Submitted: 14 October 2024.
Accepted: 7 November 2024
DOI: https://doi.org/10.58527/2303-4033.2024.13.1-2.15
UDK 316.774:37
001.102:37
Original scientific paper

The Role of Media Literacy in the Development of Critical Thinking

IRENA KISS[1]
Jurja Dobrila University of Pula
Faculty of Educational Sciences
Republic of Croatia

Abstract: The conducted research aims to examine young people's attitudes about the role of critical thinking in assessing available media content. Answers were collected using an anonymous questionnaire that included attitudes about exposure to media content, availability of technical infrastructure, and self-assessment of the level of media and information literacy. The research was conducted in October 2024, in the area of Istria, and 109 respondents, high school students and full-time students, participated. The answers were analyzed with the statistical program JASP, including exploratory factor analysis, KMO test and Bartlett's test of sphericity. The results of the quantitative analysis showed that critical thinking is recognized as a basic prerequisite for functioning in the information environment. Educational institutions are suggested to introduce educational programs aimed at a deeper understanding of the mentioned concept, while emphasizing the need to develop media and digital literacy as personal skills and basic competencies.

Keywords: media literacy, critical thinking, information environment, educational programs, media culture

Introduction

The phrase 'cultivating media culture' means the development of critical thinking, analytical skills, and information literacy, all to encourage reflection on media content in a more conscious and responsible manner. It encompasses the interaction between media, technology and audience and reflects the ways in which media and its content influences everyday life, identity, social norms, and cultural values (Kellner, 1995). The development of technology and digitization further changed the media's

irena.kiss@unipu.hr

structure, which has become an instrument of direct influence on the formation of beliefs and attitudes. This is why special attention should be paid to the impact they have on children and young people.

There are positives. The easy availability of educational content in the media means the possibility to easily acquire new knowledge, but uncontrolled use however can overburden cognitive resources, slow down the development of imagination and language, and due to the increased dynamics of changing content, reduce both attention and patience. In contemporary society, characterized by increasingly rapid technological changes, information literacy and media culture become fundamental skills for individuals and the basis for active participation in the democratic process and community development (Hobbs, 2010). With the development of the Internet and social networks, we are increasingly exposed to information from various sources, often unverified and/or biased. This paper investigates the key aspects of media culture, the impact of digitization on the youngest segments of our population, as well as initiatives to encourage information literacy and media culture, with special reference to the already traditional "Days of Media Literacy" project.

'Media culture' encompasses various aspects of the interaction of individuals and society with the media, including the consumption, production, and analysis of media content (Livingstone and Helsper, 2007). On the other hand, 'information literacy' implies the ability to recognize the need for information, as well as the ability to efficiently search, evaluate and use it (Potter 2016). These are related concepts, fundamentally important for the development of critical thinking, especially among young people. When observing the digital environment, the phrase 'information literacy' also implies an understanding of how algorithms shape access to information, again emphasizing the need for critical thinking skills (Hobbs, 2010).

Accordingly, the development of critical thinking makes it easier for individuals to evaluate information, but also to recognize manipulation and fake news. Media education programs that focus on developing critical thinking can improve academic outcomes and foster social responsibility. This skill is useful in an educational context and essential for personal development, enabling better decision-making and developing personal attitudes (Buckingham, 2003).

Changes in the structure of the media, namely digitization, have reshaped traditional media, enabling faster distribution of content via the internet (Kirschner and De Bruyckere, 2017), and the mentioned transformation has enabled everyone to create content at their own discretion, which on the one hand, leads to increased diversity, and on the other, to problems related to the quality and credibility of information (Livingstone and Helsper, 2007). As a result, consumers of information are often faced with challenges in distinguishing reliable from unverified sources.

It is a common opinion that the media has a major influence on the formation of public opinion and attitudes, which is especially true of younger people, although it is not a rule. Exposure to media content can influence attitudes towards social issues, social norms, and personal identity. For example, research shows that fake news can shape political attitudes and beliefs, which highlights the need to develop media literacy (Hobbs 2010).

Digitization has enabled access to a wide range of educational resources that were previously unavailable (UNICEF, 2018), and online platforms (e.g., YouTube, Coursera, Khan Academy) make available numerous free courses and various self-study materials (Hobbs, 2010). Availability stimulates innovation and individual creativity, enabling young people to explore new areas and interests. For example, according to research by Common Sense Media (2021), more than 80% of young people, among other things, often use internet content for educational and research purposes.

On the other hand, as mentioned above, uncontrolled use of digital media can lead to information overload and result in reduced attention spans and concentration problems. Research has shown that young people who spend more than three hours a day using social networks have frequent problems with anxiety and depression (Common Sense Media, 2021). The situation requires prompt access to educational activities aimed at media literacy and the promotion of healthier digital habits (Kirschner and De Bruyckere, 2017).

The EU's legislative framework for media literacy is defined by the directive on audiovisual media services, found in its guidelines for the audiovisual sector regulation (European Commission, 2020). The main goal is to ensure the protection of all users, especially children and young people, from potentially harmful content, while simultaneously

promoting cultural diversity and encouraging the development of local media (Livingstone and Helsper, 2007). The regulation requires that all platforms contain mechanisms to protect users from inappropriate and harmful content and ensures the promotion of local content to nurture and preserve cultural heritage (European Commission, 2020).

In this way, legislative frameworks, in addition to setting preconditions for user protection, encourage cultural diversity, strengthen identity, and provide support to local communities (Livingstone and Helsper, 2007). Maintaining the diversity of media content in a global world is a prerequisite for understanding diversity in perspectives or cultures. In this context, educational programs should emphasize cultural diversity positively and adopt media literacy to develop the skills necessary to navigate in a complex media space (Hobbs, 2010).

Considering the ubiquity of digital media, the digital habits of pupils and students have become an essential part of their everyday life (Common Sense Media, 2021). In a survey aimed at young people, most respondents declared they use different platforms every day for communication and socializing and learning. However, a significant part of the respondents admitted problems related to the excessive use of media, which are most often manifested by concentration disorders (Kirschner and De Bruyckere, 2017). This requires an active approach to education aimed at media literacy with continuous promotion of healthier digital habits (Hobbs, 2010). It is important to emphasize the importance of cooperation between educational institutions, students, and parents to create an environment that encourages a healthy relationship with the media. Examples of good practice include the integration of workshops on internet safety, identifying potentially harmful news and developing communication skills into school curricula (UNICEF, 2018).

This research, focused on media and information literacy conducted among pupils and students, opened up space for thinking about the need for more intensive work on shaping their digital habits and cultivating media culture, for the purpose of a better quality of life.

Aim and hypotheses of the research

The goal of the research is to examine users' attitudes about the role of critical thinking in evaluating available media content. In accordance with the goal, three hypotheses were set:

H1: There is a positive correlation between critical thinking and media literacy

H2: Frequent verification of the accuracy of information on the internet is positively related to awareness of the risks of disinformation

H3: Technical infrastructure has a direct impact on the effectiveness of using digital media

This research's purpose is to understand the importance of critical thinking in evaluating media content, especially among the young population. Accelerated technological development and the ubiquity of the media make information closer and more accessible, but also more susceptible to misinformation (Wardle and Derakhshan, 2017), which emphasizes the need for education on its critical evaluation.

Research participants and measuring instrument

The research is aimed at the young population, i.e. people under the age of 25 (World Health Organization, 2024), and included 109 respondents, high school students and full-time students in the Republic of Croatia, specifically in Istria County. Participation was anonymous and voluntary, conducted through an online questionnaire designed to assess attitudes, behavior, and level of digital and media literacy. Participants could withdraw from filling out the questionnaire at any time.

Participants were selected by contacting their educational institutions directly. The research instrument, the questionnaire, was originally compiled for the purposes of this research, and consists of several closed and one open question, in the form of a five-point Likert scale (Norman, 2010). In addition to demographic data, which related to age, gender, place of residence, type education and work activity, the questions are aimed at: investigating attitudes about the importance of checking available information and analyzing media content (critical thinking); technical aspects of internet use (stability, speed, access) and finally, the perception of social networks and attitudes about media and information literacy. The measuring instrument, the questionnaire, consisted of 20 questions, including: closed demographic questions; questions with the help of a Likert scale that allowed respondents to rate their perceptions on a scale from 1

to 5; self-assessment questions of personal media and information literacy and the last, open-ended question focused on reflections on the challenges and opportunities brought by ubiquitous digital media. Data collection was carried out via a link to the questionnaire, which was distributed from October 9, 2024, until October 10. 2024, and respondents were invited to participate via Microsoft Teams and e-mail. During the research, ethical principles were respected, including the anonymization of data and the voluntary participation of the respondents, who were informed about the aim and results of the research.

The data was analyzed with the statistical support of JASP, a program that allows detailed analysis of collected responses (Goss-Sampson, 2024). To identify the latent variables within the data set, an exploratory factor analysis was performed, which included: a Kaiser-Meyer-Olkin (KMO) test to assess the fit of the sample (whose value of 0.686 showed good fit); Bartlett's test of sphericity, which also showed a significant difference ($p < 0.001$) confirmed the suitability of the data for factor analysis and the Chi-square test ($p < 0.001$), which confirmed the statistical significance of the model. Bartlett's test is used in factor analysis research to test whether data sphericity can be assumed, which is an assumption for the validity of many multivariate statistical techniques (Hair *et al.*, 2010). Chi-square is a method used to test the existence of statistically significant differences between expected and actual (observed) frequencies (Agresti, 2007). This measurement instrument covered a wide range of topics related to critical thinking, the use of the Internet and social networks, information and medical literacy, and the data analysis carried out in JASP enabled a deeper understanding of the relationship between the mentioned variables, emphasizing the role of education and empowering respondents in critical thinking and responsible use of the media.

Research results

Factor analysis reveals structures or factors in the background of complex data (Tabachnick and Fidell, 2019). It enables the identification of latent variables that explain the interrelationship between other variables, thereby reducing their number to a smaller number of factors, while at the same time retaining key information (Field, 2013). Table 1 shows the KMO and MSA test values of the conducted research.

Table 1. Kaiser-Meyer-Olkin (KMO) test i MSA (Measure of Sampling Adequacy)

	MSA
Overall MSA	**0.686**
Internet access: I always have reliable and stable Internet access.	0.667
Internet access: I can connect to the Internet wherever I am.	0.674
Internet access: I can perform all my duties and activities online without difficulty.	0.748
Internet access: I have access to high-speed Internet to use the services.	0.801
How often do you check the accuracy of the information you read on the Internet?	0.675
Negative sides of using social networks - creating stereotypes.	0.724
Negative sides of using social networks - reduction of social interaction.	0.680
Negative sides of using social networks - increasing distance from reality.	0.650
Positive sides of using social networks and other media content - availability.	0.669
It is important to use accurate information that is relevant to the issue at hand.	0.764
It is important to use terms judiciously and follow the implications of the decisions we are considering.	0.844
Critical thinking encourages the ability to analyze media messages.	0.832
Critical thinking encourages privacy protection.	0.650
Critical thinking encourages refraining from publishing incorrect information.	0.717
Educational and scientific institutions - theoretical and practical content complement each other logically.	0.683
Educational and scientific institutions - assessments of the adopted contents' understanding are done often enough.	0.754
Topics important to cover in media and information literacy - security.	0.782
Topics important to cover in media and information literacy - stereotypes.	0.705
Topics important to cover in media and information literacy - communication.	0.764
It is acceptable for preschool children to be exposed to social networks.	0.683
It is acceptable for preschool children to be exposed to other media content.	0.700

Exploratory Factor Analysis
Values obtained greater than 0.600 are shown.

The individual MSA values show that most of the variables have adequate

values, with variables such as: "It is important to use terms judiciously and follow the implications of the decisions we are considering" (0.834); "Critical thinking encourages the ability to analyze media messages" (0.832); "Access to fast internet" (0.801); "Security as a topic that is important to address in the field of media and information literacy" (0.782); "Educational and scientific institutions are often enough to assess the understanding of the adopted content" (0.754); "Communication as a topic that is important to process from the field of media and information literacy" (0.764); "It is important to use accurate and relevant information" (0.764) show a very high suitability, which means that the mentioned variables have a strong connection with other variables in the analysis, which contributes to the formation of reliable factors. The KMO test gives a value of 0.686, which is a very solid result indicating that the data has a good fit for factor analysis.

Table 2. Bartlett's test of sphericity

X^2	df	p
1214.022	435.000	< .001

Bartlett's test of sphericity with its significance ($\chi^2 = 1214.022$, df = 435, $p < 0.001$) suggests that there is a sufficiently strong correlation between the variables that justifies the implementation of factor analysis, i.e., the obtained data contains meanings and patterns that can be defined by factors.

Table 3. Chi-squared test for the model

	Value	df	p
Model	483.802	321	< .001

In this case, the χ^2 model is 483,802 (with degrees of freedom df = 321 and $p < 0.001$) and suggests the existence of significant data variability through the extracted factors. In addition to the stated statistical significance, the indicators of factor loadings provide additional confirmation of the model's relevance, shown below.

Table 4. Factor loadings

Factor Loadings	Factor 1	Factor 2	Factor 3	Factor 4	Uniqueness
Critical thinking encourages the analysis of media content	0.690				0.481
Important topics in media literacy - security	0.657				0.508
It is important to use accurate and relevant information	0.641				0.501
It is important to use terms judiciously	0.633				0.510
Critical thinking encourages privacy protection	0.612				0.647
Critical thinking encourages refraining from publishing incorrect information	0.567				0.607
Important topics of media literacy - communication	0.512				0.661
Positive sides of social networks - availability	0.489				0.510
Important topics in media literacy - stereotypes	0.476				0.757
Internet access - always and everywhere		0.749			0.494
Internet access - enough for basic work		0.692			0.514
Internet access - reliable and stable		0.685			0.542
I have access to high-speed internet		0.497			0.628
Frequent checking of information accuracy			0.818		0.343
The importance of verifying the accuracy of information			0.668		0.513
Confidence in publishing information			0.599		0.632
How much do you use social networks - LinkedIn			0.402		0.815
Negative side - less social interaction				0.677	0.491

Factor Loadings	Factor 1	Factor 2	Factor 3	Factor 4	Uniqueness
Acceptability of children's exposure to the media				-0.500	0.620
Negative side - creating stereotypes				0.491	0.570
The negative side - distance from reality				0.414	0.702
Verification of information - importance					0.781
Daily use of social networks - up to 2 hours					0.855
Daily use of social networks - up to 3 hours					0.792
Use of social networks - Facebook					0.942
Use of social networks - Instagram					0.987
Positive sides of social networks - availability					0.706
Theory and practice are complemented during the education					0.849
Assessments and understandings are made often enough					0.742
Acceptability of children's exposure to the media					0.732

Note. Applied rotation method is promax.

Four factors were singled out:

Factor 1: Critical thinking and media literacy

Factor 2: Internet access and digital connectivity

Factor 3: Information Verification and Information Literacy

Factor 4: Negative sides of social networks

The first factor, "Critical thinking and media literacy" includes variables with high item loadings: "Critical thinking encourages the analysis of media messages" (0.690), "Important topics from media literacy - security"

(0.657), "It is important to use accurate and relevant information" (0.641), and "Critical opinion encourages privacy protection" (0.612). It is a factor that highlights the key dimensions of the information world, critical access to information and education. Explaining most of the variance, it suggests that the participants are aware of the importance and impact of media literacy. The result shows that respondents can recognize and evaluate the media's potential impact on social life and the need to develop a critical attitude towards the information they receive (Potter, 2004).

The second factor, "Access to the Internet and digital connectivity" relates to variables related to networking and Internet access, with the highest loadings on the items: "Access to the Internet - always and everywhere" (0.749), "Access to the Internet - sufficient for basic work" (0.692), "Reliable and safe access to the Internet" (0.685), and reflects the need for uninterrupted, stable access, necessary for the performance of official duties, but also social functioning.

The third factor "Checking information and information literacy" refers to the accuracy of information and its checking, with the highest loading on the variables related to "Frequent checking of accuracy" (0.818) and "Importance of checking accuracy" (0.668), showing a high level of awareness of the need to verify information, which is an extremely important aspect of information literacy.

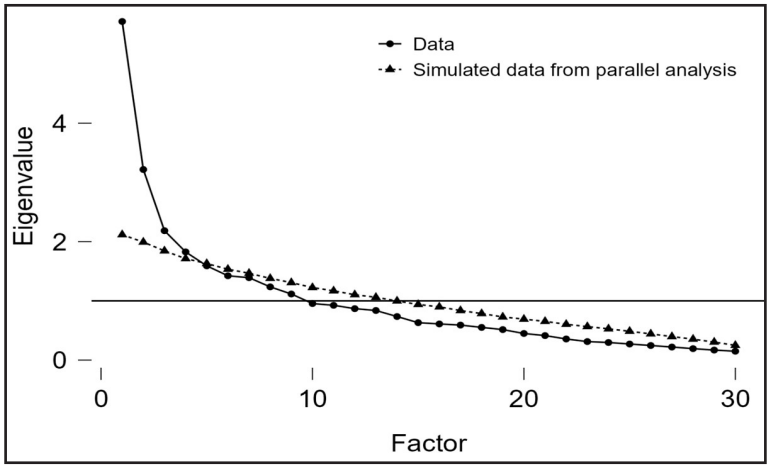
The fourth factor "Negative sides of social networks", covers negative aspects with the highest load on the variable related to "Less social interaction" (0.677) and a slightly smaller one on "Negative side - creation of stereotypes" (0.491), which gives insight into social implications and emphasizes the awareness of the problems of excessive use of social networks and their consequences.

Table 5. Correlations between factors

	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**
Factor 1	1.000	0.327	0.136	0.148
Factor 2	0.327	1.000	0.175	-0.121
Factor 3	0.136	0.175	1.000	-0.141
Factor 4	0.148	-0.121	-0.141	1.000

The correlation presented shows that these isolated factors are moderately correlated, whereby the first and second factors "Critical thinking and media literacy" and "Access to the Internet and digital connectivity" have a correlation of 0.327, which suggests a connection with the specific information each of them carries. Smaller correlations of other factors indicate the coverage of several aspects of the research, from media literacy to the negative implications of using social networks. All factors are shown in the following graphs.

Graph 1: Graphic representation of factors



Source: JASP, questionnaire analysis, author processing

The factor analysis identified key dimensions, whereby four factors were singled out, focusing on critical thinking, access to the Internet, checking information and negative aspects of social networks. The above results provide a basis for further research and can help in understanding digital and media literacy by providing a deeper understanding of how individuals relate to information on the Internet and social networks, and how they develop the skills needed to evaluate and analyze them. The above results support the need for further research that will enable deeper learning about each of these factors and their mutual influence, as well as their role in the educational process and the promotion of media literacy.

Days of Media Literacy

Among the successful, generally accepted activities adopted in the Republic of Croatia, the increasingly well-known "Days of Media Literacy" project was launched in 2018 with the aim of promoting media literacy among the population, primarily among children and young people (Agency for Electronic Media, 2023). The project includes numerous different activities aimed at all age groups, such as workshops, seminars and various public events, with the purpose of education on the connection between critical thinking and responsible use of media content. The participation of numerous educational institutions encourages an interdisciplinary and multidimensional educational approach, and the combination of different methods has a great, positive impact (UNICEF, 2018).

Projects like "Media Literacy Days" represent a significant step towards the development of these skills, encouraging broad, intensive cooperation between educational and other institutions. Through workshops, seminars and public debates, participants were encouraged to actively participate in the creation of new media content, thereby developing digital skills, as well as awareness of their own social role. Through such projects, media culture becomes a key tool for identity building and a bridge for global connectivity, reflecting common values, attitudes, and norms of society, making the media a key space through which social ideals and identities are shaped and transmitted (Silverstone, 1999). The evaluations carried out after the lectures held (as part of the aforementioned event) on May 2, 2022 and April 25, 2023 on the topics "How to recognize clickbait" and "Critical evaluation of information sources" showed that the lectures were instructive and useful, (although for most, the topic was already familiar), the contents are clear, and that the majority of respondents had the possibility to participate actively. Among the open-ended responses, the opinion that educational institutions should pay more attention to the topic of critical evaluation of information sources stood out.

Feedback also showed that the participants acquired useful skills that can be used in everyday life, and the positive results indicated an increase in awareness of the increasing risks in the digital environment, as well as the importance of strengthening social skills (Kellner and Share, 2007). In addition to the above, it is necessary to emphasize the importance of the Directive on audiovisual media services (European Union, 2018),

which seeks to create and ensure the proper functioning of the single market, while simultaneously contributing to the promotion of cultural diversity and providing a higher level of protection. In this way, through continuous and thoughtful improvement, media culture becomes a means of strengthening identity on the one hand, and a bridge that connects people around the world on the other.

Discussion

Exposure to a large amount of information through various media channels requires the development of critical thinking skills and their application when analyzing and interpreting information (Paul and Elder, 2006), which is why the analysis drew attention to the role of media and information literacy in modern society, especially among younger people. Considering that due to the rapid development of technology and digitalization, the media world is exposed to continuous changes, it becomes necessary to empower users with a critical approach to all available content. For this reason, education programs focused on information and media literacy must, in addition to theoretical aspects, include practical skills that enable active analysis and the creation of new content (Hobbs, 2010).

The success of critical thinking is also reflected in a person's ability to recognize potential bias, manipulation, and inaccurate information. These elements are ever-present in the digital world. Research shows that young people are often not adequately educated enough to distinguish accurate sources from misinformation. Among them is a study by the European Commission which showed that over 50% of fifteen-year-olds in the EU cannot recognize biased information, and a third of eighth graders do not have basic digital skills. Initiatives like the Digital Education Action Plan (2021 - 2027), the EU continuously emphasizes the role of digital literacy in the fight against misinformation, through education that includes all educational institutions, but also media experts and civil society (EU, 2024). In this way, the aspiration for a more comprehensive educational approach that includes strategies for detecting and avoiding fake news and potentially harmful content is emphasized.

In addition to the above, research shows that excessive use of digital content can lead to problems, among which is attention retention, anxiety

and learning disabilities (Kirschner and De Bruyckere 2016). Therefore, it is essential to implement educational programs that will facilitate the development of healthy digital habits for young people. Targeted workshops and educational content on internet safety, media literacy and critical thinking can significantly influence the development of critical thinking and the use of digital platforms (UNICEF, 2018).

The research's aim was to examine users' views on the role of critical thinking in the assessment of available media content, and the factor analysis provided insight into four dimensions, or factors, which confirmed the three set hypotheses.

The first hypothesis, according to which critical thinking positively correlates with media literacy, showed staunch support through factor analysis. The analysis of responses that emphasize the role of using relevant and verified information resulted in a high load within the first factor "Critical thinking and media literacy". The above indicates the key role of critical thinking in understanding and evaluating available information, which requires the ability to analyze and evaluate sources and content, which encourages the need for targeted educational interventions.

The second hypothesis, frequent verification of the accuracy of information on the internet is positively related to awareness of the risks of misinformation, was also confirmed by factor analysis. A finding, according to which respondents who check the accuracy of internet information show a serious level of knowledge about the risks that misinformation entails and a greater degree of responsibility when using digital content. High factor values for variables related to checking information and online sources further confirm the link between developed critical thinking and the tendency to chec k. Today, the dimension mentioned is becoming increasingly important.

The results confirm the third hypothesis: technical infrastructure has a direct impact on the efficiency of using digital media and show high factor loadings in the variables aimed at stability, quality, and speed of internet access. Respondents who have better access to the internet show a greater ability to use digital resources effectively, which suggests that the technological infrastructure has a direct impact on the way Internet services are used. The combination of the above results and the confirmation of the set hypotheses indicate the connection between critical thinking, the level of awareness of young respondents about risks and access to media content

and indicate the fact that digital and media literacy relate to a broader ability to evaluate and judge available content.

The results of the research suggest that critical thinking, in addition to the ability to analyze and verify information, is a skill that employers increasingly take for granted. The skill of distinguishing between accurate information and misinformation has become essential for both personal development and professional success.

The final conclusion of these results is aimed at dealing with the thesis that the level of critical thinking is closely related to the frequency of checking the accuracy of Internet content and points to the necessity of including systematic education about media literacy in both school and university educational plans in order to empower young people in the information environment. The research's results emphasized the role of media literacy in the process of empowering young people in digital society. The work encourages future studies on the topic of media and digital literacy, as well as educational approaches necessary to address the challenges brought about by digitalization. It can also serve as a basis for the development of focused educational programs and initiatives. The contribution of science is manifested in encouraging debate among educators, decision makers and experts about the role of media literacy. The topic has significant implications for future generations, and the research can help shape strategies that will support the development of critical thinking and digital skills in the future. A longer, longitudinal study should be conducted (Mužić, 2004). Then, the subjectivity of respondents when self-assessing their media and information literacy is possible, as well as the influence of socially desirable answers, which could have occurred despite the anonymity of the questionnaire.

It is necessary to remember that technology and media change rapidly, which is why continuity is needed to follow developing trends and their social impact. Also, qualitative research, such as interviews with respondents and educational process participants, would provide deeper insight into their perceptions and individual experiences.

Conclusion

In a world of easily accessible information and ubiquitous digital content, media literacy is becoming an indispensable part of education and employment. Research shows that critical thinking, media and digital skills are key to understanding this complex world. At the same time, the cultivation of media culture as a set of beliefs, values, customs, behavior, and communication practices that shape the way individuals and societies understand, create, and perceive media content, should not be neglected. It can be seen as a key part of modern culture because it affects how we understand the world, how we communicate and value certain information or lifestyles. It is a sphere in which entertainment, education, but also commercialization is intertwined, and which plays a key role in shaping contemporary social identities (Lewandowsky *et al.*, 2012).

This research contributes to the strengthening of media culture and the empowerment of young generations for responsible and critical use of digital media by improving our understanding of critical thinking and media literacy. This encourages awareness of the importance of critical reflection and responsible use of information in the ubiquitous digital environment, as well as support for the development of quality educational program for media and information literacy (Hobbs, 2011). The results provide an empirical basis for the creation of new educational approaches, programs and workshops, especially within the formal education system. Topics that young people consider important, such as safety, the creation of stereotypes and the development of communication, have been identified, which can lead to more precise planning and designing of lesson plans.

By singling out the factor related to internet access and digital connectivity, the technical aspect of equal access to digital media and the possibility of increasing general information literacy is emphasized. By identifying factors that cover the negative sides of social networks, such as reduced social interaction and the creation of stereotypes, the research contributes to a greater awareness of their harmful effects on social relations, which can be the basis for further research and the development of strategies to promote media literacy, as well as other, broader educational and educational topics.

It is necessary to emphasize this research's limitations. Critical thinking and media literacy are subjective categories that can be perceived differently, which can make their accurate interpretation difficult. Given that the

sample includes only young people, the results are not applicable to the wider population. Also, self-reporting in questionnaires can result in biases such as socially desirable responses or the tendency to present an idealized version of one's own behavior (Podsakoff *et al.*, 2003).

Digital media and social networks are developing rapidly, and new trends and new platforms and technologies are constantly emerging, which can limit the relevance of research over time because, in line with technological development, the attitudes and behaviors of young people change. Categories such as critical thinking are best assessed through long-term changes in behavior and attitudes, and the research was conducted in a relatively short period of time and focused only on specific aspects of media literacy, so limiting the focus can narrow the interpretation. Also, without adequate consideration of cultural differences, research results may be more difficult to apply in distinct cultural contexts.

Based on the results of the factor analysis, recommendations for future research that would further contribute to the understanding of critical thinking and media literacy among young people would be to include a wider and more diverse sample of young people, including respondents from different educational and sociodemographic environments (rural and urban environments, different areas, and countries). This approach would enable a more detailed comparative analysis and generalization of the results. Considering the dynamics of the development of critical thinking and media literacy, it is important to conduct longitudinal research that would monitor changes over time (Potter, 2010). Long-term monitoring would facilitate the identification of factors that permanently affect the development of skills and the observation of changes caused by technological innovations and social trends. Future research could further extend factor analysis with new variables to confirm or refute the existing components of media literacy and critical thinking. At the same time, variables such as emotional intelligence in the digital environment or specific ways of interpreting and evaluating information can give a deeper insight into the factors of critical thinking.

By considering the cultural context, a comparative study among distinct cultures could reveal specific patterns of behavior and values and help develop culturally adapted educational programs (Buckingham, 2003). Given that the digital environment is constantly evolving (Selwyn, 2022), research into the impact of innovative technologies and platforms on

critical thinking and media literacy is recommended to uncover new challenges and opportunities.

Also, young people often create their attitudes towards the media under the influence of their immediate environment, especially family and friends, which is another area suitable for research. It would also be interesting to investigate the effects of fake news and misinformation with the purpose of developing specific educational strategies (Allcott and Gentzkow, 2017). The above recommendations provide a basis for further research that could contribute to a deeper understanding of the factors and variables identified in this paper's initial factor analysis.

Media literacy should not be just an item in the educational program but a fundamental educational component, because only with a comprehensive and systematic approach is it possible to ensure the development of critical thinking and the ability to analyze media content, which represent a key step in creating an informed, conscious society.

The conclusion of the research is that an elevated level of critical thinking is positively related to the frequency of checking the accuracy of available information. This indicates the necessity of including systematic media literacy education in school and university curricula with the aim of media empowerment for young people (Halpern, 2014). Additionally, the results suggest that developed critical awareness and the ability to evaluate media sources contribute not only to individual media empowerment but also to the creation of collective resistance to inaccurate information, which is the key to maintaining an informed society in the digital age. Factor analysis of the conducted research confirmed the impact of key dimensions of media literacy, among which critical thinking, source analysis and recognition of misinformation stood out.

References

Agencija za elektroničke medije. 2023. *Dani medijske pismenosti*. Zagreb: Agencija za elektroničke medije. Accessed 10 October 2024. (https://www.aem.hr/dani-medijske-pismenosti)

Agresti, Alan. 2007. *An Introduction to Categorical Data Analysis*. Hoboken, New York: Wiley.

Allcott, H., and Matthew Gentzkow. 2017. "Social Media and Fake News in the 2016 Election." *Journal of Economic Perspectives* 31 (2): 211-236.

Buckingham, David. 2003. *Media Education: Literacy, Learning and Contemporary Culture*. Cambridge: Polity Press.

Common Sense Media. 2021. *The Common Sense Census: Media Use by Tweens and Teens*. San Francisco: Common Sense Media. Accessed 11 October 2024. (https://www.commonsensemedia.org/research/the-common-sense-census-media-use-by-tweens-and-teens-2021)

Europska unija. 2018. "Direktiva (EU) 2018/1808 Europskog parlamenta i Vijeća od 14. studenoga 2018. o izmjeni Direktive 2010/13/EU o usklađivanju određenih odredaba utvrđenih zakonom, propisom ili upravnim postupkom u državama članicama u vezi s obavljanjem djelatnosti pružanja audiovizualnih medijskih usluga (Direktiva o audiovizualnim medijskim uslugama), s obzirom na promijenjene tržišne stvarnosti." Službeni list Europske unije L303: 69-92.

European Commission. 2020. *Digital Education Action Plan 2021-2027*. Bruxelles: European Commission. Accessed 30 September 2024. (https://ec.europa.eu/education/education-in-the-eu/digital-education-action-plan_en)

European Union. 2024. *Tackling Disinformation and Promoting Digital Literacy*. Learning Corner. Accessed 11 October 2024. (https://learning-corner.learning.europa.eu)

Field, Andy. 2013. *Discovering Statistics Using IBM SPSS Statistics*. Thousand Oaks, CA: Sage.

Goss-Sampson, A. Mark. 2024. *Statistical Analysis in JASP 0.18.3: A Guide for Students*. (https://jasp-stats.org/wp-content/uploads/2024/03/Statistical-Analysis-in-JASP-2024)

Hair, Joseph F., Black, William C., Babin, Barry J. and Anderson, Rolph E. 2010. *Multivariate Data Analysis*. Pearson Prentice Hall.

Halpern, Diane F. 2014. *Critical Thinking across the Curriculum: A Brief Edition of Thought and Knowledge*. Mahwah, NJ: Lawrence Erlbaum. (https://doi.org/10.4324/9781315805719)

Hobbs, Renee. 2010. *Digital and Media Literacy: A Plan of Action*. Washington, DC: The Aspen Institute. Accessed 11 October 2024. (https://eric.ed.gov/?id=ED523244)

Hobbs, Renne. 2011. Digital and media literacy: Connecting culture and classroom. Thousand Oaks, CA: Corwin.

Kellner, D. 1995. *Media Culture: Cultural Studies, Identity and Politics Between the Modern and the Postmodern*. Routledge. (https://doi.org/10.4324/9780203205808)

Kellner, Douglas and Jeff Share. 2007. "Critical Media Literacy, Democracy, and the Reconstruction of Education" New York: Peter Lang Publishing.

Kirschner, Paul A. and Pedro De Bruyckere. 2017. "The Myths of the Digital Native and the Multitasker" *Teaching and Teacher Education* 67: 135-142.

Lewandowsky, Stephan, Ullrich. K. H. Ecker, Collen. M. Seifert, Schwarz, Norbert and Cook, John. 2012. Misinformation and Its Correction: Continued Influence and Successful Debiasing. *Psychological Science in the Public Interest 13* (3), 106-131. (https://doi.org/10.1177/1529100612451018)

Livingstone, Sonia and Ellen Helsper. 2007. "Gradations in Digital Inclusion: Children, Young People and the Digital Divide." *New Media & Society* 9 (4): 671-696. (https://doi.org/10.1177/1461444807080335)

Mužić, Vladimir. 2004. *Uvod u metodologiju istraživanja odgoja i obrazovanja*. Zagreb: Educa d.o.o.

Norman, G. 2010. "Likert Scales, Levels of Measurement and the 'Laws" of Statistics'" *Advances in Health Sciences Education* 15 (5): 625 - 632.

Podsakoff, Philip M., Scott B. MacKenzie, Jeong-Yeon Lee, and Nathan P. Podsakoff. 2003. "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies" *Journal of Applied Psychology* 88 (5):879-903.

Potter, W. James. 2004. *Theory of Media Literacy: A Cognitive Approach*. Thousand Oaks, CA: Sage Publications.

Potter, W. James. 2010. "The State of Media Literacy" *Journal of Broadcasting & Electronic Media* 54 (4): 675-696. (https://doi.org/10.1080/08838151.2011.521462)

Potter, W. James. 2016. *Media Literacy*. Thousand Oaks, CA: Sage Publications.

Paul, Richard and Linda Elder. 2006. *Critical Thinking: Tools for Taking Charge of Your Learning and Your Life*. Upper Saddle River, New York: Pearson Prentice Hall.

Selwyn, Neil. 2022. *Education and Technology: Key Issues and Debates*. London: Bloomsbury.

Silverstone, Roger. 1999. *Why Study the Media?* London: Sage Publications.

Tabachnick, G. Barbara and Fidell, S. Linda. 2019. *Using Multivariate Statistics*. Pearson.

UNICEF. 2018. *Digital and Media Literacy: A Guide for Parents and Educators*. New York: UNICEF. Accessed 11 October 2024. (https://www.unicef.org/reports/digital-and-media-literacy-guide-parents-educators)

Wardle, Claire, and Hossein Derakhshan. 2017. *Information Disorder: Toward an Interdisciplinary Framework for Research and Policy Making*. Strasbourg: Council of Europe.

World Health Organization. 2024. *Adolescent and young adult health*. Accessed 11 October 2024. (https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions)

Uloga medijske pismenosti u razvoju kritičkog mišljenja

Sažetak: Cilj provedenog istraživanja je ispitati stavove mladih o ulozi kritičkog mišljenja u procjeni dostupnih medijskih sadržaja. Odgovori su prikupljeni anonimnim upitnikom koji je obuhvatio stavove o izloženosti medijskim sadržajima, dostupnosti tehničke infrastrukture i samoprocjenu razine medijske i informacijske pismenosti. Istraživanje je provedeno u listopadu 2024. godine, a sudjelovalo je 109 ispitanika, učenika srednje škole i studenata redovitog studija na području Istarske županije. Rezultati su analizirani statističkim programom JASP, obuhvativši eksploratornu faktorsku analizu, KMO test i Bartlettov test sferičnosti. Rezultati kvantitativne analize pokazali su da je kritičko mišljenje prepoznato kao osnovni preduvjet funkcioniranja u informacijskom okruženju. Obrazovnim institucijama sugerira se uvođenje obrazovnih programa usmjerenih dubljem razumijevanju navedenog koncepta, uz isticanje potrebe razvoja medijske kulture promicanjem medijske i digitalne pismenosti kao osobnih vještina i temeljnih kompetencija.

Ključne riječi: medijska pismenost; kritičko mišljenje; informacijsko okruženje; obrazovni programi, medijska kultura