%	n	%
BARCELONA	12	20	39	65	9	15			60	100
MADRID	7	33.33	7	33.33	7	33.33			21	100
Valencia	1	7.69	1	7.69	9	69.23	2	15.38	13	100
Total	20	21.28	47	50	25	26.6	2	2.13	94	100

Source: Own elaboration

The final sample comprises those training programmes for which descriptive information was available, such as a teaching guide or content index, or that could be obtained through consultation with the corresponding institutions or instructors. The analysis encompassed a total of 69 initiatives.

The methodology employed to examine the available course information, such as teaching guides, was content analysis. To this end, eight ad hoc variables were established to enable a systematic analysis of the educational offerings. These variables, along with their corresponding categories - defined post hoc to systematize the results - are presented below:

- Type of training: course, seminar, subject, workshop, masterclass, or other.
- Modality: face-to-face or virtual.
- Duration: 15 hours or less, between 15 and 40 hours, 45 hours or more.
- Age requirement for learners: 16 or older, 18 or older, 50 or older, 55 or older, 60 or older, 65 or older, open to all ages.
- Continuity between courses: yes or no.
- Explicit mention of MIL in the teaching guide or content index: yes or no.
- Relation to MIL: no relation (1), focus on technological and digital competencies (2), focus on theories and structures of communication (3), addresses disinformation (4), fully addresses MIL (5).
- Instructor profile related to journalism: yes or no.

A comprehensive evaluation of the collected material was conducted for the purpose of delimiting these variables, with the objective of identifying the characteristics that could be extracted from each training proposal. This process enabled the development of a common technical data sheet model for the entire sample, which can be used as a replicable analytical instrument. The categories employed are accessible, comparable and relevant for addressing the research questions.

Once the courses that rigorously met the characteristics of the MIL definition developed in the theoretical framework of this study were identified, going beyond a purely instrumental approach, incorporating the emotional component, and positioning MIL as part of the solution to information disorders and the media trust crisis, those offerings corresponding to categories 4 and 5 were isolated. This facilitated a more comprehensive overview of the programmes specifically addressing disinformation and MIL.

In light of the fact that certain online information regarding specific programmes had been found to be outdated or imprecise, official consultations with the relevant institutions were undertaken wherever possible in order to verify data pertaining to content, duration, or access requirements. In addition, semi-structured interviews were conducted with instructors responsible for the analysed programmes, who participated in the study.

Attempts were made to contact all instructors for whom consultation information was available. Out of 34 potential instructors, 17 interviews were ultimately conducted. A standard questionnaire [appendix II] was used as the basis for the interviews, with slight variations depending on the type of educational institution in which the instructors work (university programmes for older adults, regional adult education centers, and popular universities).

The interviews, conducted between February and November 2025, focused on the following topics in order to complement the content analysis of the corresponding teaching guides or content indices:

- Confirmation of whether the majority of learners are part of the active or inactive population.
- Bibliographic sources used to design the instructional content.
- Main questions raised by learners regarding their relationship with the media or information management.
- Primary methodologies employed to address learners' interaction with the media.
- Differences in learning experiences across age groups.
- Whether the following key concepts—selected for their recurrence in the academic literature forming the theoretical framework—are explicitly addressed during training:
 - Media literacy
 - Disinformation
 - Fake news
 - Information disorder
 - Manipulation
 - Biased information
 - Partial information
 - Partisan information
 - Verification
 - Hoaxes
 - Post-truth
 - Polarisation
 - Algorithm
- Main competencies acquired by learners.
- Treatment of emotions: whether they are addressed and, if so, in what manner.

4. Results

4.1. Public MIL Education in Spain's Major Cities

Of the 69 training initiatives analysed through their teaching guides and/or content indices, the majority (47) exhibit an approach focused on the development of digital and technological competencies, representing 68.1%. These digital and technological competency programmes are typically characterised by a duration of 15 to 40 hours, although some are annual in nature, coinciding with the academic year.

Furthermore, a notable concentration of initiatives is observed in the city of Barcelona, where 53 programmes were identified, accounting for 76.8% of the total. Of these, 73.6% are offered by the Generalitat de Catalunya through the Més Digitals programme, the Punts Òmnia, and COMPETIC instruction at Adult Education Centres.

In Madrid, where five of the analysed initiatives are located (representing 7.2% of the total sample), two offering institutions were identified: the regional government and universities, with one and four programmes, respectively. In Valencia, where a total of 11 initiatives were identified, it is notable that universities account for 81.8% of the programmes (9 in total). It is also noteworthy that Valencia is the only city with an active, federated Universidad Popular.

With respect to the regional scope, it is noteworthy that the DIGCOMP and Capacitación Digital programmes in Valencia and Madrid, respectively - both offered at Adult Education Centres - were discontinued in the 2025/2026 academic year due to their reliance on European funding.

No involvement of public media outlets was observed in any of the analysed initiatives. Furthermore, none of the examined programmes included systematic mechanisms to monitor or evaluate the impact these training activities may have on citizens. Only 7.2% of the 69 initiatives were delivered online.

Finally, interviews with instructors of programmes focused on digital and technological competencies, as well as those oriented toward communication theories and structures, confirmed that some key concepts associated with MIL or disinformation (e.g., fake news or hoaxes) do emerge during classroom activities. In addition, whenever possible, a critical attitude toward information is encouraged, and exercises such as comparing headlines are incorporated into the learning experience.

4.2. Public MIL Education in Spain's Major Cities

Of the 69 programmes for which precise information regarding course characteristics was available, only 14 explicitly address disinformation or MIL. In summary, the findings align with categories 4 and 5, as delineated in the established methodology for the content analysis of teaching guides. Consequently, these 14 programmes align most closely with the definition of MIL adopted in this study.

The 14 programmes are distributed across the three cities analysed as follows: The data indicates that the percentage of respondents in Barcelona is 50%, in Valencia 28.57%, and in Madrid 21.43%. The responsible institutions and the identified programmes are presented in Table 2.

Table 2: Specific MIL Programmes Identified in the Study

1	Barcelona	Universitat Autònoma de Barcelona (UAB)	Subject "COMUNICACIÓ, EDUCACIÓ I ALFABETITZACIÓ MEDIÀTICA"
2	Barcelona	Universitat Politècnica de Catalunya (UPC)	Subject "SOCIETATS-MÓN DEL SEGLE XXI"
3	Barcelona	Biblioteques Municipales	Masterclass "LAS CONSECUENCIAS POLÍTICAS DE LA DESINFORMACIÓN"
4	Barcelona	Biblioteques Municipales	Course "DETECCIÓ FAKE NEWS I DESINFORMACIÓ"
5	Barcelona	Cibernàrium	Course "FAKE NEWS Y OTRAS DESINFORMACIONES: NO TE DEJES ENGAÑAR"
6	Barcelona	Cibernàrium	Course "APRENDE A DETECTAR LOS PELIGROS DE INTERNET"
7	Barcelona	Cibernàrium	Course "BUSCA Y FILTRA LA INFORMACIÓN EN LA RED"
8	Valencia	Universitat Politècnica de Valencia (UPV) Sénior	Course "CLAVES DE LA COMUNICACIÓN MEDIÁTICA"
9	Valencia	La Nau Gran de la Universitat de València (UV)	Subject "LINGÜÍSTICA I COMUNICACIÓ"
10	Valencia	La Nau Gran de la UV	Subject "LLEGIR LA PREMSA"
11	Valencia	La Nau Gran de la UV	Course "DESINFORMACIÓN Y ESTRATEGIAS PARA COMBATIRLA"
12	Madrid	Universidad Complutense de Madrid (UCM)	Course "¿QUIÉN MANDA AHÍ? EL PAPEL DE LA COMUNICACIÓN EN LA ESPAÑA DESINFORMADA"
13	Madrid	Madrid Aula Digital	Course "¡CUIDADO CON LOS BULOS!"
14	Madrid	Madrid Aula Digital	Course "APRENDE A DETECTAR BULOS"

Source: Own elaboration

The university system, the Madrid Regional Government, and the Barcelona City Council are the primary providers of training in disinformation and MIL. A total of fourteen programmes were identified; however, merely two of these are offered in an online capacity. The aforementioned courses are Aprende a detectar bulos from Madrid Aula Digital and Fake News y otras desinformaciones: no te dejes engañar from Cibernàrium. The remaining initiatives comprise four subjects, eight courses, and one in-person masterclass. The distribution of programme types by institution and city is presented in Table 3.

Table 3: Institutions providing specific MIL programmes identified in the study and their type

			Subject		Course		Online course		Masterclass		Total	
			n	%	n	%	n	%	n	%	n	%
BARCELONA	City council	Municipal libraries			1	50			1	50	2	100
		Cibernàrium			3	100					3	100
	University	Universitat Autònoma de Barcelona (UAB)	1	100							1	100
		Universitat Politècnica de Catalunya (UPC)	1	100							1	100
Total Barcelona			2	28.57	4	57.14			1	14.29	7	100
MADRID	Regional government	Madrid Aula Digital			1	50	1	50			2	100
	University	Universidad Complutense de Madrid			1	100					1	100
Total Madrid					2	66.67	1	33.33			3	100
Valencia	University	La Nau Gran UV	2	66,67	1	33.33					3	100
		UPV Sénior			1	100					1	100
Total Valencia			2	50	2	50					4	100
Total			4	28.57	8	57.14	1	7.14	1	7.14	14	100

Source: Own elaboration

With regard to the university system, the three cities share common characteristics in the identified programmes. The duration of these programmes generally ranges between 15 and 40 hours, with the exception of the subjects *Societats-món del segle XXI* at UPC and *Comunicació, educació i alfabetització mediàtica* at UAB, which exceed 45 hours. Additionally, no tiered learning pathways are offered; that is, although some programmes continue across academic years, the content tends to be repeated annually. Finally, it is noteworthy that the teaching staff in these cases have a journalistic profile or are directly related to the field.

Conversely, programmes administered by regional and municipal governments, located in Madrid and Barcelona, also manifest common traits. In both cases, the options are available in both face-to-face and online modalities, with a duration of less than 15 hours, and without any differentiation of levels. Furthermore, the teaching staff are not connected to the journalistic field.

When considered in terms of duration, it is evident that 50% of the 14 programmes have a duration of less than 15 hours, 35.71% range between 15 and 40 hours, and only 7.14% exceed 45 hours (see Table 4).

Table 4: Duration of the specific MIL programmes identified in the study, by city and providing institution

		15h or less		45h or more		Between 15h & 40h		Total	
		n	%	n	%	n	%	n	%
BARCELONA	City council	5	100					5	100
	University			2	100			2	100
Total Barcelona		5	71.43	2	28.57			7	100
MADRID	Regional government	2	100					2	100
	University					1	100	1	100
Total Madrid		2	66.67			1	33.33	3	100
Valencia	University					4	100	4	100
Total Valencia						4	100	4	100
Total		7	50	2	14.29	5	35.71	14	100

Source: Own elaboration

Evidence from interviews with instructors and university teaching guides indicates that university-based programmes generally incorporate content on the structure of communication, communication theories, and disinformation.

Furthermore, when taking the age factor into consideration, discrepancies become apparent between the programmes offered by the university system and those provided by public administrations. In the case of universities, the minimum age required for participation is generally over 50 or 55 years, whereas initiatives from regional and municipal governments target individuals aged 16 and above or have no age restrictions.

The 14 programmes constituting the sample are evenly divided as follows: It is evident that 50% of the programmes are specifically designed for older adult learners, while the remaining 50% are intended for the adult population in general. A comprehensive distribution is delineated in Table 5.

Table 5: Minimum age required for participation in the specific MIL programmes, by city and providing institution

		16 years or more		50 years or more		55 years or more		All ages		Total	
		n	%	n	%	n	%	n	%	n	%
BARCELONA	City council	5	100							5	100
	University			1	50	1	50			2	100
Total Barcelona		5	71.43	1	14.29	1	14.29			7	100
MADRID	Regional government	1						1	50	2	100
	University			1	100					1	100
Total Madrid		1	33.33	1	33.33			1	33.33	3	100
Valencia	University			4	100					4	100
Total Valencia				4	100					4	100
Total		6	42.86	6	42.86	1	7.14	1	7.14	14	100

Source: Own elaboration

As indicated by interviews with university instructors, it is evident that students aged 50 and above correspond, in all cases, to individuals who are no longer active in the labour market. That is to say, they are retired. A noteworthy example is the subject *Comunicació, educació i alfabetització mediàtica* (UAB), which is included in the Universitat de l'Abast's offering from the Faculty of Communication Sciences and reserves a limited number of places for older adults wishing to enrol. However, the instructor confirmed in the interview that, in her ten years of teaching the course, this has never occurred.

Moreover, the concept of MIL is explicitly mentioned only in the teaching guide of the subject *Comunicació, educació i alfabetització mediàtica* (UAB) and the course *¿Quién manda ahí? El papel de la comunicación en la España desinformada* (UCM). Although the dissemination of false information constitutes a theme closely related to MIL, the remaining 12 identified programmes do not make direct reference to this term in their official documentation.

Interviews also reveal that the most frequently employed methodology for addressing disinformation is the comparison of news items. Moreover, no shared bibliography was identified for the preparation of the 14 programmes comprising the sample. University instructors, with whom this information was corroborated through interviews, indicate that their teaching practice is based on their own academic expertise, as well as on scientific articles and books of various kinds.

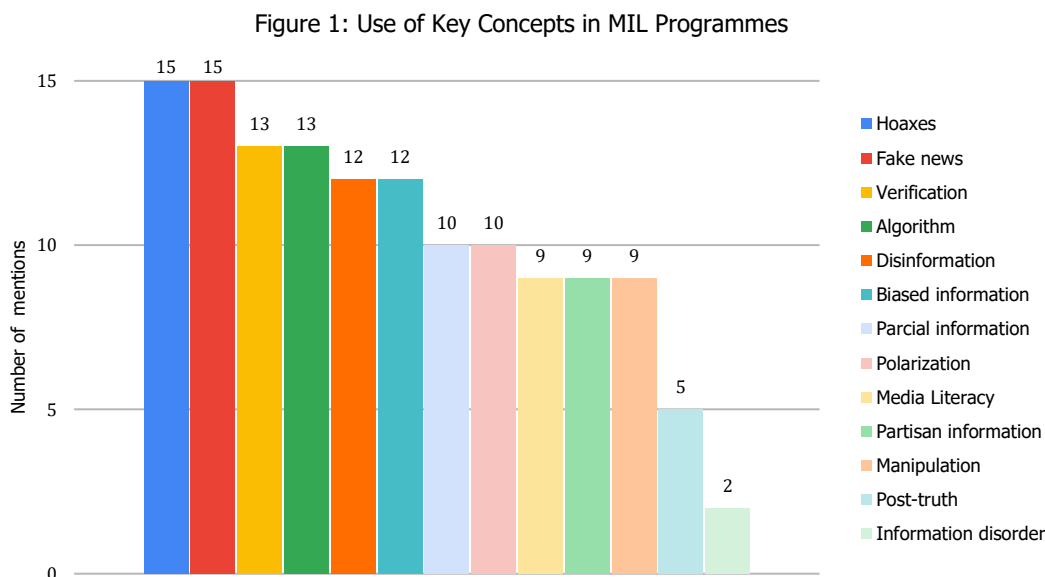
Among the works referenced are *Por qué creemos en mierdas* by Ramón Nogueras; *Sesgos cognitivos* by Javier F. Jiménez; *Nuestra mente nos engaña* by Helena Matute; *Pensar rápido, pensar despacio* by Daniel Kahneman; *La Era de la Información: economía, sociedad y cultura* by Manuel Castells; *Educación en medios. Alfabetización, aprendizaje y cultura contemporánea* by David Buckingham; and *Alfabetización mediática y nuevo humanismo* by José Manuel Pérez Tornero and Tapio Varis, among others.

Finally, several university instructors highlighted during the interviews that adult learners tend to be aware of the media they consume and of the ideological orientation of those outlets. They also observed a marked interest among senior learners in issues related to disinformation and MIL, along with a strong predisposition to participate in educational activities addressing these topics.

4.3. Key Concepts Identified in Interviews with Instructors

A total of 17 semi-structured interviews were conducted with instructors from the full sample, including 7 of the specific MIL programmes, as well as instructors from courses focused on digital and technological competencies and those oriented around communication theories and structures - the remaining 10 interviews -. One of the dimensions explored in these interviews was a set of 13 key concepts related to MIL and disinformation (see Figure 1).

Across the 17 interviews, the term MIL was explicitly mentioned in the classroom in nine of the programmes analysed. Among the remaining concepts, the most frequently cited were "fake news" and "hoaxes," referenced in 15 out of 17 interviews. These were followed by the concepts of "verification" and "algorithm," which were mentioned in 13 of the 17 interviews. In the subsequent tier, "disinformation" and "biased information" were identified (12 of 17), followed by "partial information" and "polarisation" (10 of 17). Finally, the terms "manipulation" and "partisan information" appeared in nine of the 17 interviews.



Source: Own elaboration

4.4. The Emotional Component in Public MIL Programmes

A general content analysis of teaching guides and course outlines revealed no explicit reference to the emotional component. It is important to note, however, that only two exceptional cases merit mention in this regard:

- In the online course *Aprende a detectar bulos*, offered by Madrid Aula Digital and fully accessible, students are asked the question, "Does anything you usually see make you feel frustrated?" in the module that teaches how to distinguish false information from reliable news.

- In the course entitled *Llegir la premsa* (Reading the Press) at La Nau Gran of the Universitat de Valencia, a session on the subject of information manipulation is offered, with the full curriculum for this study provided by the instructor. Concepts such as "emotional compulsion" and "emotional techniques" are mentioned.

In relation to the emotional dimension in teaching practice, the interviews incorporated an explicit inquiry into this facet to ascertain its incorporation in the classroom environment, the students' experiences in relation to it, and the presence of a dedicated methodology. Of the 17 interviews conducted, 10 correspond to non-specific MIL programmes. The instructors of these courses have indicated that emotions are addressed in relation to the learning process or the use of technology, such as feelings of insecurity or frustration.

With regard to the seven interviews conducted with instructors of the specific MIL programmes – all of which were conducted in a university context – in three cases, the emotional component is not addressed directly. In the remaining four, although instructors acknowledged its inclusion, they clarified that the approach is strictly theoretical: critical reflection is encouraged, but no concrete methodology is implemented to engage students with this component in a practical way.

The information obtained through the content analysis and the interviews also facilitated the identification of specific practices concerning the emotional component, which were categorised into four distinct categories: not addressed (1), addressed with a theoretical approach (2), emotions related solely to the utilisation of technology or the Internet are shared (3), and emotions related exclusively to the learning experience are shared (4).

5. Discussion and conclusions

A comprehensive analysis of public programmes for adult learners in Madrid, Barcelona and Valencia was conducted, with these cities being selected on the basis of their apparent relation to new technologies and communication - and, by extension, to fundamental dimensions of MIL -, revealed that the majority of offerings are oriented towards the acquisition of knowledge in the technological and digital domain. In accordance with the levels of media literacy proposed by Celot and Pérez-Tornero (2009), as referenced previously, these initiatives would be positioned at the initial level of skills pertaining to contextual or environmental factors. However, they do not facilitate progression up the competency hierarchy necessary to attain full MIL.

The analysis of the complete sample indicates that interviews with instructors corroborate the implicit and transversal presence of media and information literacy within training programmes, even when these focus solely on digital and technological competencies or on communication theories and structures. It has been demonstrated that when learners are exposed to both domains, they subsequently raise questions in the classroom regarding key MIL concepts. These questions are addressed by instructors to the best of their ability.

In addition, the analysis of all programmes indicates a lack of involvement from media organisations. If MIL aims to foster citizenship as a partner of journalism (Muratova et al., 2019), this disconnection from the media limits that potential. Similarly, the inability of journalism professionals to practise MIL within their own

outlets (Frau-Meigs, 2022) to help audiences become critical and reflective (Dinkelaker, 2024) also limits this potential. Consequently, although learners may enhance specific aspects of their engagement with the information ecosystem, there is an absence of a structural framework to facilitate alignment between media actors and society.

With regard to the modality of the programme, face-to-face instruction is predominant in the provision for adult learners, which carries both intrinsic advantages and drawbacks. On one hand, it fosters social cohesion among learners and allows for more personalised support in the classroom. On the other hand, it imposes accessibility limitations, as online formats typically facilitate reconciliation with work schedules or other obligations. This factor can have a particularly significant impact on the participation of adult learners who have not yet reached retirement age.

With regard to the initiatives that have been specifically identified as focusing on MIL, two common characteristics can be distinguished. Firstly, the programmes under scrutiny do not feature differentiated levels of instruction. Secondly, the duration of these programmes rarely exceeds 45 hours, with two exceptions; one of which has never enrolled senior learners. It is evident that both factors are interrelated and entail significant limitations. The absence of levels has been demonstrated to impede the progressive acquisition of knowledge or competencies in the field. While the majority of the 14 programmes exhibited continuity or were available during the 2024/2025 and 2025/2026 academic years, the content tended to be repetitive, thereby limiting opportunities for deeper engagement, which, as previously mentioned, was constrained due to the limited duration of the programmes.

These constraints underscore the complexity of integrating media and information literacy into a lifelong and fluid learning process (Wilson et al., 2011; Hobbs, 1998), one that fosters effective, strategic engagement with media, underpinned by critical thinking (Buckingham, 2019; Jolls, 2023; Kellner & Share, 2005).

Furthermore, a particularly salient limitation is identified in relation to the age of access and the orientation of the programmes. Initiatives that address MIL in an explicit and comprehensive manner, such as the subject *Comunicació, educació i alfabetització mediàtica* at UAB and the course *¿Quién manda ahí? El papel de la comunicación en la España desinformada* at UCM - are offered exclusively by universities, with a minimum age requirement of over 50 years in both cases. Consequently, specific MIL training is not accessible to the adult population at large, being restricted instead to senior learners. This standpoint is in contrast to the position espoused by Patricia Aufderheide (1992), who argued for the universal right to attain media and information literacy. Furthermore, this perspective challenges the notion of cultivating skills that are either absent or supplementary to formal academic education (Thoman & Jolls, 2004), a position this study endorses.

A thorough analysis of the teaching guides and content indexes, in conjunction with a comprehensive review of the bibliographies identified in the various programmes, has confirmed the absence of specific and shared MIL pathways aimed at adult learners. Moreover, the findings from both the interviews conducted with teaching staff and the consultations with the offering institutions indicate the absence of systematic mechanisms to evaluate the impact of the content on participants. Additionally, there is no follow-up of learners' progress once the training has concluded, which limits the ability to assess the actual effectiveness of these initiatives.

Despite mounting scientific evidence underscoring the pivotal role of emotions in information management, both in consumption and dissemination, and particularly in the context of information disorders, the study of programmes in Madrid, Barcelona, and Valencia substantiates that, to date, extant training does not incorporate specific methodologies that enable citizens to acquire skills to identify biases or cultivate healthy scepticism. The approach is fundamentally theoretical and of limited depth, constrained by the absence of differentiated levels and the previously noted short duration. In these cases, MIL training for adult learners remains outside the theoretical framework proposed by the integration of the Media Literacy Theory of Change and the Message Interpretation Process (MIP), as adopted in this study. This approach emphasises the necessity to cultivate competencies for the regulation of emotional responses to media, and asserts that the effective utilisation of media necessitates the integration of both cognitive and affective competencies.

In response to the first research question, it can be concluded that public MIL training aimed at adult learners in Spain's three largest cities exhibits a predominantly technocentric focus and is not organised around specific programmes or shared policies in this area. Furthermore, the characteristics of the offering institutions and the types of training available restrict access primarily to inactive individuals - particularly retirees -, thereby highlighting the current inability to reach the broader adult population under study.

With regard to the second research question, it is evident that the emotional component is not structurally integrated into either the design or delivery of content, beyond occasional theoretical references. In any case, there is a paucity of in-depth development and practical approaches that would allow this component to be systematically addressed in the current post-truth context.

In consideration of the findings and conclusions derived from the present study, a series of overarching recommendations can be proposed with the aim of enhancing the public provision of media and information literacy (MIL) training. Firstly, the development of a dedicated strategy - equipped with shared objectives and indicators - and aligned with international frameworks such as those proposed by UNESCO could foster more coherent competency progression and help overcome the prevailing technocentric approach. Such a strategy would also facilitate the incorporation of the emotional dimension into MIL teaching and learning processes.

Secondly, the structuring of training pathways into differentiated levels is recommended, with the objective of avoiding content repetition and promoting MIL as a lifelong learning competence. Furthermore, the extension of the duration of programmes would facilitate greater depth of content coverage and support the development of more complex skills, including those related to the emotional dimension.

Furthermore, it is imperative to enhance collaboration among key stakeholders, namely public administrations, academic institutions, and media organisations. The coordination of such initiatives would provide MIL with a more robust structural, theoretical, and practical foundation, thereby enhancing both their implementation and their potential impact.

Finally, the incorporation of systematic evaluation mechanisms should be considered a priority. These should aim to assess both the competencies acquired by participants and potential changes in their information-related practices. The implementation of such measures would contribute to a more efficient allocation of resources and support the continuous improvement of public policies and programmes in the field of MIL.

The present study acknowledges several limitations that should be considered when interpreting the results. Initially, there were occasional difficulties in obtaining responses from university faculty members, whether due to delayed replies or complete lack of response, which restricted the availability of direct information from this group.

The identification and direct contact with teaching staff from specific programmes, including Capacitación Digital and Madrid Aula Digital (Madrid) or COMPETIC, Més Digitals, and Cibernàrium (Barcelona), presented certain challenges. This resulted in a reduction in the number of potential interviews and, consequently, the diversity of faculty perspectives integrated into the study.

Furthermore, access to detailed information on regional initiatives outsourced to private companies, such as ODILO in the case of Madrid and Mainjobs in Barcelona, was limited. This limitation imposed constraints on the analysis, thereby impeding a comprehensive evaluation of the programmes contingent on these entities.

Conversely, a marked heterogeneity was observed in the educational offerings of regional and municipal centres for older adults, both in relation to formats and the institutions providing them, as well as in their uneven capacity to develop their own programming. This variability hinders systematic comparison between initiatives aimed at their users.

In the context of future research, it is imperative to persist in the analysis of novel publicly funded MIL initiatives that are scheduled to be implemented in the forthcoming years. This will facilitate the observation of their evolution, scope, and the potential for transformation. Furthermore, it would be advantageous to extend the mapping of educational offerings to encompass private or community-based programmes, thereby facilitating a more comprehensive understanding of the training ecosystem in this field.

Furthermore, the methodology developed in this study provides a replicable model that could be applied in other regions of Spain. The implementation of such a system would facilitate the comparison of contexts, the identification of best practices, and the recognition of benchmark models that contribute to the design of more effective public policies and educational strategies in the field of media and information literacy.

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Conflict of interest

The author declare no conflict of interest.

Ethical statement

This study was conducted in accordance with the principles of scientific research and did not require additional ethics committee approval.

Declaration of AI usage

No generative AI tools were used in the preparation of this manuscript.

Data availability

The data and/or supplementary material supporting the findings of this study are publicly available at <https://zenodo.org/records/20126587>

Author contributions

The author is solely responsible for the conception, research, writing, and revision of this manuscript.

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