

Project “Strengthening Freedom of Expression and Freedom of Media in Serbia”

SERBIA 2025 MEDIA LITERACY INDEX

- Pilot Version –

Belgrade, 2025

Authors:

Dr Marijana Matović, Faculty of Political Sciences, University of Belgrade

Dr Ana Milojević, Faculty of Political Sciences, University of Belgrade

Dr Snežana Milin Perković, media literacy expert

Dr Aleksandar Tomašević, Institute of Physics, University of Belgrade



This project is funded by
the European Union



Disclaimer: This report was published with financial support from the European Union. The views expressed in this report belong exclusively to the authors and their collaborators and do not necessarily represent the official position of the OSCE Mission in Serbia and do not necessarily reflect the views of the European Union.

Table of Contents

Introduction.....	1
Index Construction Process.....	2
Basic Premises	3
Definition of Media Literacy	3
Media Literacy in Context	5
Serbia’s Media Literacy Index.....	7
Basic Framework and Operational Definition of Media Literacy	7
I MEDIA LITERACY INDEX (MLI), based on individual competences	8
Instrument Design and Measurement Framework	8
Sample and Data Collection.....	9
Media Literacy Index – MLI.....	10
II INTEGRATED MEDIA LITERACY INDEX (IMLI)	14
ENVIRONMENTAL FACTORS – ANALYSIS OF EXTERNAL FACTORS	14
III IMLI VALIDATION AND FINAL CONSTRUCTION	22
Delphi Process and Consensus Building.....	22
Key Findings	24
Concluding Considerations and Recommendations	25
References.....	29

Introduction

The Serbia 2025 Media Literacy Index report responds to several requirements. One requirement was to provide an assessment of the current situation and lay the groundwork for an annual evaluation of the cumulative impact of activities in the field of media and digital literacy in relation to the Index. The second important requirement was to develop a research instrument to measure the level of media literacy of the general population. The fulfilment of these requirements also constitutes the first step in implementing Activity 5.1.1 of the national Media Strategy 2020–2025 Action Plan, which calls for “the establishment of a media literacy index in the Republic of Serbia in line with European methodology.” The third requirement was to develop an Index that is sensitive to changes in the environment (media, social, technological, etc.), as well as to the availability of the relevant data.

Whilst developing the Index, we examined several key questions that shape the scope and implications of the media literacy concept in today’s context:

- Which factors affect media and media content today - their quality, production, distribution, audiences and perceptions of them?
- Is media literacy a progressive competence that develops linearly, or are there contextual factors that may lead to its regression?
- Are there media-literate individuals - those who have access to media, are able to analyse and evaluate media messages and actively participate in the digital environment, albeit in undemocratic ways and/or in undemocratic societies?
- To what extent can media literacy exist - or be meaningfully developed - in environments with limited media freedom and pluralism?
- Does media literacy include a normative dimension - values and views aligned with democratic principles (e.g., trust in institutions, protection of fundamental rights, freedom of speech)?

The answers to these questions shaped the dual structure of the Integrated Media Literacy Index (IMLI): a survey-based measurement of individual competences (access, critical evaluation, participation), combined with external contextual indicators (infrastructure, education system, media freedom, democratic context, trust and cybersecurity and AI

readiness). This approach enabled not only an assessment of the current situation, but also the identification of systemic barriers and policy priorities.

This report presents the Media Literacy Index (hereinafter: MLI), which is based on a survey conducted on a representative sample of the population of the Republic of Serbia and is designed to measure the current level of media literacy among Serbia's citizens.

The report also proposes a model for the Integrated Media Literacy Index (hereinafter: IMLI), a comprehensive methodological framework for measuring the level of development of media literacy in Serbia. Unlike models that focus exclusively on either individual competences or contextual factors, the IMLI captures both levels simultaneously and their interaction - namely, the individuals' ability to access, critically evaluate and actively participate in the media environment, as well as the structural conditions that enable or constrain the development of these competences.

The IMLI presented in this report is the result of a multidisciplinary research process integrating theoretical analysis, empirical research and expert validation¹. As a pilot study, it provides broader findings on media literacy in Serbia in 2025 and offers a methodological foundation for future longitudinal analyses and international comparisons.

Index Construction Process

Construction of an index is a complex, multi-phase process. As Wadhwa and Nandal (2025) note, indices aggregate various indicators relevant to a given phenomenon into a single composite measure, offering a more comprehensive overview that facilitates comparison, trend analysis and policy formulation.

The process of index construction begins with the operationalisation of the concept to be measured. This is a critical phase that requires balancing the theoretical definition of the concept (in this case, media literacy) with the availability of reliable data necessary to translate the concept into measurable and mutually compatible constructs. As Wadhwa and Nandal further observe:

¹ The Research Team thanks the experts who had taken part in the Delphi Process for their contribution to IMLI's development.

“These abstract concepts require careful operationalization, which involves defining the concept in measurable terms, selecting appropriate indicators, and determining the methodology for combining these indicators into a cohesive index. The selection of indicators is a critical step that often involves balancing theoretical relevance with data availability and reliability.” (Wadhwa & Nandal, 2025, p. 3927)

Departing from this definition of an index, we set the following **project goal**: to *construct a media literacy index that incorporates environmental factors*. In the preliminary stage, we conducted a review of the literature and relevant research to identify the key elements of media literacy and its relationship with the environment. Based on this review, we established a working framework of the integrated index and examined selected external data sources. We structured the implementation of the goal into three phases:

The first phase involved the design and implementation of the survey: developing the questionnaire (ensuring its complementarity with the existing external data sources), conducting the survey (data collection), analysing the survey data and constructing the Media Literacy Index (MLI) at the level of individual competences.

The second phase focused on preparing external data for integration with the MLI results, as well as integrating these data into the preliminary Integrated Media Literacy Index (IMLI).

The third phase consisted of validating the IMLI using the Delphi method² (consultations with media literacy experts), resulting in the construction of the final IMLI for Serbia in 2025.

Basic Premises

Definition of Media Literacy

Media literacy is a concept with a long theoretical tradition but heterogenous operationalisations. Most definitions, from early formulations (Aufderheide, 1993) to

² The Delphi method, developed by the RAND Corporation in the mid-1950s, is a research technique used in social sciences to achieve consensus among experts. It is primarily applied in situations of uncertainty, where insufficient data exist to support informed decision-making. The method is consensus-based, structured and iterative, with the results of each round informing subsequent rounds until consensus is reached (more on the Delphi method in Rowe & Wright, 1999).

contemporary frameworks such as UNESCO (2022) and NAMLE (2024), have retained three core elements: (1) access to media and information, (2) critical evaluation of content, and (3) participation via media (creation, communication, civic action).

This consensus is confirmed by meta-analytical studies. In a review of definitions, Bulger (2012) identified access/use, analysis/evaluation and content creation as the dominant components. Based on an analysis of 210 studies, Potter (2022) categorised over 400 elements of media literacy into four domains: access, analysis, evaluation and communication. The European Commission (COM 2007/833), UNESCO (Grizzle et al., 2013), regulatory bodies (BAI, 2022; Ofcom, 2025, 2023) and professional associations (NAMLE, 2024; Jolls & Thoman, 2008) likewise define media literacy by relying on three domains - access, analysis and evaluation, creation and communication. However, each of these domains has evolved conceptually in response to technological and social developments.

Early definitions of **access** primarily focused on physical and technological availability, typically measured by whether households had internet access and whether individuals possessed the skills to use digital devices. Contemporary approaches expand the understanding of access in three directions. First, access entails not only technical availability but also the diversity of perspectives available (content pluralism), which directly depends on media freedom and structural pluralism (EC, 2007). Second, individuals may have technical access but lack the skills to navigate, search or assess the relevance of information; access is therefore also understood as cognitive availability (Grizzle et al., 2013). Third, access is understood as awareness of one's information needs. Access is meaningful only if individuals are aware of their needs for specific media content and understand how to satisfy them (*ibid.*). Paradoxically, access is both the easiest and the most difficult dimension to measure: while infrastructure availability can be easily quantified, cognitive availability and awareness of information needs require more sophisticated instruments.

The **ability to analyse and evaluate media content** is the most stable component in definitions of media literacy (Pereira & Moura, 2022). This dimension includes identification of the type of content (news, advertisement, opinion), the source (public service media, private platform, unidentified actor) and the context of creation. It also involves understanding the media ecosystem, the basic regulatory framework, ownership structures, the economic models underlying content creation and the technological constraints shaping content. Furthermore, it includes application of criteria for assessing source credibility, as well as content accuracy and

balance. In digital environments, critical evaluation necessarily extends to new domains, such as AI-generated content, disinformation campaigns and coordinated manipulation of public opinion. This dimension reflects the educational capacity of the system - the extent to which critical thinking is developed through formal education and the availability of media education.

The conceptualisation of the **participatory dimension of media literacy** is the most diverse. Some authors focus on content creation - writing blogs, producing videos, editing images (Jolls & Thoman, 2008). Others put emphasis on communication - the ability to express oneself effectively across different media formats (Pereira & Moura, 2022). Others yet link participation to civic action - use of digital tools for social engagement, petitions, campaigns and public deliberation (Hobbs, 2010; NAMLE, 2024). The EAVI framework (Celot & Pérez Tornero, 2009) subdivides communicative and participative skills into three categories: first, as social relations, involving networking, connections, communities and peer communication; second, as citizen participation, encompassing interaction with institutions, expression of opinions and mobilisation of interest groups; and third, as content creation, involving content production, collaborative creation and problem-solving via the media. The Australian regulatory authority (ACMA, 2009) also includes digital safety among participatory competences (managing privacy, protection from fraud, responsible data sharing), arguing that meaningful participation is not possible without security (Perez-Escoda et al., 2016).

Media Literacy in Context

Our model departs from the key premise that media literacy is not an individual attribute in a vacuum, but rather a relational phenomenon - interaction between competences and the environment. As Erstad and Amdam (2013) note, literacy is not only developed but also applied within specific contexts that may be enabling or constraining. This approach is explicitly articulated in European policy frameworks. The Audiovisual Media Services Directive (Directive 2007/65/EC: 3) sets out that “[M]edia literacy refers to skills, knowledge and understanding that allow consumers to use media effectively and safely. Media-literate people are able to exercise informed choices, understand the nature of content and services and take advantage of the full range of opportunities offered by new communications technologies. They are better able to protect themselves and their families from harmful or offensive material. Therefore, the development of media literacy *in all sections of society* should be promoted and its progress followed closely” (italics ours). Subsequent documents (EC, 2009; EC Expert

Group, 2009) further elaborate this dimension, emphasising that the same individual competences may produce different outcomes depending on media freedom, educational systems, democratic institutions and technological infrastructure.

UNESCO (Grizzle et al., 2013a; UNESCO, 2022) explicitly links media and media and information literacy (MIL) to a democratic society and intercultural dialogue, qualifying it as a prerequisite for informed participation in digital society, thereby implicitly acknowledging that media literacy loses its emancipatory function in the absence of a democratic context. The Irish regulatory authority (BAI, 2022) operationalises the participatory dimension of media literacy via individual-level skill indicators and “success indicators”, translating individual competences into collective capacities at the level of communities and systems.

Based on the understanding of media literacy as a **relational phenomenon** (the interaction between competences and the environment), the European Association for Viewers’ Interests (EAVI) framework was developed through a series of studies for the European Commission (Celot, 2009; Celot & Pérez Tornero, 2009; DTI & EAVI, 2011). Initiated by efforts to establish a methodology for measuring media literacy at the European level, the EAVI framework introduces a **dual measurement architecture** that distinguishes between individual competences and environmental factors.

Individual competences are defined in this framework as “an individual capacity to apply certain skills” (Celot, 2009, p. 7), and they encompass both **personal competences** (media use, critical understanding of the content) and **social competences** (communication via the media, participation in the public sphere).

Environmental factors are defined as a “set of contextual factors” that **engender or endanger** the development and application of individual competences. These include media availability (technological infrastructure, content pluralism), media policies (regulatory frameworks, user protection), education (formal and non-formal media education), media industries (ownership structures, economic models, professional standards) and civil society (organisations and media literacy initiatives).

The EAVI framework rests on the **key premise** that identical **individual competences may yield different outcomes** depending on structural conditions, wherefore different scenarios can be envisaged. For example, individuals may possess critical evaluation skills, but they will lack access to diverse sources and their competences will remain underutilised in an environment with low media pluralism. In another scenario, infrastructure is well developed and access is high, but the education system fails to foster critical thinking, resulting in the people’s passive use of media and limited evaluation of content. A third scenario may involve

an active civil society that encourages participation, while the broader democratic context is restrictive (e.g. low level of freedom of expression), rendering civic engagement via the media potentially risky.

Media literacy thus emerges from the interplay between competences and the environment. The degree of their convergence or divergence determines the individuals' actual capacity to participate effectively in the mediated public sphere. Therefore, we developed an index for assessing the state of media literacy in Serbia departing from the understanding of media literacy as a relational phenomenon.

Serbia's Media Literacy Index

Basic Framework and Operational Definition of Media Literacy

The construction of the Integrated Media Literacy Index (IMLI) is based on the EAVI conceptual framework applied in the context of Serbia. The EAVI framework offers three key advantages for our study.

First, its core structure remains relevant despite rapid technological change - the distinction between what individuals are able to do and the context in which they do it has not been rendered obsolete by the emergence of new technologies, such as artificial intelligence, or new threats, such as coordinated disinformation campaigns. On the contrary, these developments underscore the importance of the contextual approach, as the same individual skills can produce different outcomes depending on media freedom, educational capacities and democratic institutions in which they are applied.

The EAVI framework's second advantage lies in its comparative applicability. The framework was developed with the aim of enabling cross-national comparisons despite different political traditions, media systems and educational models across European countries. Incorporation of the EAVI logic into the IMLI enables the application of the methodology in other countries in the region and thus the gradual creation of a base of comparative data that would allow a deeper analysis of the relationship between structural factors and the people's actual competences.

Third, the integrated approach has direct implications for diagnosis and public policy design. If the index indicates a low level of media literacy, it is necessary to determine whether it is the result of a lack of individual skills, systemic barriers or a misalignment between the

two. Each of these scenarios requires different types of intervention. Lack of skills points to the need for media education programmes; systemic barriers call for structural reforms (improving media freedom, the education system and democratic institutions); while situations in which both competences and opportunities exist but do not align suggest the need for interventions related to motivation, trust and perceived safety. The integrated index enables this kind of diagnosis; we will demonstrate its analytical potential in the concluding sections following the presentation of the empirical findings for Serbia.

Therefore, taking into account these three key dimensions and building on the EAVI framework, we based the construction of the index on the following definition of media literacy:

Media literacy is the ability to access, critically understand (analyse and evaluate) and participate via media (as content and technologies), with these competences developed and applied within specific social contexts that include technological infrastructure, the education system, media freedom, democratic institutions, social trust and preparedness for emerging technologies, including artificial intelligence.

Such a definition enables the construction of an index that simultaneously measures **what people are capable of doing** (individual competences - MLI), **the environment in which they do it** (structural factors - external indicators) and **the form of media literacy emerging from their interaction** (the IMLI). The following sections explain in detail how individual competences were operationalised through the survey, how external contextual indicators were selected and harmonised and how the Delphi process involving expert consultations informed the final structure and weighting of the integrated index.

I MEDIA LITERACY INDEX (MLI), based on individual competences

Instrument Design and Measurement Framework

The design of the survey instrument followed the EAVI conceptual framework, focusing on individual competences and measuring three key dimensions: the extent to which the citizens are connected to the media ecosystem through the diversity and intensity of their use of different platforms; their capacity to critically evaluate the content to which they are exposed; and the extent to which they use media for citizen participation and the protection of their privacy in the digital environment. However, when we operationalised these dimensions

for Serbia in 2025, we also took into account the technological and social changes that did not exist at the time the original model was developed. Adaptation of the EAVI framework required three key extensions. First, we introduced the dimension of artificial intelligence (AI), which was not included in traditional conceptualisations of media literacy. This dimension captures not only people's awareness of the presence of AI in the media environment, but also their patterns of using AI tools for accessing information and creating content. Second, we expanded the dimension of critical evaluation to include verification behaviours - measuring not only the respondents' ability to recognise problematic content, but also the concrete actions they take when they come across suspicious information (e.g., cross-checking it across multiple sources, consulting fact-checking platforms and searching for the original context). These extensions respond to the realities of the contemporary media environment, in which it is no longer sufficient to think critically, but it is also necessary to verify information actively and systematically. Third, recognising that people cannot meaningfully participate in the digital public sphere if they lack a sense of safety and control over their personal data, we extended the dimension of participation to include protection skills in the digital environment - such as blocking tracking, safeguarding privacy and reporting hate speech.

The final instrument comprises sixty-three questions organised into three sections corresponding to the theoretical structure of media literacy.³ The first section (P1–P16) measures access to and use of media, including traditional media (television, radio, print) and digital platforms (social media, news portals, video platforms and messaging applications), as well as patterns of AI use. The second section (P17–P42) focuses on the critical understanding of media content and includes the identification of various types of problematic content (disinformation, sensationalism, biased reporting), the ability to manage emotional responses to media messages and concrete verification behaviours. The third section (P43–P56) measures communication, content creation, participation and protection practices in the digital environment. The additional seven questions (P57–P63) capture the respondents' sociodemographic characteristics, enabling stratified analyses by gender, age, education, type of settlement and other relevant variables.

Sample and Data Collection

The survey was conducted on a two-stage stratified representative sample of 800 adult citizens of Serbia. Stratification was carried out at two levels: the first level consisted of

³ The full questionnaire is available upon reasonable request.

territorial units (Belgrade, Vojvodina and Central Serbia), while the second level comprised types of settlement (urban and rural) within each territorial unit. This structure allows the disaggregation of the data by the key sociodemographic characteristics, including gender, age group, level of education, income, region and type of settlement. The distribution of the sample by gender and region is broadly aligned with estimates of the Statistical Office of the Republic of Serbia (SORS), with slight skew toward older and rural segments of the population, which is typical of telephone surveys. Despite this skew, the sample ensures satisfactory representativeness of Serbia's adult population.

Field data collection was conducted between 15 May and 15 June 2025, using the CATI (Computer-Assisted Telephone Interviewing) method. This approach enabled the rapid collection of data from a geographically dispersed sample while ensuring quality control through call supervision and real-time checks of logical consistency during interviews. The interviews lasted twenty-five minutes on average. The data were coded and analysed using SPSS, following standard procedures for data cleaning and consistency checks.

Media Literacy Index – MLI

Data cleaning and reliability testing were followed by the normalisation of seven validated scales to enable their aggregation into composite scores. Normalisation was performed while preserving the original response metrics. The normalised scales were then combined into three distinct dimensions of media literacy, based on both theoretical considerations (i.e., which aspects are conceptually central to each dimension) and empirical findings from factor analysis (which questions genuinely measure a common latent construct and the extent of variance they explain).

The first dimension measures the diversity and intensity of use of various media platforms, as well as readiness to master new tools. It consists of two components: one measuring the diversity of sources people use for information and entertainment and patterns of AI use (P10–P16), which capture whether and how the respondents use AI tools. Greater weight is assigned to media diversity, given that it is a more fundamental aspect of media literacy – people must first use media before they can use more advanced tools based on AI.

The second dimension comprises three components of critical understanding of media content. The identification of problematic content (P17–P21) measures whether citizens can recognise disinformation and biased reporting. Managing the impact of information (P22–P24) focuses on emotional regulation - whether the respondents allow media messages to quickly

influence them or whether they are capable of maintaining a more distanced, reflective stance. Verification behaviours (P25–P30) capture the concrete actions people take when encountering suspicious information, such as cross-checking across multiple sources or consulting fact-checking platforms. The greatest weight is assigned to recognition, as it is prerequisite for the other two components - citizens must first identify a problem before they can address it.

The third dimension integrates two components: digital safety and protection skills (P43–P50) measure the application of concrete privacy-protection practices, such as blocking tracking, managing shared data and reporting hate speech. Civic engagement (P51–P56) measures the extent to which the citizens use digital platforms for public participation - sharing socially relevant information, holding actors accountable, advocating ideas and organising events. Greater weight is assigned to civic engagement, as it represents the ultimate goal of media literacy in a democratic society, while protection skills serve as a prerequisite enabling safe participation.

The results reveal significant differences across dimensions. The dimension related to access and use shows the lowest mean value ($M = 25.5$, $SD = 19.7$) and the widest range (0–79.9), indicating substantial variation among respondents in access to media and AI use. Critical understanding emerges as the most stable dimension ($M = 42.1$, $SD = 15.1$), suggesting that strategies of critical understanding and verification are more evenly distributed across the population and constitute the pillar of individual media literacy. Participation shows a lower average ($M = 27.6$, $SD = 20.2$) and the highest level of heterogeneity, indicating that participatory behaviours and protection practices have not yet become widespread - a small segment of the population is highly active, while the majority remains passive or engages only occasionally.

The final composite **Media Literacy Index (MLI)** was constructed as a weighted average of the three dimensions. The dimension of critical evaluation carries the greatest weight, as the most stable and conceptually central domain - neither access nor participation can be meaningful without the ability to critically understand and verify information. The dimension capturing media and AI use, as well as the dimension related to digital citizenship and participation, are assigned lower weights, as they exhibit greater variability and dependence on structural factors (such as infrastructure and the democratic context), which are captured through external indicators. The distribution of weights was determined after testing several alternative formulas, based on both theoretical considerations and empirical stability.

The final formula for calculating the average level of media literacy among citizens of Serbia is as follows:

$$MLI = 0.20 \times D1 + 0.60 \times D2 + 0.20 \times D3$$

Table 1: MEDIA LITERACY INDEX Structure by Media Literacy Dimensions

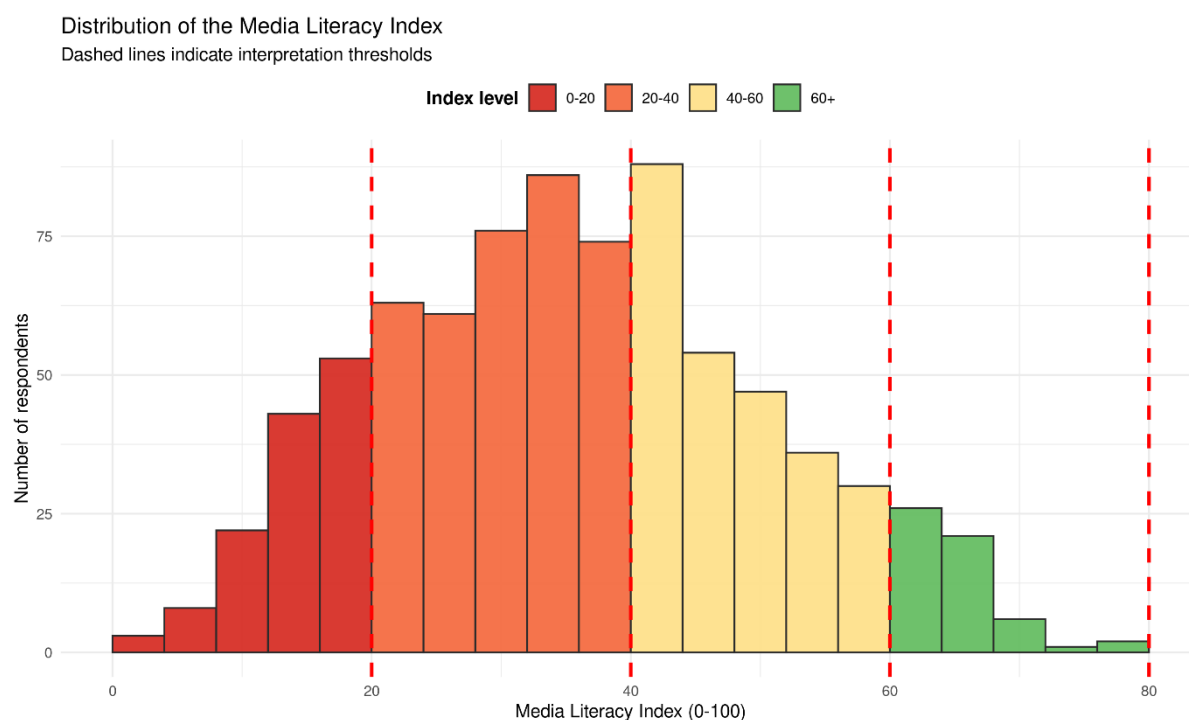
<i>MEDIA LITERACY DIMENSION</i>	<i>WHAT IT MEASURES</i>	<i>Questionnaire Items</i>	<i>SHARE</i>	<i>VALUE</i>
<i>D1. ACCESS AND USE</i>		P1–P16		
<i>Diversity of Media Use</i>	Frequency of use of nine types of media, ranging from television and radio to social media and AI	(P1–P9)	20%	25.5
<i>AI Use Patterns</i>	Ways in which people rely on AI tools	(P10–P16)		
<i>D2. CRITICAL UNDERSTANDING</i>		P17–P42		
<i>Recognition of problematic content</i>	How often respondents notice fake news, conspiracy theories, hate speech and similar phenomena	(P17–P21)	60%	42.1
<i>Managing the impact of information</i>	How people experience the pressure of information and their emotional responses to media content	(P22–P24)		
<i>Verification behaviours</i>	Strategies respondents use to check suspicious information	(P25–P30)		
<i>D3. PARTICIPATION</i>		P43–P56		
<i>Digital safety and protection skills</i>	Eight activities checking the respondents' knowledge of ways to protect themselves and others online	(P43–P50)	20%	27.6
<i>Civic Engagement</i>	Ways in which people use the media to inform themselves,	(P51–P56)		

	share their opinions and organise			
--	-----------------------------------	--	--	--

**Average MLI value for Serbia in 2025 stood at 35.9 points
(SD = 14.9), with a range from 3 to 77.2.**

None of the respondents reached the upper quartile of the scale (above 75 points), which indicates that very high levels of media literacy are virtually absent in the general population. The distribution is skewed toward the lower ranges: 16% of respondents fell into the very low category (0–20 points), 45% into the low category (21–40), 32% made the medium category (41–60) and only 7% exceeded the high category threshold (61–80). The very high category (81–100) remained unrepresented.

Such distribution clearly points to the need for systemic interventions. The majority of citizens (61%) exhibit low or very low levels of competence, indicating significant gaps in knowledge and suggesting that a substantial share of the population is inadequately equipped to navigate the contemporary media environment safely and effectively. At the same time, the existence of a small but identifiable segment with high levels of competence (7%) suggests that structural conditions do allow for the development of media literacy among those with access to education, resources and motivation - the question is how to make these conditions more widely accessible to the broader population.



The survey findings provide the basis for calculating the Media Literacy Index at the level of individual competences. The Index can thus be used to regularly monitor increases or declines in media literacy levels in Serbia, enabling also indirect tracking of the efficiency of public policies and other related activities. Monitoring is also possible across the media literacy dimensions, offering insights into the effectiveness of campaigns targeting specific competences, such as verification behaviours, digital skills, et al.

The Media Literacy Index (MLI) addresses the second requirement concerning the development of an instrument for assessing the level of media literacy among the general population. The MLI also indirectly addresses the third requirement, namely the Index's sensitivity to changes in the broader environment. In any case, the survey instrument should be reviewed on an annual basis in consultation with experts from the academic community.

II INTEGRATED MEDIA LITERACY INDEX (IMLI)

One of the requirements was to provide an assessment of the current situation and to lay the groundwork for the annual evaluation of the effects of cumulative activities in the fields of media and digital literacy in relation to the Index. Prior findings offer insight into the level of media literacy among Serbia's citizens, but they cannot, on their own, explain why competences are at this level. The answers lie in the structural environmental factors - namely, the quality of the media system, the capacity of the education system and the level of democratic freedoms and social trust. The ensuing analysis of these factors helps us understand not only what citizens are capable of, but also the conditions under which they exercise these capabilities, thus more directly addressing the requirement that the Index be sensitive to changes in the environment. One possible extension of the MLI, through the inclusion of environmental factors, is the proposed **Integrated Media Literacy Index (IMLI)**, which is elaborated in detail in the text below.

ENVIRONMENTAL FACTORS – ANALYSIS OF EXTERNAL FACTORS

While the survey measures what citizens are currently capable of doing, the analysis of environmental factors examines the systemic conditions under which they can exercise these capabilities. Media literacy is not merely an individual attribute, but emerges from the interaction between competences and structural context. The selected environmental factors were grouped into six categories: (1) infrastructure and access, (2) educational foundations, (3)

media freedom and pluralism, (4) the democratic context, (5) social trust, privacy and cybersecurity and (6) AI preparedness. The selection of categories was guided by a combination of theoretical considerations and pragmatic constraints. Theoretically, the categories cover dimensions identified by the EAVI framework as relevant environmental factors - media availability, education, the media system and social capital. Pragmatically, the selection was limited by the availability of reliable and internationally comparable data. *Certain dimensions that would be ideally relevant - such as systematic monitoring of the implementation of media literacy policies or the evaluation of non-formal education programmes - were not included due to the lack of regularly updated data sources.* In addition, we introduced two new dimensions that were not part of the original EAVI framework but respond to transformations in the contemporary media environment: cybersecurity and AI preparedness.

Publicly available data from reliable sources were used as indicators to assess the values of these categories. External data were collected from national sources (Statistical Office of the Republic of Serbia – SORS, Gemius and the SHARE Foundation) and international databases (OECD PISA, Eurostat, European Social Survey – ESS, UN E-Government Survey, Reporters Without Borders Press Freedom Index, Centre for Media Pluralism and Media Freedom, Freedom House and the Global AI Index). A total of thirty-one indicators, organised into six categories, were used to evaluate the key environmental aspects relevant to media literacy. The data cover the 2022–2025 period, with the most recent available data used for each indicator. All indicators were normalised to a common 0–100 scale to enable comparison and aggregation into composite scores by category.

The following sections provide a detailed account of each of the six categories, explain the indicators they include and how they are interrelated and analyse their relationship with the survey findings on individual competences.

II.1. INFRASTRUCTURE AND ACCESS

Technological availability is a fundamental prerequisite for the development of media literacy - people cannot use digital media without access to the internet, devices and platforms. This category includes indicators such as household internet penetration (SORS, 2023), the frequency of use of social media and digital services (SORS, 2023), population coverage by domestic media portals (Gemius, 2024) and a composite Digital Connectivity Index measuring

the quality of network infrastructure and access speed (Digital Connectivity Index, Global AI Index 2024).

The data indicate that Serbia has a well-developed digital infrastructure. Household internet penetration has reached 85%, meaning that the vast majority of the population has technical access to digital media. Data show that 82% of the adult population use social media on a daily basis, while 69% of internet users visit domestic media portals on a monthly basis. The Digital Connectivity Index (64.8/100) confirms that the network infrastructure supports not only access but also continuous and relatively fast data exchange necessary for a contemporary media experience. The average score for the infrastructure and access category is 78.98/100, the highest among all environmental dimensions, positioning Serbia high on the scale of infrastructure availability and quality.

However, comparison with the survey findings reveals a significant mismatch. While external data indicate high technological availability, the survey dimension of access and use suggests that technological capacity does not automatically translate into effective competence. For example, citizens can have access to the internet and devices but do not necessarily use a diverse range of sources - they rely on a limited number of platforms, predominantly social media as their primary source of information, and use traditional media and specialised portals only sporadically. This finding indicates that the issue lies not in the infrastructure but in motivation, media habits, or lack of awareness of the benefits of diverse information sources. ***Therefore, rather than focusing on infrastructure development, systemic interventions should concentrate on media literacy programmes helping citizens make better use of already available resources.***

II.2. EDUCATIONAL CAPACITIES

The education system plays a key role in fostering critical thinking and media literacy among younger generations. The ability to analyse texts, understand arguments, evaluate sources and use information to solve problems - competences developed through formal education - underpins capacities for the critical understanding of media. This category combines objective indicators of educational attainment with expert assessments of systemic support for media literacy.

The primary indicator is the PISA assessment (OECD Programme for International Student Assessment, 2022), which measures 15-year-olds' ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges. Reading literacy is

particularly relevant, as it involves not only understanding texts, but also evaluating and reflecting on them, including recognising perspectives and using information to draw well-reasoned conclusions. Conversion of Serbia's PISA 2022 results to a 0–100 scale yields an average score of 49.33/100. This result suggests that the education system does not sufficiently develop competences for critical understanding and reasoning among young people.

In addition to the objective measurement of student achievement, this category includes an expert assessment of systemic support for media literacy within the education system. During the Delphi process, an expert panel (comprising teachers, education professionals and education and media literacy researchers) assessed the extent to which the education system in Serbia supports the development of media literacy. The average score was 3.21/10, which, after normalisation, corresponds to 32.1/100. This low score indicates a gap between objective measures of student competences (PISA) and expert assessments of systemic support for media literacy, pointing to a structural issue: the education system as a whole does not provide sufficient targeted support for the development of critical media literacy through curricula, teacher training and pedagogical approaches. The experts' assessment is based on insights into curricula, teaching practices and institutional capacities, thereby complementing the evaluation of the education system with insights not captured by PISA.

The link with the survey is indirect but important: the survey dimension measures critical skills among adults, while PISA reflects the educational foundations acquired by younger generations. The survey dimension related to critical understanding stands at 42.10/100 and represents the most stable and highest individual domain among adults. This is slightly lower than the PISA average for younger cohorts (49.33/100), but substantially higher than the expert assessment of systemic support (32.1/100). This suggests that people develop certain critical skills despite the lack of systemic support in education, probably through informal learning channels and life experience. However, neither group reaches higher levels of competence, which *reinforces the need for systemic interventions in the education system aimed at fostering critical thinking from the earliest stages of schooling*.

II.3. MEDIA FREEDOM AND PLURALISM

The quality of the media system via which people access information fundamentally shapes the conditions for the development of media literacy. Even where people possess well-developed critical competences, their application is constrained if the media environment offers limited pluralism of perspectives, if journalists operate under pressures compromising the independence of reporting, or if ownership structures result in a concentration of control over information. Media literacy entails the ability to access diverse sources, evaluate their

reliability and form informed opinions - however, all of this depends on whether such sources exist in the first place and whether they are able to operate freely.

This category integrates data from two internationally recognised sources. The Reporters Without Borders Press Freedom Index (RSF, 2025), after inversion (46.5/100), indicates that Serbia falls among countries facing moderately high risks to media freedom. The second source comprises four dimensions of the Media Pluralism Monitor (Centre for Media Pluralism and Media Freedom, 2024), which systematically assesses risks to media pluralism: fundamental protection (constitutional and legal safeguards of media freedom), market plurality (ownership concentration and transparency), political independence (government influence over media and public service funding) and social inclusiveness. The average score for Serbia is 47.75/100, with political independence and market plurality identified as the most problematic dimensions.

The average score for the category of media freedom and plurality - 47.17/100 – indicates serious structural constraints. Low plurality means that even people seeking to consult diverse perspectives encounter a media market that is structurally homogenised - certain viewpoints dominate the public sphere, while others are marginalised not due to lack of audience demand, but because of economic and political barriers to entry. Low level of media freedom suggests that even journalists committed to independent reporting operate under pressures compromising their ability to investigate and publish critical content.

The link with the survey findings is particularly revealing. A scale measuring trust in various sources of information was tested during the construction of the MLI. This scale was excluded from the final index due to low reliability, i.e. because the respondents did not demonstrate a consistent pattern in evaluating sources - some expressed high levels of trust across all sources, while others were broadly distrustful, without clear differentiation between types of sources. Such inconsistency may be a direct consequence of the ambiguous quality of the media environment. Where people cannot rely on stable quality criteria, due to wide variations or shifts in media standards, their assessments become unsystematic and tend to reflect general levels of trust or distrust rather than evaluations of specific sources. ***Therefore, structural deficiencies of the media system not only limit access to high-quality information, but also impede the development of stable criteria for assessing reliability.***

II.4. DEMOCRATIC CONTEXT

Media literacy entails the active use of media for civic engagement - expressing opinions, mobilising around public issues, connecting with others and organising collective action. However, such use depends not only on individual competences, but also on the institutional framework, which may either encourage or discourage citizen participation. In environments with limited democratic freedoms, citizens may possess the necessary competences and have access to platforms, yet refrain from public engagement due to fear of repercussions or the realisation that their participation will have no real impact on decision-making.

This category combines indicators of democratic freedoms and opportunities for digital participation. Freedom House classifies Serbia as “partly free,” with a score of 56.0/100 in its 2024 Freedom in the World report. Internet Freedom is rated somewhat more highly, at 70/100, indicating that the digital space is relatively freer than traditional media. The average score for the democratic context category stands at 64.5/100.

The UN E-Participation Index (UN E-Government Survey, 2024) measures the extent to which governments use digital platforms to facilitate citizen participation. This indicator is particularly relevant for the digital dimension of media literacy, as it reflects whether citizens who wish to engage have access to resources. Serbia scored 73.0/100 on this index, which is relatively high, especially compared to its overall level of democratic freedoms. This mismatch suggests that e-participation platforms formally exist and that institutions have established online mechanisms, but do not substantively respond to citizens’ demands, which may discourage participation over time.

While the average score for the democratic context category is 64.5/100, the survey-based participation dimension stands at a mere 27.56/100. This gap between the existence of platforms and their actual use suggests that *technological availability does not guarantee use when people presume their participation will not produce results. Addressing this problem requires not only merely improving the digital platforms, but also a shift in institutional culture toward meaningful responsiveness to citizen participation.*

II.5. DOMAIN OF TRUST, PRIVACY AND CYBER-SECURITY

Social trust, data protection culture and cyber-security together form the foundation for meaningful media participation. People lacking even a minimum level of trust in others and in institutions tend to withdraw from the public sphere and limit their activities to private circles.

People unfamiliar with privacy protection measures are exposed to data abuse, which may deter them from public engagement. The assessment of this category draws on three types of data.

First, we used Eurostat data on interpersonal trust from the European Social Survey (ESS, 2023), which measures trust in others, fairness and helpfulness. According to these data, the level of interpersonal trust in Serbia stands at 44.2/100, which is below the European average.

Second, we included data on privacy protection practices from the national ICT survey (SORS, 2023). SORS data show that only 21.9% of citizens on average implement privacy protection measures (such as disabling location tracking, restricting the visibility of social media profiles, or limiting the use of personal data for advertising), which is a very low share, particularly given the widespread use of digital platforms in Serbia.

Third, the category includes data on cybersecurity in the media sector (SHARE Foundation, Cybersecurity Monitoring, 2024), which tracks incidents such as hacking attacks on media websites, direct threats and attacks against journalists via digital channels, abuse, discrimination and hate speech. According to these data, the media cybersecurity indicator appears relatively high (71.94/100). However, this measure reflects only reported incidents (with actual figures likely higher) and does not capture subjective perceptions of security.

The average score for the category of trust, privacy and cybersecurity stands at 38.52/100 (combining moderate interpersonal trust at 44.2/100, very low prevalence of protection practices at 21.9/100 and moderate cybersecurity at 71.9/100). While the relatively high cybersecurity indicator raises the overall average, it cannot compensate for low levels of social trust and individual privacy protection.

The link with the survey reveals multiple gaps between knowledge, practices and systemic security. The survey's participation dimension (P43–P50) measures whether respondents know how to apply eight different protection measures (e.g., report hate speech, disable tracking, protect against fraud), while external data show that only around 22% of them actually implement these measures in practice. At the same time, the cybersecurity indicator (71.94/100) suggests that systemic security is stronger than individual preparedness. This indicates that citizens are insufficiently equipped to protect themselves, even in an environment where objective risks are not extremely high. The presence of knowledge among certain segments of the population does not necessarily manifest itself in everyday practice. ***These findings point to the need for interventions that go beyond skills training to also reshape risk perceptions and foster a culture of digital safety.*** At the same time, the low level of social trust (44/100) is closely linked to low participation levels. People who lack trust in others are less

likely to engage publicly, as they perceive themselves to be exposed to risks without reciprocal support or protection. Therefore, ***interventions are needed not only to promote protective behaviours, but also to strengthen the foundations for proactive engagement – to establish relationships of trust both among individuals and between citizens and institutions.***

II.6. AI PREPAREDNESS

Artificial intelligence is increasingly becoming an integral part of the media ecosystem - from automated news generation to personalised recommendations that shape the users' information experiences. Media literacy in the contemporary environment requires both an understanding of traditional media processes and the ability to navigate content mediated or generated by artificial intelligence. This includes recognising AI-generated content, as well as critically evaluating the authenticity and reliability of such content. The development of these competences depends not only on institutional capacities to regulate and ensure the transparent use of AI technologies, but also on public trust in AI.

In this category, we incorporated the IMF AI Preparedness Index (2024), which assigned Serbia a score of 54.0/100, indicating a moderate level of institutional readiness. This index captures regulatory frameworks, technical infrastructure, human capital and innovation capacity in the field of AI. We also used the Digital Connectivity data from the Global AI Index, which confirm that the technological foundation for AI adoption is relatively strong (64.8/100). However, data on public trust from the same source reveal a gap between infrastructural readiness and trust in AI technologies (36.9/100), pointing to limited understanding of how AI functions, lack of transparency in its use, or fears of potential abuse. The average score of the AI preparedness category stands at 51.9/100.

Low levels of trust are clearly reflected in the survey data, which show that only 23.9% of the respondents (191 out of 800) use AI platforms. Low trust in AI and low levels of usage reinforce one another: citizens refrain from using AI due to distrust, while trust does not increase due to lack of experience. A comprehensive assessment of this category points to the ***need for a proactive approach that integrates several dimensions.***

First, transparent policies on use of AI by public institutions and media organisations - which algorithms curate news, how models are trained and who is accountable for errors.

Second, education on AI technologies that goes beyond technical skills to include an understanding of their societal implications - how AI is transforming the media, the ethical dilemmas AI raises and how users' rights can be protected.

Third, civic empowerment through programmes that foster the critical evaluation of AI-generated content.

Without such interventions, there is a risk of creating a new digital divide - between the minority that uses AI tools and understands their underlying logic and the majority that remains passive and distrustful – which will further deepen inequalities in media literacy.

III IMLI VALIDATION AND FINAL CONSTRUCTION

Following the survey and the analysis of external indicators, which produced two complementary profiles - individual competences (MLI: 35.9/100) and structural conditions (six environmental categories) - the remaining methodological question was how to integrate them into a single metric. To address this, we applied the Delphi method with an expert panel in order to empirically determine the relative importance of the individual dimensions.

Delphi Process and Consensus Building

The Delphi process involved thirty experts in education, media, media and education policies and from civil society. The panel included teachers, journalists with experience in fact-checking and verification, researchers specialising in digital competences and disinformation, representatives of state institutions and civil society activists conducting media literacy programmes. The panel's geographic and institutional diversity ensured that the resulting consensus did not reflect the perspective of just one group of actors, but instead provided a synthesis of perspectives across the media literacy field.

The Delphi method was conducted in two rounds during October 2025. In the first round, the experts independently assigned weights to seven proposed dimensions of media literacy: Connectivity and Access, Critical Evaluation, Democratic Participation, Media Freedom, Trust and Privacy, Cybersecurity, and AI Preparedness. Each dimension was accompanied by a brief explanation of what it measures and how it derives from survey and external data. In the second round, the experts were provided with aggregated results from the first round (median and interquartile ranges for each dimension), insight in qualitative explanations of other participants and the opportunity to revise their weights in light of collective assessments. Agreement was achieved on all dimensions based on two predefined criteria of statistical stability and consensus.

Two methodological adjustments were made during the construction of the final index.

First, the dimensions of Trust and Privacy and Cybersecurity were merged into a single dimension - Trust, Privacy and Cybersecurity - with a combined weight. This decision was based on the conceptual proximity of these dimensions and the fact that they rely on external indicators capturing social trust, users' protection measures and systemic cybersecurity.

Second, following the merger, all the weights were normalised through proportional scaling. The IMLI's final structure comprises six dimensions: (1) Connectivity and Access – 15.71%, (2) Critical Evaluation – 20.94%, (3) Democratic Participation – 10.47%, (4) Media Freedom – 20.94%, (5) Trust, Privacy and Cybersecurity – 20.94%, and (6) AI Preparedness – 11.00%. This distribution indicates that experts identified Critical Evaluation and Media Freedom as central and equally important dimensions of media literacy.

Application of the Delphi-validated weights to the dimension scores yielded the final Integrated Media Literacy Index for Serbia (2025): **IMLI = 43.11/100**. Table 2 shows the contribution of each dimension to the overall index.

Serbia's 2025 score on the Integrated Media Literacy Index (IMLI) stands at 43.11 out of 100.

Table 2: Final IMLI Score for Serbia:

<i>Dimension</i>	<i>Score</i>	<i>Weight</i>	<i>Contribution</i>
CONNECTIVITY AND ACCESS	52.23	15.71%	8.2
CRITICAL EVALUATION	45.72	20.94%	9.57
DEMOCRATIC PARTICIPATION	46.03	10.47%	4.82
MEDIA FREEDOM	47.17	20.94%	9.88
TRUST, PRIVACY AND CYBERSECURITY	38.52	20.94%	8.07
AI PREPAREDNESS	23.42 (60/40)	11.00%	2.58
<i>IMLI Serbia</i>		100%	43.11

Key Findings

Serbia's score of 43.11 out of 100 in 2025 can be interpreted as a medium–low level of integrated media literacy. Serbia performs better on the Integrated Media Literacy Index (IMLI: 43.11) than on the survey-based Media Literacy Index (MLI: 35.9/100), due to high scores on the external infrastructure (78.98) and the democratic context (64.50) indicators. However, *the mismatch between structural opportunities and individual use remains evident also in the integrated index.*

Three dimensions contribute almost equally to the IMLI. Critical Evaluation (9.57), Media Freedom (9.88) and Trust, Privacy and Cybersecurity (8.07) together account for nearly two-thirds of the index. These dimensions form the core of media literacy from a theoretical perspective as well: the capacity for critical reasoning, a media environment offering pluralism of perspectives and a level of security enabling public engagement. Contributions of Connectivity and Access (8.20) and Democratic Participation (4.82) are moderate, while AI Preparedness (2.58) contributes the least, due to both low usage levels reflected in the survey and low levels of trust indicated by external data.

The value of the Connectivity and Access dimension (52.23) masks the gap between infrastructure (78.98) and use (25.48). Although external conditions enable diverse media use, the citizens do not fully take advantage of these opportunities. This finding has direct policy implications, suggesting that further investment in infrastructure is unlikely to significantly improve media literacy. Interventions that enable and motivate citizens to make better use of the existing resources are likely to make greater impact. Similarly, within the Democratic Participation dimension (46.03), high levels of e-participation measured by external indicators contrast with low levels of civic engagement observed in the survey, again pointing to the underutilisation of the available resources. The lowest-scoring dimension, AI Preparedness (23.42), signals an area where both structural conditions and individual practices remain underdeveloped. Low trust and low usage reinforce one another, creating a vicious cycle. Without proactive interventions - such as transparent policies, AI education and ethical standards - there is a risk that this gap will widen, creating a new digital divide between the minority that uses AI tools and understands their logic and the majority that remains passive.

In any case, the Media Literacy Index (MLI) and the Integrated Media Literacy Index (IMLI) provide a much-needed foundation for future analysis and trend monitoring. First, annual tracking will show whether interventions (media literacy programmes, education reforms, changes in the media system) produce genuine change. Second, application of the

methodology in other countries will enable cross-country comparisons and the identification of best practices. Third, analysis of the IMLI across its dimensions will help identify priorities for systemic interventions, both in the current and future moments and contexts in which the index is applied.

Concluding Considerations and Recommendations

Policy Recommendations: Four Priority Areas for Intervention

Based on the IMLI findings, four priority areas for systemic intervention can be identified that are likely to produce measurable improvements in media literacy in Serbia. These areas are not isolated. Rather they are mutually reinforcing - progress in one domain strengthens progress in others, and vice versa.

I. The **development of comprehensive media literacy programmes that enable citizens to make better use of the already available technological infrastructure** is the primary priority. The findings clearly indicate that the problem does not lie in lack of technology, but rather in how it is used. Media literacy programmes should focus on strategies for using diverse information sources and verification behaviours requiring systemic support. Such programmes should teach citizens how to identify and actively use a variety of information sources, while also raising awareness of the importance of source diversity - recognising that different platforms offer different perspectives, that monopolies over information can lead to bias and that consulting multiple independent sources supports informed judgment. In addition, citizens should learn the practical steps for responding to questionable information – they should, for example, learn to verify information across multiple independent sources before sharing it, consult fact-checking organisations when encountering sensationalist claims, seek the original context of images or statements circulating on social media and recognise clickbait headlines promising more than the text actually delivers.

Special attention should be paid to older demographic groups and less-educated segments of the population, who often lack access to informal learning channels available to younger and more educated groups. Programmes targeting these groups should be tailored to their prior knowledge, learning styles and practical needs. This may include adaptation of both content and format - slower pacing, repetition of key concepts, use of everyday examples and

practical demonstrations instead of abstract explanations. Participatory formats are particularly effective: citizens can practice on real-life examples, analyse news content, use tools for verifying images and videos, engage in group discussions on how to distinguish news from comment and practice source and context verification. Such programmes can be delivered through workshops using the existing infrastructure, such as libraries or pensioners' associations. It is essential that the programmes are free of charge, geographically inclusive (covering both urban and rural areas) and sustained over time rather than implemented as one-off initiatives that quickly fade.

II. Experts assess systemic support for media literacy in education as low, while PISA results confirm that the education system does not sufficiently develop critical understanding competences among young people. These findings point to the **need for a comprehensive reform of the education system** that positions media literacy as a transversal competence across all levels of formal education, from primary and secondary education to higher education, particularly in teacher training programmes. Such reform should begin with curriculum revision to ensure that media literacy is both introduced as a standalone subject - ideally taught by graduates in media and communication studies - and systematically integrated across other relevant subjects. Integration of media literacy as a cross-curricular competence entails embedding critical media analysis skills within existing subjects where they naturally fit. For example, in history classes, students can critically analyse how media represent historical events and social groups. This approach allows students to develop media competences across multiple contexts and subjects, which reinforces their knowledge and enhances its practical applicability.

It goes without saying that curriculum reform can only be effective if media literacy is first taught by those specifically trained in the field of media and communications and if teachers of other subjects are additionally empowered to guide students in critically evaluating the content they are exposed to. This requires continuous professional development programmes providing the teachers not only with a theoretical understanding of media literacy, but also with practical pedagogical strategies, activities and materials they can use in class. One-off seminars have limited impact, since teachers quickly forget the new knowledge they do not use regularly. Long-term programmes involving mentoring, peer exchange and ongoing support, would be more effective.

Finally, the effects of integrating media literacy into curricula should be systematically evaluated through studies assessing whether students exposed to reformed programmes demonstrate higher competences than previous cohorts. While educational reform does not

yield immediate results, it produces systemic change by raising the overall level of media literacy of the population over time.

III. Structural constraints within the media system directly affect people's ability to develop and apply media literacy skills. Even where individuals possess critical evaluation skills, limited pluralism of perspectives and concentrated ownership structures constrain access to diverse sources that can be meaningfully compared. **Reform of the media system** is therefore a necessary parallel intervention; without it, individual competences will remain only partially applicable.

Strengthening the independence of public service media should be a strategic priority because public broadcasters operating in line with their mandate should serve as models of high-quality, pluralistic journalism, accessible to all citizens regardless of economic status. This requires a fundamental reform of the mechanisms for appointing governing bodies to ensure that the public broadcasters serve the public rather than the interests of the government of the day, as well as transparent and predictable forms of funding enabling planning and safeguarding their independence from political pressure. Public service media must have the resources and institutional autonomy to produce high-quality news, engage in investigative journalism and create educational content that elevates the level of public debate.

Public service media reform should be accompanied by systemic support for independent and local media providing alternative perspectives and covering issues neglected by commercially driven or pro-government media. These outlets frequently operate on the edge of economic sustainability. Transparent public funding mechanisms - based on clear criteria and professional standards - can support their viability without compromising editorial independence. At the same time, support for local media covering regional and common issues ensures access to information relevant to the people's everyday lives, which national outlets often overlook.

Transparency of media ownership should become a binding standard since citizens have the right to know who owns the media they follow and how ownership structures may influence the content they consume. Regulatory frameworks should ensure public access to clear and comprehensible information on media ownership, business interests, funding sources and any conflicts of interest. For examples, individuals are better equipped to assess whether an outlet's reporting is biased if they are aware that it is owned by a company with government contracts.

Finally, the protection of journalists from pressure, threats, physical attacks and lawsuits aimed at silencing critical reporting is a prerequisite for free journalism. Without

journalists who can safely investigate and publish their reports, citizens cannot access high-quality information, regardless of how developed their individual competences are. This requires not only appropriate legal frameworks adequately penalising attacks against journalists, but also effective law enforcement and strengthening rapid legal and institutional response mechanisms when journalists are targeted. Although such measures require political will and may face resistance because they are undermining the status quo, they are indispensable for creating a media environment in which media literacy has substantive purpose.

IV. Low social trust, extremely limited use of privacy protection measures and low trust in artificial intelligence together create an environment in which citizens - even when equipped with knowledge and skills - do not actively participate in the public sphere or adopt emerging technologies that are becoming part of the media ecosystem. **This problem is related to people's views on privacy, their trust in institutions and other people, and their understanding of how the new technologies are reshaping the media landscape.** Interventions in this area must be multidimensional and **target both individual practices and systemic safeguards.**

With regard to the domain of privacy and security, most citizens do not implement basic protection measures, even when they are aware of them. This suggests that they do not perceive the risks – how valuable their data are or the ways in which they can be abused, leading them to treat privacy protection as unnecessary. Awareness campaigns should focus on these issues, combining practical guidance (e.g., disabling tracking, managing app permissions) with clear explanations of concrete ways in which data can be abused. People should understand that privacy protection is not a luxury for those who have something to hide but a fundamental right and a reasonable precaution in the digital environment. Systemic security must be embedded into platforms through binding data protection standards applicable to all digital services - from global platforms to local e-government systems. This includes clear rules on data collection and use, mandatory encryption of sensitive data, automatic deletion of unnecessary data and transparency regarding data sharing. Citizens must have simple tools to control their data, monitor access and withdraw consent. Regulatory frameworks must prescribe effective sanctions for violations of standards, rather than symbolic penalties that large platforms treat as a cost of doing business.

With regard to artificial intelligence, low trust and low usage reinforce one another, creating a vicious circle. Breaking this cycle requires transparent policies governing the use of AI in public institutions and media organisations. Citizens should know when they are

interacting with automated systems not real people, which algorithms select the news they see on social media, how image- and content-generating models are trained and who is accountable for AI errors. Such transparency fosters both trust and understanding. At the same time, education on AI should go beyond technical knowledge to include its societal implications - how AI transforms news and content production, the ethical dilemmas of automated content moderation, how citizens can protect their rights when algorithmic decisions affect them and how to recognise AI-generated content. At the same time, media organisations that use AI for generating or editing content must also ensure transparency and accountability. Ethical standards of AI use in the media should prevent the erosion of human accountability and the spread of disinformation.

References

- Aufderheide, P. (1993). *Media literacy: A report of the National Leadership Conference on Media Literacy*. Aspen Institute.
- Broadcasting Authority of Ireland – BAI (2022). Media Literacy Policy. <https://www.medialiteracyireland.ie/wp-content/uploads/2022/12/BAI-ML-Policy-1.pdf>.
- Bulger, M. (2012). Measuring media literacy in a national context: challenges of definition, method and implementation. *Media Studies*, 3(6), 83-104. <http://hrcak.srce.hr/96376>.
- Celot, P. (2015). *Assessing media literacy levels and the European Commission pilot initiative*. European Association for Viewers Interests (EAVI). <https://eavi.eu/wp-content/uploads/2017/08/assessing.pdf>
- Celot, P. and Pérez Tornero, J. M. (2009). *Study on assessment criteria for media literacy levels: A comprehensive view of the concept of media literacy and an understanding of how media literacy levels in Europe should be assessed* (Final report). European Commission, Information Society and Media Directorate-General, Media Literacy Unit. https://ec.europa.eu/assets/eac/culture/library/studies/literacy-criteria-report_en.pdf
- Centre for Media Pluralism and Media Freedom (2024). Media Pluralism Monitor 2024: Serbia. European University Institute. <https://cmpf.eui.eu/media-pluralism-monitor-2024/>
- Directive 2007/65/EC of the European Parliament and of the Council of 11 December 2007 amending Council Directive 89/552/EEC on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities. *Official Journal of the European Union*, L 332, 27–45.
- DTI & EAVI (2011). *Testing and refining criteria to assess media literacy levels in Europe: Final report*. European Commission, Directorate-General for Information Society and Media, Media Literacy Unit. https://eavi.eu/wp-content/uploads/2017/08/study_testing_and_refining_ml_levels_in_europe.pdf
- EAVI (2011). *Assessing Media Literacy Levels and the European Commission*. <https://eavi.eu/wp-content/uploads/2017/08/assessing.pdf>.
- Erstad, O., & Amdam, S. (2013). From Protection to Public Participation: A Review of Research Literature on Media Literacy. *Javnost - The Public*, 20(2), 83-98.
- European Commission (2009). Commission Recommendation of 20 August 2009 on media literacy in the digital environment for a more competitive audiovisual and content industry and an

- inclusive knowledge society. Official Journal of the European Union, C 257, 1-6. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009H0625>.
- European Commission (2009). Study on Assessment Criteria for Media Literacy Levels. Brussels: European Commission - Expert Group on Media Literacy. https://ec.europa.eu/assets/eac/culture/library/studies/literacy-criteria-report_en.pdf
- European Commission (2011). Testing and Refining Criteria to Assess Media Literacy Levels in Europe Final Report. Commissioned by the European Commission Directorate-General for Information Society and Media; Media Literacy Unit. Danish Technological Institute & European Association for Viewers' Interests. https://eavi.eu/wp-content/uploads/2017/08/study_testing_and_refining_ml_levels_in_europe.pdf
- European Commission (2007). A European approach to media literacy in the digital environment (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2007) 833 final).
- Eurostat (2024). Trust in others by sex, age and educational attainment. Eurostat. https://ec.europa.eu/eurostat/databrowser/view/ilc_pw03/default/table
- FarrPoint (2024). *International Digital Connectivity Readiness Index (DCRI), September 2024*. FarrPoint. https://www.farrpoint.com/uploads/store/mediaupload/1591/file/FarrPoint_International_DCRI_Sept_2024.pdf
- Freedom House (2024). Freedom in the World 2024: Serbia. Freedom House. <https://freedomhouse.org/country/serbia/freedom-world/2024>
- Gemius (2024). Gemius Audience Serbia 2024: Online news portal reach. Gemius. <https://e-public.gemius.com/rs/rankings/12730>
- Government of the Republic of Serbia (2020). Strategija razvoja sistema javnog informisanja u Republici Srbiji za period 2020-2025. godina. *Službeni glasnik RS* 11/2020. https://www.media.srbija.gov.rs/medsrp/dokumenti/medijska_strategija210_cyr.pdf.
- Grizzle, A., Moore, P., Dezuanni, M., Asthana, S., Wilson, C., Banda, F., Onumah, C. (2013). *Media and information literacy: policy and strategy guidelines*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000225606>
- Grizzle, Alton, Torrent, Jordi & Perez Tornero, Jose Mael (2013a). MIL as a Tool to Reinforce Intercultural Dialogue: Principles and Aims of the UNESCO-UNAOC UNITWIN Cooperation Programme on Media and Information Literacy and Intercultural Dialogue. In: Carlsson, Ula & Hope Culver, Sherri (eds.) *Media and Information Literacy and Intercultural Dialogue*, (pp. 9-16). MILID Yearbook, The International Clearinghouse on Children, Youth and Media Nordicom. Sweden: University of Gothenburg. https://milunesco.unaoc.org/wp-content/uploads/2013/04/Media_and_Information_Literacy_and_Intercultural_Dialogue.pdf
- Hobbs, R. (2010). Digital and media literacy: A plan of action. Aspen Institute.
- Jolls, T. & Thoman, E. (2008). *Literacy for the 21st Century. An Overview & Orientation Guide to Media Literacy Education*. Part I: Theory CML MediaLit Kit™ A Framework for Learning and Teaching in a Media Age. Centre for Media Literacy. https://webspace.ship.edu/hliu/etextbook/theory/doc/media%20literacy_v02.pdf
- Ofcom (2023). Future Technology and Media Literacy: Anchor document. <https://www.ofcom.org.uk/siteassets/resources/documents/research-and-data/media-literacy-research/making-sense-of-media/future-technology-trends-and-media-literacy/anchor-document.pdf?v=329832>
- Ofcom. (2025). *Adults' media use and attitudes report 2025*. <https://www.ofcom.org.uk/media-use-and-attitudes/media-habits-adults/adults-media-use-and-attitudes>

- Organisation for Economic Co-operation and Development. (2023). PISA 2022 results (Volume I): The state of learning worldwide – Reading. OECD Publishing. https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/12/pisa-2022-results-volume-i_76772a36/53f23881-en.pdf
- OSCE (2022) *Media users over the age of 65 in Serbia*. <https://www.osce.org/files/f/documents/3/2/541704.pdf>
- OSCE (2025). 2025 Media Literacy of Serbia’s citizens, Survey Research Report. Belgrade. [2025 Media Literacy of Serbia’s citizens, Survey Research Report.pdf](#)
- Pereira, S., & Moura, P. (2022). Assessing media literacy competences: Reflections and recommendations from a quantitative study. *Journal of Media Literacy Education*, 14(3), 79-93. <https://doi.org/10.23860/JMLE-2022-14-3-7>
- Perez-Escoda, Ana, Garcia-Ruiz, Rosa, Aquaded, Ignacio. 2016. International dimensions of media literacy in connected world. *ATI – Appliens Technologies and Innovations*, 12 (2), 95-106.
- Potter, James W. (2022). Analysis of definitions of media literacy. *Journal of Media Literacy Education*. 14(2), 27-43. <https://doi.org/10.23860/JMLE-2022-14-2-3>
- Reporters Without Borders (2024). 2024 World Press Freedom Index. Reporters Without Borders. <https://rsf.org/en/index?year=2024>
- Rowe, G. & Wright, G. (1999). “The Delphi Technique as a Forecasting Tool: Issues and Analysis,” *International Journal of Forecasting*, Vol. 15, No. 3, pp. 53-375.
- SHARE Foundation (2024). Cyber-safety monitoring report 2024: Serbia. SHARE Foundation. <https://monitoring.labs.rs/en>
- Statistical Office of the Republic of Serbia (2023). USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE REPUBLIC OF SERBIA, 2023: Households/Individuals, Enterprises (ISSN 1820-9084). SORS. [G202316018.pdf](#)
- The National Association for Media Literacy Education (NAMLE). 2024. *Media Literacy Framework*. <https://namle.org/resources/media-literacy-defined/>
- Tortoise Media (2025). The Global AI Index. Tortoise Media. <https://www.tortoisemedia.com/data/global-ai>
- UNESCO (2022). Global Standards for Media and Information Literacy Curriculum Development. Paris: UNESCO. https://www.unesco.org/sites/default/files/medias/files/2022/02/Global%20Standards%20for%20Media%20and%20Information%20Literacy%20Curricula%20Development%20Guidelines_EN.pdf
- United Nations Department of Economic and Social Affairs (2024). United Nations E-Government Survey 2024: E-Participation index – Serbia. UN. <https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/151-Serbia>
- Wadhwa, A., & Nandal, S. (2025). Development of an Index in Social Science: A Systematic Literature Review. *The Scientific Temper*, 16(03), 3927–3942. Doi: 10.58414/SCIENTIFICTEMPER.2025.16.3.09