Digital Resilience in the Age of AI: The Role of Media and Information Literacy (MIL) in Empowering Gen Z and Enhancing ESG Outcomes

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A coherence between media and information literacy (MIL), digital resilience, empowerment of Gen Z, and Environmental Social Governance (ESG) could be seen as a complex contemporary phenomenon in the context of the development of Artificial Intelligence (AI), when MIL acts a structural mechanism, which enables Gen Z to become digitally resilient and influence ESG outcomes accordingly. Empirical research on MIL in Lithuanian Gen Z individuals aged 16-19 and 20-24 revealed a moderate level of MIL, which further increases in the group of 20-24 years old. However, research results revealed that the respondents tend to be less reactive and thus take no proactive efforts, particularly in analysing the digital content from different perspectives or warning others regarding fake news. Recognising the identified gaps in MIL, the study proposes comprehensive solutions through the implementation of ESG-aligned practices aimed at strengthening digital resilience among Gen Z.

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1 Introduction

The development of ***Artificial Intelligence (AI)*** is recognised as a driving force for economies and societies at the global level. Scientific literature emphasises its power to enable organisations to respond more efficiently and proactively to ***Environmental, Social, and Governance (ESG)*** areas (Hamdouni, 2025; Lulewicz-Sas et al., 2025). ESG framework, which was presented first time in the report "Who Cares Wins: Connecting Financial Markets to a Changing World" (United Nations, 2004), is a set of standards, policies and metrics used by organisations and investors as a crucial measure to assess both the societal and environmental impact of their operations and to shape the future of nations, businesses, and consumers (A guide to ESG: what is it and why does it matter?, 2024; Pérez et al., 2022). For example, *environmental* aspects are reflected through the organisational practices to decrease carbon emissions, energy usage, waste management, and pollution control; *social aspects* could be visible through the company's relationships with employees, suppliers, customers, and communities, covering aspects such as labour practices, human rights, and community engagement; and finally, *governance* aspects may be reflected in the quality of corporate governance, including the structure and behaviour of the board of directors and shareholder rights (Krishnan, Yang & Tan, 2024).

While implementing progressive AI based machine learning, predictive analytics and automation tools, organisations can increase productivity, innovation capacity, organisational efficiency and, in ESG terms, they maintain their environmental and social responsibility, and governance quality and robustness (Lulewicz-Sas et al., 2025; Hamdouni, 2025).

It is worth noting that AI also significantly impacts the media and information contents, and the ways in which they are created, processed and interpreted (Sergeeva et al., 2025). Although AI may be used to generate novel content of high quality, such as images, text, or music for positive purposes, AI is also employed to produce *fake news* in such ways that the detection of misleading or even harmful information becomes very complicated (Devrim, 2025). Thus, AI as a powerful tool is also being used to fabricate ESG outcomes, when organisations emphasise their commitment to sustainability at economic, social and /or ecological levels, including implementing *greenwashing* techniques, i.e. vague /false statements about

sustainability practices (Di Pillo, Palombi & Strazzullo, 2025). The society, in return, positively evaluates organisations, which plan, implement and monitor the revelation of ESG outcomes in their organisational processes.

It should be stated that the generation of ***Gen Z***, which consists of the individuals who are born between 1997 and 2012, is significantly interested in personalised experiences that align with ESG values (Cao et al., 2026). These values are reflected in "organisational ecological environment, its coexistence and interaction with human and other populations, and the corporate system of internal control and procedures" (Lulewicz-Sas et al., 2025, p. 635). The choice of ESG based values among Gen Z could be noticed not only from a customer but also from employee perspective - for example, the scientific research of Lulewicz-Sas et. al. (2025) revealed that employees are more engaged if society and corporate governance-related ESG are in place.

On the other hand, since Gen Z literally grew up with digital technologies, it is very familiar with various digital tools and welcomes AI-driven experiences well (Cao et al., 2026). In addition, Gen Z individuals especially are dealing with huge amounts of data and information and thus experience various challenges in managing and acting upon them. Patel et al. (2025) note that the exposure to false or misleading information significantly influences Gen Z individuals because they might accidentally create and share misinformation without even realising it (Zagni & Canetta, 2023). Thus, we need to employ ***MIL*** as the fundamental defence against these challenges because it allows people to doubt human and AI-generated content (Devrim, 2025). In scientific literature media literacy traditionally is defined as "the ability to encode and decode the symbols transmitted via media and synthesise, analyse and produce mediated messages" (National Association for Media Literacy Education, n.d.). By enhancing MIL, individuals can navigate the digital ecosystem more responsibly, avoiding the negative impacts (Susilawati, Halfiani & Wahyuni, 2024).

It may be argued that Gen Z, despite its significant digital involvement, doesn't possess good digital MIL skills (Gherguţ-Babii, Poleac & Obadă, 2025; Mercenier, Wiard & Dufrasne, 2021). Young individuals access the information easily but are not able to evaluate critically or they may use media only for social connections (Susilawati, Halfiani & Wahyuni, 2024). Accordingly, digital naivety causes a

vulnerability gap, which creates risks for cyberbullying, misinformation, and other digital harms. Such a context requires the employment of MIL in such a way that it leads to *digital resilience*.

We state in this Chapter that MIL, which leads to digital resilience, is supposed to act as an empowerment tool of Gen Z to enhance ESG outcomes because of Gen Z attitudes to sustainability.

Empowering Gen Z individuals is challenging because of dual obstacles: their limited skills concerning MIL and a macro environment which lacks support for ESG based values. For example, weak environmental awareness, social polarisation and instability, challenges to good governance, lack of transparency etc. can be seen among the examples of disabling macro environment. Various digital technologies including AI, while used to produce fake news, also do their harm in damaging public trust and decreasing stability of information ecosystems and democratic systems (Patel, Jain & Mathew, 2025). Thus, ***a research question*** is formulated as follows: How to empower Gen Z to enhance ESG outcomes through MIL leading to digital resilience in the context of AI?

Exploring the solutions to this research question is quite challenging as a significant gap in terms of availability of scientific literature exists in establishing the relationships between i) AI and ESG outcomes (Hamdouni, 2025), ii) MIL and ESG outcomes, while MIL itself is more portrayed as a cognitive skill (Blumberg et al., 2017), which is a quite static approach but not a dynamic approach considering the need for digital resilience and empowerment of Gen Z. Finally, empowerment itself should be understood as a complex phenomenon. Considering these statements, ***we are aimed*** at presenting the complex phenomenon of MIL, digital resilience, Gen Z empowerment and ESG outcomes by adapting a multilayer interdisciplinary approach. The research is organised as follows: the first section provides theoretical insights regarding MIL, digital resilience, Gen Z empowerment and ESG outcomes; the second section presents research methodology of empirical research on MIL vulnerability among Gen Z in two different groups 16-19 years old and 20-24 years old; the third section presents the empirical results of the performed research, while the section of Discussion also presents a conceptual framework regarding interconnections of MIL, empowerment of Gen Z, and digital resilience.

2 Literature Review

2.1 Media and information literacy (MIL) as a competence to tackle fake news

The topic of ***media and information literacy (MIL)*** is gaining more significance during the years. It is being emphasised and evaluated in various strategic documents at European Union and national levels since MIL is one of the prerequisites of successful and qualitative digital education. Because of its significance, MIL is called the foundational skill for democracy in the 21st century (Boyd & Dobrow, 2011; Jolls & Johnsen, 2017) to deal with fake news. MIL enables individuals to evaluate information, recognise fake news, and make informed choices (Gherguț-Babii, Poleac & Obadă, 2025).

Fake news, which as the term first emerged in 2016 during U.S. presidential election (McDougall, 2019), could be defined as inaccurate, false, or grossly distorted information (with no verifiable facts, sources or quotes to deceive the audience (Obadă & Dabija, 2022; University of Michigan Library, n.d.). Fake news can be divided into three types of information disorder, such as misinformation, disinformation and mal-information, and seven forms of manifestation, such as satire or parody, false connection, misleading content, false context, imposter content, manipulated content and fabricated content (The Commons: Social Change Library).

Misinformation is false information that is created and spread without an intention to harm or deceive ((The Commons: Social Change Library).). Misinformation could be recognised in spreading incorrect rumours; jumping to conclusions, accidentally relying on bad sources (Gunner, 2021). According to Ackland & Gwynn (2020), misinformation also includes satire news, conspiracy theories and hoaxes, which may be humorous or malicious, and often involve citing a trusted source.

Disinformation, on the contrary, spreads with the intention to deceive or cause harm (The Commons: Social Change Library). Disinformation reveals itself in starting untrue rumours, leaving out details and intentionally using bad sources (Gunner, 2021)

Finally, *mal-information* is deliberate publication of private information for personal, corporate or political, rather than public interest (The Commons: Social Change Library).

Fake news can be analysed through a shared network, aimed group and focused area. The area mostly includes animals, celebrities, food and diets, body image and sexuality, beauty and fashion, health, shopping, technology, crime and politics (Examples of Fake News Relevant for Young People, 2019). MIL–the ability to critique, understand, and analyse media–plays a crucial role in mitigating the effects caused by negative news (Susilawati, Halfiani & Wahyuni, 2024). According to Devrim (2025), media literacy functions through four operational dimensions which enable users to access content and use it and analyse it critically and generate new content and produce ethical creative work.

In the age of AI, MIL has a significant emphasis on the digital aspect. Thus, *digital* MIL encompasses skills related to accessing, navigating, and interpreting information across digital platforms and thus it is essential for effective usage of AI technologies (Sergeeva et al., 2025). Digital MIL includes three core aspects: *technical literacy* (proficiency in using digital tools), *cognitive literacy* (critical thinking and reasoning), and *socio-emotional literacy* (responsible and ethical online behaviour) (Ng 2012; Suwarto, Setiawan & Machmiyah, 2022). According to Perdana et al. (2019), essential elements of digital literacy include critical thinking, creativity, information assessment, and proficient utilisation of digital media.

One should state that Gen Z individuals, which are competent in MIL, may enhance ESG outcomes only if their MIL skills make them digitally resilient. Following Park et al. (2024) statement that "*resilience-based approaches seek to maintain people's autonomy and ability to self-regulate when facing harms, instead of paternalistically shielding them from encountering risk"*, it is obvious that only *proactive* behaviour towards fake news impacts positively ESG outcomes.

2.2 Media and information literacy as an empowerment tool for Gen Z to enhance ESG outcomes

In general terms, ***empowerment*** encompasses individuals' autonomy in decision-making regarding duties and tasks (Khany & Tazik, 2016). In this Chapter, we are concentrating on two main types of empowerment - ***structural*** and ***psychological***. At the organisational level, structural empowerment focuses on policies and practices to direct power, decision-making authority and responsibility to lower levels of the organization (Sun, Zhang & Chen, 2012). In other words, we mean various conditions that are provided for individuals to perform a particular task using their own autonomy. In the case of ESG outcomes, an organisation implemented the structures and processes, based on ESG metrics, which encourage to behave sustainably at ecological, social and environmental levels. Choi, Jeong & Park (2024) confirmed that ESG activity recognition has a positive relationship with self-efficacy and empowerment of employees to use their autonomy for decision-making. At a wider level, the structural empowerment of ESG systems means that, for example, the governments create mandatory reporting standards, frameworks that align economic growth, community /societal needs, environmental preservation with sustainability. In the case of digital dimension (MIL and digital resilience), structural empowerment is based on officially creating transparent, ethical practices, systems and procedures to fight fake news and increase societal MIL.

Structural empowerment is supposed to increase ***psychological empowerment of individuals***, which Llorente-Alonso, García-Ael & Topa (2023) sees as "a subjective, cognitive, and attitudinal process that helps individuals feel effective, competent and authorized to carry out a task". Psychological empowerment consists of the following factors - *meaning* (the value seen in implementing tasks or goals); *competence* (to fulfil the tasks); *self-determination* (or autonomy), and *impact* (the degree to which behaviour is seen as "making a difference") (Spreitzer, 1995; Khany & Tazik, 2016; Sun, Zhang & Chen, 2012).

The current context doesn't seem very empowering to enhance ESG outcomes from a Gen Z perspective. According to McDougall (2019), in the Digital Era 4.0, the amount of dissemination of negative news, such as reports on violence, corruption, kidnapping, pornography, hate speech, and bullying, through digital platforms like Instagram, Twitter, TikTok, Facebook, and Telegram, seems very concerning. It is

even more concerning because society in general likes negative news (Susilawati, Halfiani & Wahyuni, 2024) but Generation Z, immersed in digital media from a young age, is particularly vulnerable to the psychological effects of such exposure (McDougall, 2019).

The influence of older generations may also not always be positive because older generations don't possess good MIL skills although they consume a lot of data and information (McDougall, 2019) presented through social media platforms - Pariser (2011) states that it creates "filter bubble" phenomenon, when the provision of algorithm driven information limits the exposure of other beliefs and opinions, and other opinions are unheard.

Low digital MIL among individuals also impacts lower levels of *civic engagement* (Gherguț-Babii, Poleac & Obadă, 2025) and it explains why sometimes a significant proportion of the society is not motivated to influence the changes. Gen Z is seen as the generation that it is not interested in political matters, such as voting. We could state that if Gen Z individuals deal with data and information in passive ways, they will be less interested in civic engagement, and in return it increases their vulnerability to fake news, as they lack the critical MIL necessary to discern credible sources from false information (Gherguț-Babii, Poleac & Obadă, 2025). The vulnerability to fake news increases because Gen Z also is searching for the confirmation of credibility among peers rather than researching traditional, scientific ways (Hassoun et al., 2025).

According to Maulana et al. (2024), engaging youth in media initiatives and educational schemes may positively impact their engagement in activities regarding environmental protection, benefiting both youth and ecosystems because MIL influences individuals' understanding of ecological issues, and thus shaping environmental awareness. It could be stated that MIL contributes to the development of eco-media literacy (López, 2023) with its deeper insights into environmental impacts.

However, although Gen Z is closely connected to environmental and social approaches, its insufficient MIL skills restrict digital resilience and the manifestations of ESG based behaviour because such a behaviour requirescritical accessing and evaluation of data and information, distinguishing real sustainable initiatives from

greenwashing and other misinformation, taking initiative to encourage sustainable behaviour at different levels.

3 Media and information literacy (MIL) among Gen Z: manifestations and challenges

This section presents research methodology to evaluate MIL among Gen Z and empirical research results to present the manifestations of MIL among Gen Z in the following age groups – 16-19 years old and 20-24 years old.

3.1 Research methodology to evaluate media and information literacy (MIL) among Gen Z

Pilot research was performed to evaluate disinformation vulnerability of 9-12 grade students (16-19 years old) in Lithuanian secondary education institutions (secondary schools, gymnasia and vocational education institutions, which provide the secondary education) and young students between 20-24 years old, which should already have more competence and skills to evaluate news on the media. It was expected to collect at least 100 fully answered questionnaires for exploratory purposes.

The Lithuanian media literacy index, which is calculated by Open Society Institute Sofia, is 58 points out of 100 points in 2026 (Open Society Institute Sofia, 2026). This index is the same as in 2022 (Lessenski, 2022). The highest media literacy index in 2026 belongs to Denmark, Finland, Ireland and Netherlands (71 points for each of these countries). Although Lithuania is not doing badly being in the second cluster of countries, the index still doesn't change, and the media literacy index looks average. These reasons show the importance of researching Lithuanian context.

The Assessment tool – questionnaire, which was used in the research, was created in the Project SPOTTED, where we both, the Authors of the Chapter, were part to (Herrero-Diz & Muñiz-Velázquez, 2022). This questionnaire served to meet the following research objectives regarding Gen Z in the age groups - 16-19 years old and 20-24 years old, as follows: 1) to analyse how much the research participants provide credibility to information or news they receive from social networks, Internet or the smartphone in basic checking (6 items-statements), quantitative

reading level (4 items-statements), qualitative reading level (4 items-statements) and understanding the purpose of a particular news (5 items-statements); 2) to analyse the sharing of any information or news received on social media, Internet or mobile phone (6 items-statements).

The respondents were asked to evaluate each statement by 5 point-Likert scale, by choosing among "1 Never / 2 Rarely/ 3 Sometimes/ 4 Usually / 5 Always". It is important to note that the respondents were received a Lithuanian version of the questionnaire.

The questionnaire was developed in the online format with a link to share in the secondary, vocational and higher education institutions under the permission of their heads. In the case of students until 18 years old, the parental permission to be a part of research had to be received. The educational institutions organised this process.

The questionnaire was anonymous - no personal data, which could help us to identify the respondents were collected. The respondents were supposed to only mention their age, gender (male/female/other), city and study institution type (secondary, vocational, higher education).

In the beginning of the questionnaire, the respondents were provided with an explanation in a written form that the participation in the research is voluntary and the respondents are permitted to withdraw whenever they want, without having to give explanations; that all data obtained in the study will be anonymous and will be used only for the research purposes. In addition, it was emphasised that only the respondents 16 years of age or older are supposed to participate in the research.

The respondents were also provided with a contact (kristina.grumadaite@ilk.lt) to ask any questions regarding this research.

3.2 Empirical research results as reflection for a need of digital resilience

From 147 received answered questionnaires, 91 questionnaires were fully answered. 38 % of respondents simply stopped in between or even in the final stage of the questionnaire without evaluating all the statements. We assume that this

questionnaire was quite long for Gen Z. However, only fully answered questionnaires were used for further analysis.

57 fully answered questionnaires in the age group of 16-19 years old were collected. The questionnaire was performed by 22 males, 33 females, neither men nor women - 2. The most of respondents were from Kaunas district (30), the rest were from Utena district (3), Telšiai district (7), Šiauliai district (2), Klaipėda district (7), Marijampolė district (4), Panevėžys district (3), Alytus district (1).

In comparison, 34 fully answered questionnaires from the respondents who are more than 20 years old but no more than 24 years old, were collected. 67.65 % of them are from Kaunas city (Lithuania). 21 of the respondents were women.

We didn't notice any differences among the answers in the case of city, gender or the type of educational institution, most of the differences were noticed while analysing both age groups. Thus, further presentation of data is concentrating on the age factor.

Table 1: Basic checking

		Often or always (16-19 years old)	Often or always (20-24 years old)	Rarely or never (16-19 years old)	Rarely or never (20-24 years old)
1.	I check if the author of the content or news is there.	38,60 %	58,82 %	33,33 %	20,59 %
2.	I look to see if the website or the medium is known.	47,40 %	70,59 %	15,79 %	2,94 %
3.	I verify that the web address is credible.	50,88 %	67,64 %	24,56 %	14,71 %
4.	When it's a video, I check to see who made it.	35,08 %	47,58 %	38,60 %	17,65 %
5.	I look to see if the information is recent.	42,11 %	61,76 %	26,31 %	17,65 %
6.	I check if the photo corresponds to the rest of the content.	43,86 %	58,82 %	24,56 %	11,43 %

Source: Authors' own work

Basic checking. This group of items includes checking the presence of the author of the news and video, credibility of website and web address, coherence of photo and content, and the timing of the news (Table 1). Research results revealed that at

least one third of the respondents, who are 16-19 years old, rarely or never check the existence of the author of the content or news. This situation improves in the age group of 20-24 years old, including the fact that there is no one from this group who never checks the name of the author (only 7 respondents from this age group are doing it rarely) (Table 1).

More positive results among the youth of 16-19 years old are in the case of seeing whether the website is known: 47,40 % of respondents are doing it always or often, while only 15,79 % of respondents are doing it rarely or never.

The situation even more improves in the case of respondents, which are more than 19 years old. 70,59 % of respondents mentioned that they are doing this often or always. Only one of them never does it.

50,88 % of respondents (16-19 years old) verify the credibility of a web address, while 24,56 % of respondents are doing it rarely or never.

In the case of the respondents who are more than 19 years old, 67,64 % of them always or often verify the credibility of a web address, while only five respondents are doing it rarely or never (14,71 %).

A concerning situation is seen in the case of checking the author of the video. 38,60 % of respondents (16-19 years old) do it never or rarely; 26,32 % of respondents do this sometimes.

The respondents, which are more than 19 years old, seem more aware of the necessity to know the author of the video. Only 6 of them (17,65 %) mentioned that they are doing it never or rarely but almost half of the respondents (47,58 %) are doing it always or often.

However, considering that 35,29 % of respondents are doing it sometimes, it shows *that video content is still being taken for granted despite the age group.* In general, we could state that if a respondent doesn't check the author of the video, he /she won't check the author of the news as it is.

In the case of 4th and 5th items, better results of MIL again are seen in the age group of 20-24 years old (Table 1).

Quantitative reading level. This group of items consists of the need to read the entire news or content, finding contacts or other information about the author of the news and comparison of the information with other sources (Table 2). Out of the 4 items, the most concerning results are revealed regarding checking the contacts or other information about the author of the news - only 14,04 % of respondents of 16-19 years old often or always are looking for the contact of the author of the news (Table 2).

Table 2: Quantitative reading level

		Often or always (16-19 years old)	Often or always (20-24 years old)	Rarely or never (16-19 years old)	Rarely or never (20-24 years old)
1.	I need to read the entire news or content.	47,37 %	44,12 %	19,3 %	20,59 %
2.	I look to see if I can contact the author or find more information about him or her	14,04 %	38,24 %	45,61 %	28,76 %
3.	I compare the information with other sources.	31,58 %	58,82 %	28,07 %	20,59 %
4.	I'm good with reading only the headline	24,56 %	38,24 %	31,58 %	32,35 %

Source: Authors' own work

Although the results are better in the case of other items, the overall results are not satisfying because still quite a big number of respondents are not very attentive, don't care much about information comparison and feel quite good reading only the headline, especially in the younger age group (Table 2): for example, ***24,56 % (14) of respondents agree that they often or always feel good with reading only the headline. 43,86 % (25) do it sometimes.*** 19,3 % (11 respondents) from this age group even don't need to read the content of the entire news. In the case of the latter situation, the respondents of 20 years old or more demonstrate quite similar results.

Qualitative reading level. It includes evaluating reliable sources, proper presentation of the news, timing of the news and expressiveness of the headline (Table 3). Looking at Table 3, almost a half of the respondents from the age group

of 16-19 years old (47,37 %) often or always check the reliability of the sources of the news, while a third of respondents (33,33 %) are doing this sometimes. It is important to note that *there are still some individuals who rarely or never note this.* The results regarding the respondents 20 years old or more seem better, however, there are still some respondents (5 in total), who never or almost never do this.

Table 3: Qualitative reading level

		Often or always (16-19 years old)	Often or always (20-24 years old)	Rarely or never (16-19 years old)	Rarely or never (20-24 years old)
1.	I note whether the information contains data or figures from reliable sources.	47,37 %	67,65 %	19,3 %	14,71 %
2.	I check whether the information is well presented (without spelling errors, grammatical errors, etc.)	45,61 %	52,94 %	24,56 %	8,82 %
3.	I will doubt a story if the headline is too attention-grabbing.	31,58 %	58,82 %	28,07 %	20,59 %
4.	I think about whether the content I'm receiving is related to the present.	33,33 %	58,83 %	15,79 %	11,76 %

Source: Authors' own work

It is important to note that *only 9 respondents from the age group of 16-19 years old confirmed that they always have the doubt regarding the expressiveness of the headline*, while 24,56 % of respondents are doing it rarely or never. However, regarding respondents of 20 years old or more, the results are the opposite: 64,71 % of respondents always or often have this doubt, and only 5 respondents are doing it never or rarely.

15,79 % of respondents 16-19 years old rarely or never are thinking about whether the content they are receiving is related to the present. *50,88 % are doing it sometimes,* thus it shows that there is a probability to read and even to share the news, which may be outdated

In the case of the respondents 20 years old or more, 11,76 % of the respondents (4 respondents) are doing it rarely or never, 29,41 % of the respondents are doing it sometimes.

Purpose or aim. Table 4 presents the results about the willingness of the respondents to differentiate the context of the news and analyse the impact of it on them and others. Research results reveal that the minority, but still 9 respondents of 16-19 years old age rarely or never can differentiate the possible humorous aspect of the news or content. Even more positive results are seen in the case of of respondents of 20 years old or more, while only 3 respondents are doing it never (1 respondent) or rarely (2 respondents).

Table 4: Purpose or aim

		Often or always (16-19 years old)	Often or always (20-24 years old)	Rarely or never (16-19 years old)	Rarely or never (20-24 years old)
1.	I clearly differentiate if the news or content is humorous or a joke.	45,61 %	61,76 %	19,3 %	8,82 %
2.	I think about whether the information is trying to influence my emotions (make me laugh, angry, outraged…)	28,07 %	41,18 %	19,3 %	20,59 %
3.	I analyze whether the content, in addition to informing, has another purpose (political, ideological, economic...).	31,58 %	44,12 %	36,84 %	26,47 %
4.	I think about whether the information is intended to harm someone or something.	33,33 %	70,59 %	26,32 %	5,88 %
5.	I clearly distinguish between what is information and what is opinion.	56,14 %	64,71 %	15,79 %	11,76 %

Source: Authors' own work

The Table 4 also reveals that news analysis skills should be improved - approximately one third of respondents of respondents 16-19 years old don't analyse the purpose and context of the news. ***26,32 % of respondents 16-19 years old never or rarely think about the possible harm of the information (15 respondents)***, 33,33 % of

respondents (19 respondents) think about it often or always. The improvement of this aspect is visible among the respondents of 20 years old or more, when 70,59 % of the respondents often or always think about it, and only 2 respondents never or rarely think about it.

Table 5: Dissemination

		Often or always (16-19 years old)	Often or always (20-24 years old)	Rarely or never (16-19 years old)	Rarely or never (20-24 years old)
1.	When information or content amuses me (funny message), I share it immediately, without fact-checking it.	43,85 %	32,36 %	31,59 %	44,12 %
2.	If a news item makes me outraged or angry, I share it immediately, without cross-checking it.	7,02 %	8,82 %	77,19 %	73,53 %
3.	When I get a piece of news that makes me happy, I share it quickly, without having to cross-check it.	45,61 %	41,18%	24,57 %	35,29 %
4.	When sharing content, I simply seek to entertain myself and my friends.	43,86 %	29,41 %	11,76 %	50 %
5.	I share news or content with the main intention of influencing the opinion of others.	15,79 %	11,76 %	61,40 %	70,59 %
6.	If I know it's false, I share it to warn my contacts.	29,82 %	38,24 %	38,60 %	38,24 %

Source: Authors' own work

Dissemination. Table 5 represents the results of the intention to share particular information, and it reveals quite satisfying results regarding the following items:

– *Sharing funny information without fact-checking it.* In the age group of 16-19 years old: always – 6 respondents (10,52 %); often – 19 respondents (33,33 %); sometimes – 24,56 % – of respondents; rarely – 14 respondents, and never – 4 respondents. 32,36 % of respondents of 20 years old or more are doing it often or always, but almost half of the respondents (44,12 %) are doing it rarely (11 respondents) or never (4 respondents).

– *Sharing anger provoking news without cross-checking it.* Most of the respondents of 16-19 years old (35, or 61,40 % of them) ***never*** do this. Additional 9 respondents are doing it rarely. Only 4 respondents share such news. In the case of the respondents, which are 20 years old or more, 52,94 % of respondents ***never*** do this.

Although the respondents aren't eager to share anger provoking news, gratifying news is shared more often without fact-checking.

It is also necessary to note that the respondents aren't intended to warn others regarding noticed fake news – only 29,82 % of the respondents in the age group of 16-19 years old always or often share this with others. In general, more than third of the respondents of both age groups never warn others about fake news.

4 Discussion

This Chapter emphasises that ESG includes governance, social and ecological dimensions, which are more directed to organisations, but not to individuals. However, although individuals don't own ESG, they can make an impact on these dimensions, for example, achieving more sustainable and resilient outcomes. In such a sense, micro-behaviour makes an impact on macro behaviour.

The most challenging areas regarding MIL. Empirical research results presented in the Chapter reveals that MIL skills will improve with age: the respondents in the age group of 20-24 years old demonstrated better results in all MIL aspects in comparison to the 16-19 years old age group. The most concerning areas regarding MIL are noticed in 1) (non)checking the availability of the contact and additional information about the author of particular news; 2) reading only headline without reading the entire news; 3) analysing the reliability of the sources of particular news; 4) recognising the over-expressiveness of a particular headline which may be fake; 5) checking the timing of particular news; 6) analysing news context, especially before sharing it with each other.

Reactiveness vs. Proactiveness regarding media. The Dissemination part of empirical research clearly shows the attitudes of Gen Z towards media as a platform to share the news that make them happy (not sad or angry) and allow them to

entertain themselves and their friends, even without cross-checking it. It confirms the statements in the scientific literature that Gen Z uses social media more for joyful communication and consumption (Panagiotou, Lazou & Baliou, 2022) than creating new solutions. Other signs of *reactiveness, but not proactiveness regarding fake news* are as follows: not informing others much about recognised fake news; not giving much effort in analysing the purpose of particular context although this content may seek to create political, economic or ideological impact; not sharing the news or content to influence the opinion of others.

It could be stated that such results reveal a limited psychological empowerment of young individuals especially in the areas of understanding of "making a difference" with particular actions (such as warning others about harmful information) and seeing the value in implementing particular tasks i.e. being active participants in MIL field (Llorente-Alonso, García-Ael & Topa, 2023). Such results indicate that quite a big proportion of the respondents don't look like change agents to influence changes in the external environment, including ESG outcomes, because having competence to recognise positive and negative aspects (for example, waste management, community engagement, quality of corporate governance, etc.) itself doesn't create the desired changes On the contrary, digital resilience is about how to promote ESG reforms proactively even in the face of adverse circumstances because digital resilience is explained through possessing digital skills, the self-efficacy with technology, and being able to effectively give and receive support(Lee & Hancock, 2023). It is obvious that a basic checking of news and sharing it with the peers for fun is not about digital resilience. Digitally resilient individuals are not stepping back but employ all digital competence to face and adapt the circumstances.

The reactiveness regarding behaviour in media platforms requires MIL education. The limitations of psychological empowerment to become digitally resilient may be reduced by structural empowerment ((Sun, Zhang & Chen, 2012), and we state that MIL education could be as one of the most significant tools to empower individuals. MIL education could be implemented at individual and systemic levels. *Individual level* is related to self-education and training of critical thinking, while *systemic level* is related to educational programs at state level and training systems in the business organisations. Scientific literature emphasises that the approach of a dynamic MIL education should be employed because it is not about reactive tools, such as fact-checking and verification tools, but, on the

contrary, helps to facilitate resilient media engagement among young people (McDougall, 2019; Wardle & Derekhshan, 2017). It is also advisable to combine the training of MIL with cultural studies, to develop critical thinking.

Since young people are very community oriented, it would be necessary to develop MIL programmes in education sector, involving the peers (Gherguț-Babii, Poleac & Obadă, 2025). The latter statement reflects Gen Z social characteristics in fact checking with their peers, which could be strengthened by forming peer networks for collaborative learning and enabling peer-to-peer support within online communities (Hassoun et al., 2025).

5 Conclusions

Media and information literacy (MIL) is an essential competence of a complex and multifaceted nature that can enable Generation Z to critically evaluate information, reducing the risk of disorder of information and protecting their psychological well-being in order to increase digital resilience and thus to empower individuals to effectively impact the functioning of ESG systems for a long term. Thus, MIL should not be viewed merely a cognitive skill but a structural mechanism, which enables Gen Z to influence ESG outcomes. However, it is emphasised that only digitally resilient individuals could impact ESG outcomes because they behave proactively, not reactively. We state that digital resilience is formed through psychological empowerment (meaning, competence, self-determination and impact) and structural empowerment (providing all the necessary tools for performing particular actions). However, Gen Z tends to be passively reactive as the organisations / institutions aiding them don't actively promote them to be proactive and thus structurally don't empower them with essential digital skills and tools.

Empirical research, which was oriented into two age groups (16-19 years old and 20-24 years old) of Gen Z, to test their vulnerability regarding fake news and their MIL skills, revealed that their MIL skills are moderate with a noticeable improvement in the age group of 20-24 years old. However, these skills seem more reactive than proactive – the respondents mostly recognise fake content but not intend to inform others about it or simply scroll down or interact with peers without analysing the aim or purpose of particular content. Thus, such Gen Z individuals don't seem much empowered to enhance ESG outcomes because these require proactive actions.

Since the empirical research was exploratory, further research with an increased scope is required. Because of a limited number of respondents, it was challenging to establish the connection between different items, such as gender or educational institution type. In addition, the empirical research results present the current status of MIL but don't reveal the empowerment phenomenon and strong connections with ESG outcomes.

Thus, future empirical research could be performed by employing a qualitative and quantitative research methodology, which could reveal the complex phenomenon of MIL, digital resilience, ESG outcomes and interrelations among them. Future empirical research could help to answer the following questions: 1) how does wider (political, economic, socio-cultural, technological, ecological, legal) environment *structurally* influence the enhancement of meaning, competence, self-determination and impact of Gen Z regarding MIL and digital resilience? 2) how does MIL and digital resilience are related through *psychological empowerment*? 3) What are the revelations of ESG outcomes, which could be enhanced through the employment of MIL?

In the case of quantitative research approaches, additional scales could be used such as Moral Disengagement Scale (Paciello et al., 2008) or Scale Values in Action, with special emphasis on critical thinking (Park & Peterson, 2006).

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