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Media literacy skills in the exercise of digital citizenship of university students in Peru

Doris Fuster-Guillen[1]
Graciano Garcia Samuel Josue[2]
Yoselin Andrea Huapaya-Capcha[3]
Liz America Chacchi Gabriel[4]
Ronald Miguel Hernandez-Vasquez[5+]

[1,2]*National University of San Marcos, Lima, Peru.*
[1]*Email: dfusterg@unmsm.edu.pe*
[2]*Email: chamugraciano@gmail.com*
[3]*Technological University of Peru, Lima, Peru.*
[3]*Email: yoselin.huapaya@unmsm.edu.pe*
[4]*Enrique Guzman y Valle National University of Education, Lima, Peru.*
[4]*Email: lchacchi@une.edu.pe*
[5]*Research Group on Innovation in Education and Health, Senor de Sipan University, Chiclayo, Peru.*
[5]*Email: ronald.hernandez@outlook.com.pe*

(+ Corresponding author)

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ABSTRACT

The objective of this study was to analyze the relationship between media literacy skills and the exercise of digital citizenship among Peruvian university students. The research was conducted using a quantitative approach, through an explanatory, cross-sectional design based on the positivist paradigm. The sample consisted of 444 students from 17 universities, selected through stratified probability sampling. Two validated questionnaires with high levels of reliability ($\alpha = 0.962$ and $\alpha = 0.939$) were used to collect data, ensuring the internal consistency of the instruments used. The results revealed that 66% of students have an intermediate level of media literacy, while 60% exercise their digital citizenship irresponsibly, evidencing a worrying disconnect between the use of technologies and the development of civic competencies. Through structural equation modeling, a positive, significant, and structural relationship ($\beta = 0.724$) was identified between the two variables, demonstrating that limitations in media skills negatively affect critical, ethical, and responsible participation in digital environments. This study is particularly relevant in the Peruvian educational context, where widespread access to the internet does not always translate into thoughtful and civic-minded use of digital media. In this sense, it is concluded that integrating media literacy into university curricula is essential, promoting critical thinking, digital responsibility, and the formation of active and conscious citizens in a society increasingly influenced by media and technology.

Contribution/ Originality: This study demonstrates how the development of media skills directly influences more ethical and critical digital participation, highlighting the urgency of integrating them into Peruvian university education. Furthermore, its results provide key insights for rethinking educational strategies that strengthen digital citizenship in increasingly complex technological contexts.

1. INTRODUCTION

Media literacy is fundamental because it allows the active participation of people in the social, labor, cultural, and political spheres of each individual. For a democratic society to function fully, it is necessary to have a critical mass

of citizens capable of understanding and exercising their rights [1]. Likewise, in the context of the multimodal culture of the 21st century, where information circulates constantly, a literate subject must be able to handle the different codes and forms of expression of the current languages (audiovisual, textual, and digital), but also have the skills to delimit the information, analyze it, and convert it into knowledge. This perspective implies rethinking the classic concept of literacy, proposing that its purpose is to prepare people to use in a reflexive, critical, and appropriate way the information that circulates through the various digital tools and platforms currently available [2]. The exercise of digital citizenship involves incorporating democratic, deliberative, participatory, and autonomous values, which are recognized by law but are also under constant construction. Actively participating in the digital environment does not depend only on being present or using technologies daily, but requires developing specific skills to interact consciously and responsibly. Although we all know how to read and write online, as well as manage social networks, even our students, this does not mean that we can critically engage with the digital space. To achieve this, it is necessary to develop specific competencies. From this perspective, the digital citizen is not limited to being a simple user but becomes the protagonist of a process of media appropriation, using them to listen to and recognize themselves, in an active and transformative exercise [3].

In relation to media literacy, we start from the fact that most of our time is spent in contact with the media, making it essential to obtain an education about them. Many times, we do not know how these media work or what interests are behind them. Understanding that hardware, software, or digital technologies have been created by people with generally commercial purposes, as well as recognizing that our personal data has value in the market, is precisely one of the purposes of media education: to encourage reflection, analysis, and critical thinking about the use of various media.

Media education aims to develop individuals' ability to critically analyze various aspects of communication, facilitating a deeper understanding of its content and meanings. This includes, for example, learning to question who produces messages, to whom they are addressed, what meanings they convey, and what they represent in reality [4]. In the field of digital citizenship, numerous ethical issues emerge, such as false advertising, cruelty, cyberbullying, the use of social networks to denigrate others, excessive competitiveness, intolerance towards differences, unfounded judgments, and the circulation of harmful content; these raise questions about the positive or negative influence on the understanding of what it means to participate as a citizen. Considering that students frequently use technology, it is essential to equip them with tools that enable respectful, safe, and responsible communication and collaboration in digital environments [5, 6]. The need to communicate and collaborate online in both safe and responsible ways has given relevance to the concept of digital citizenship [7-9]. In this sense, media literacy, understood as the ability of students to access different media and critically analyze messages coming from audiovisual media, radio, the Internet, and print media, is key to exercising digital citizenship. This implies the development of behaviors oriented toward the safe, ethical, responsible, and legal use of communication and information technologies [10].

Research on digital citizenship and media literacy is supported by two main theoretical approaches: community action theory and expectancy theory. The Goldman et al. [11] expectancy theory of media literacy is based on dual processing models, reflected in systems. On the one hand, reasoning involves analytical thinking, being slower and deliberate; it is oriented to achieve specific goals in certain situations. Kahneman [12] and, on the other hand, the associative process, characterized by being more intuitive, fast, and automatic, is used in everyday contexts. The Media Integration Model postulates that developing the capacity for critical analysis of information sources and content allows making decisions and acting based on beliefs supported by evidence, based on adequate media literacy. This is because media skills influence the way in which information is sought and used [13]. For this reason, media literacy training is fundamental, as it motivates students to consult diverse sources and to develop strategies such as lateral reading [14]. According to Habermas [15], on the theory of community action within the framework of digital citizenship, the most effective generation of information is achieved through dialogue. The construction of truth, in

this approach, is a collective and progressive process, where ideas are adjusted and corrected jointly to overcome errors and misinterpretations [16].

2. LITERATURE REVIEW

2.1. Media Literacy

It is appropriate to discuss the concept of media literacy. According to the European Commission, this is understood as the ability to access media, understand them, produce content, and evaluate them critically. It also points out the importance of developing these skills due to the rapid expansion of digital technologies and their increasing presence in different areas of life, such as education, culture, business, recreation, and politics. Media literacy can be defined as: "The power of entry to submit to critical analysis and evaluation to convey media messages, such as video, film, television, Internet, and advertisements in different formats, whether written or non-written" [17-19]. In turn, it results in the acquisition of skills to interpret and convert codes of the television and sound broadcasting media system, as well as media that make use of ICT and print media [20]. Media and information literacy is understood as the ability to apply critical thinking when obtaining and producing media content. This competence also involves being aware of one's personal and social values, assuming the responsibilities associated with the ethical use of information, actively participating in cultural dialogue, and maintaining personal autonomy, even in contexts where this may be threatened in subtle or difficult-to-identify ways. In addition, UNESCO [21] mentions media and information literacy focused on five possible primary competencies: critical thinking, comprehension, creativity, intercultural awareness, and citizenship De Pablos Pons and Ballesta Pagan [22]. Obeid's [23] definition of media literacy, which is "learning to access, analyze, evaluate, create, and act using all forms of communication.

2.2. Digital Citizenship

Digital citizenship refers to the practice of behaviors in digital environments that ensure a safe, ethical, legal, and responsible use of information and communication technologies [10], encompassing the accepted standards of conduct in the use of technology, understood as a tool for learning, creation, and participation consciously and responsibly. According to Collier, the competencies pertaining to digital citizenship foster an ethical and critical attitude towards the content that is consumed, shared, or disseminated through digital media and technologies. These behavioral norms help to protect adolescents in particular from inappropriate behavior both online and offline, such as cyberbullying or cybercrime [24]. Digital citizenship, in this sense, is defined as a set of thoughts, skills, and actions that help students to interact, understand, actively participate, and change themselves in order to transform their environment, their community, and society in general [25].

In the context of higher education in Peru, technology was often incorporated as an object of consumption rather than as a transformative tool [26], which led to the acquisition of technological resources that did not generate significant changes in people. The lack of a critical view on the use of technology is a key aspect, since adequate training in this area can strengthen education, while deficient preparation contributes little or nothing. However, the problem does not lie in the technology itself, but in the training of the individual. It has been proven that a well-prepared university teacher, even in contexts with limited resources, is capable of achieving quality learning in his or her students. Greater emphasis has been placed on secondary aspects of education, such as evaluations, rankings, standards, technology acquisition, or infrastructure improvement. Although these elements have their relevance, they are not the central axis to achieve a quality education that forms people with critical thinking [27]. It is necessary to understand how media and technologies are integrated into the comprehensive education of students in Peru. Currently, no approach considers this aspect from a cultural perspective. We discuss certain topics because we consume them through the press or television; in other words, the media set the agenda for what we discuss, influence our consumption decisions through advertising, and are part of our daily entertainment, such as series or movies. The

media have a relevant role; they are not secondary elements, although in teacher training, they are usually treated as simple complements [28].

UNESCO emphasizes the importance of integrating media literacy into teacher training; however, the training they receive often focuses solely on procedural or technical aspects [29]. Teachers who do not feel adequately trained in the use of technology often believe they will never be able to incorporate it effectively into their classes, leading to a rejection of its use. Consequently, they tend to avoid resources such as series or YouTube videos for fear of being ridiculed by students, who generally have a better command of these digital tools [30]. The merely instrumental and superficial view of technology has generated a distorted perception of the role of media among these people. Technologies and digital media are not only mere optional tools to be used in the classroom; they are an essential part of the culture, since our daily life is greatly influenced by them. Therefore, in the educational field, it is necessary to ask ourselves some questions: what are the media really, what is their function, who controls them, and what are their objectives? [29]. If teachers have media literacy skills, they will be able to guide, develop, and enhance in their students a critical stance on the media, strengthening their ability to interact with them in an autonomous, democratic, reflective, and participatory way, thus promoting a responsible practice of digital citizenship [3].

3. HYPOTHESIS

3.1. General Hypothesis

- There is a positive, significant, and structural relationship between media literacy skills and the exercise of digital citizenship among university students in the Lima region.

3.2. Specific Hypotheses

- University students with higher levels of media literacy demonstrate a more responsible exercise of their digital citizenship.
- College students with greater proficiency in the use of media technology demonstrate higher levels of responsibility in the practice of digital citizenship.
- The greater the aesthetic media literacy, the better the practices of responsible digital citizenship among university students.
- University students with a greater ability to identify the ideology and values transmitted by the media exercise their digital citizenship in a more ethical, critical, and responsible manner.
- Media literacy, particularly in media use, interaction, and media technology, significantly influences the level of digital technical skills students demonstrate within their digital citizenship.
- Low levels of content consumption literacy, combined with cognitive dissonance, are negatively associated with the proper exercise of technical digital skills and critical engagement in digital environments.
- Greater literacy in media aesthetics is inversely related to engagement with social and political issues in digital environments.

4. METHODOLOGY

4.1. Design

This research was based on an explanatory design, aimed at understanding the causal relationships between the variables of media literacy and digital citizenship. The approach adopted was quantitative, supported by the positivist paradigm, which prioritizes obtaining objective and measurable data through the use of rigorous statistical tools. Likewise, the study was structured under a cross-sectional and retrospective design, allowing the collection of information at a single time point, in order to describe and analyze the levels and relationships between the variables in university students.

4.2. Participants

The study population consisted of university students from the Lima region of Peru. Probabilistic sampling was used to select the participants, which guaranteed the representativeness of the sample with respect to the target population. The final sample consisted of a total of 444 students from 17 universities in the region. This selection made it possible to cover a diversity of institutions and educational contexts, offering a broad view of the phenomenon under investigation.

4.3. Instruments

Two previously designed and validated instruments were used for data collection. The first was a questionnaire that assesses media literacy skills, consisting of 41 items that address dimensions such as media language, technology, content consumption with cognitive dissonance, use and interaction, content monitoring, aesthetics, and ideology and values present in the media. The second instrument consisted of a 25-item questionnaire aimed at measuring the level of digital citizenship, considering aspects of participation, responsible use of technology, ethics, and criticality in digital environments. Both instruments were subjected to a content validation process through the judgment of five experts in the area, as well as a confirmatory factor analysis that ensured construct validity. The reliability of the questionnaires was tested through Cronbach's Alpha coefficient, reaching a value of 0.962 for the media literacy instrument and 0.939 for the digital citizenship instrument, indicating high internal consistency.

4.4. Procedure

The fieldwork was carried out under ethical and confidentiality criteria, safeguarding the integrity and anonymity of the participants. Prior to the application of the questionnaires, detailed information was provided to the students on the objectives of the study, and their informed consent was requested. The instruments were applied in person and digitally, depending on the logistical facilities of each university, thus guaranteeing voluntary participation and the reliability of the data collected.

4.5. Statistical Analysis

The data obtained were processed using SPSS 26 statistical software. First, a descriptive analysis was performed to categorize the levels of media literacy into basic, intermediate, and advanced, as well as the levels of digital citizenship into responsible, not very responsible, and not responsible at all. Subsequently, inferential analyses were applied using structural equation modeling, employing the asymptotic free distribution method, given the absence of multivariate normality in the data. This technique made it possible to explore and quantify the structural influence between the variables, guaranteeing the validity and robustness of the results. The level of statistical significance was set at $\alpha = 0.05$, equivalent to 95% confidence, a criterion that guided the acceptance or rejection of the hypotheses proposed.

Table 1. Media literacy levels of university students.

Level	Frequency	Percentage
Basic	65	15%
Intermediate	294	66%
Advanced	85	19%
Total	**444**	**100%**

5. RESULTS

According to Table 1,66% of university students in the Lima region are at an intermediate level of media literacy, while 15% are at a basic level. This indicates that many students still lack the necessary skills to critically analyze the

information transmitted by the media, nor to use and communicate it appropriately. As a result, their social participation is limited.

Table 2. Dimensions of Media Literacy of University Students.

Dimensions	Level	Basic	Intermediate	Advanced
Literate in the language of the media	Frequency	73	269	102
	Percentage	16%	61%	23%
Media technology literate	Frequency	58	213	173
	Percentage	13%	48%	39%
Cognitive dissonance content consumption literacy	Frequency	319	91	34
	Percentage	72%	20%	8%
Literate in the use of and interaction with the media	Frequency	43	225	176
	Percentage	10%	51%	40%
Literate in monitoring the dissemination of media content	Frequency	155	160	129
	Percentage	35%	36%	29%
Literate in media aesthetics	Frequency	56	209	179
	Percentage	13%	47%	40%
Literate in media ideology and values.	Frequency	83	230	131
	Percentage	19%	52%	30%

Table 2 shows that 61% of university students in the Lima region have an intermediate level of media language literacy, while 16% are at the basic level. These results show that most students cannot identify the intentions behind media messages, as well as the necessary skills to analyze how stories and information are constructed and communicated in media such as radio, television, print media, social networks, and the Internet.

It can be seen that 48% of university students in the Lima region reach an intermediate level in terms of handling technology related to media literacy, while 13% are at a basic level. This leads to the conclusion that students have not yet fully developed competencies related to the appropriate use of the technologies used by the media, such as the quality of audio, image, and video reproduction, information storage, or the operation and interaction of devices through tools such as Bluetooth or Wi-Fi connection.

In addition, it is observed that 72% of university students in the Lima region have an intermediate level and 8% have a basic level of literacy in relation to the consumption of content that generates cognitive dissonance. This is evidence that, upon receiving information contrary to their previous beliefs, values, or knowledge, students experience confusion or discomfort. Therefore, a limited capacity to face this type of situation is identified, since they show difficulties in analyzing the veracity and credibility of the messages disseminated by the media, as well as interpreting them in a critical and reflective way, differentiating between facts and opinions.

It is evident that university students in the Lima region have not yet managed to consolidate an adequate level of literacy in the use and interaction with the media, since 51% are at an intermediate level and 10% at a basic level. This leads to the conclusion that students have not yet fully developed the necessary skills to interact with various media formats, such as reading digital news, listening to podcasts, actively participating in social networks, or viewing content on streaming platforms. It is essential that they strengthen their relationship with the media to encourage a more active and critical participation in social life.

It shows that 35% of university students in the Lima region are at a basic level of literacy in terms of monitoring the dissemination of content in the media, while 36% reach an intermediate level. This indicates that there are still limitations in developing skills to critically monitor the information disseminated by the media. Students demonstrate difficulties in understanding how the media function, in evaluating the veracity and objectivity of sources with criteria, and in formulating observations that promote responsible and transparent informative practices. Additionally, there is limited awareness of the effects of disinformation in society. It is evident that 47% of university students in the Lima region are at an intermediate level of literacy in the aesthetic aspect of the media, while 13% are at a basic level.

This indicates that students have not yet fully developed the necessary skills to interpret and analyze the visual resources used by the media, such as the use of color, composition, design, and typography, which are used strategically in the messages to generate emotional reactions in the audience.

It can be seen that 52% of university students in the Lima region are at an intermediate level of literacy with respect to the ideology and values transmitted by the media, while 19% have reached an advanced level in this area. This reflects that a significant number of students are still in the process of strengthening their ability to identify the ideological positions and values implicit in media content.

Table 3. Levels of digital citizenship of university students.

Level	Frequency	Percentage
Nothing responsible	113	25%
Not responsible	266	60%
Responsible	65	15%
Total	**444**	**100%**

Table 3 shows that 60% of university students in the Lima region have a low level of responsibility in the exercise of digital citizenship, while only 15% reach a responsible level. This indicates that there are still deficiencies in the adequate use of digital skills, as well as in critical and reflective participation in digital spaces, especially concerning political activism and social intervention in virtual environments.

Table 4. Media literacy and digital citizenship of university students.

Media literacy	Digital citizenship						Total	
	Nothing responsible		Not responsible		Responsible			
	n	%	N	%	n	%	n	%
Basic	50	11%	15	3%	0	0%	65	14%
Intermediate	59	13%	216	49%	19	4%	294	66%
Advanced	4	1%	35	8%	46	10%	85	19%
Total	113	25%	266	60%	65	15%	444	100%

Table 4 shows that 11% of university students demonstrate a basic level of media literacy and a not very responsible level of digital citizenship. Likewise, 49% are at an intermediate level of media literacy but exhibit a not very responsible level of digital citizenship. This indicates that, by not developing competencies such as interpreting, producing, analyzing, and arguing about the functioning of the media, the responsible exercise of digital citizenship is limited, negatively affecting their active participation in society.

Table 5. Media language literacy and digital citizenship of university students.

Literate in the language of the media	Digital citizenship						Total	
	Nothing responsible		Not responsible		Responsible			
	n	%	N	%	n	%	n	%
Basic	42	9%	29	7%	2	0%	73	16%
Intermediate	63	14%	183	41%	23	5%	269	61%
Advanced	8	2%	54	12%	40	9%	102	23%
Total	113	25%	266	60%	65	15%	444	100%

From Table 5, the results show that 9% of university students have a basic level in the mastery of media language and a not at all responsible level in digital citizenship, while 41% reach an intermediate level in the handling of media language and a responsible level in the exercise of digital citizenship. This evidence shows that students are still developing competencies to understand and adequately use media language, as well as to elaborate their own messages, which has an impact on the insufficient practice of responsible digital citizenship in digital environments.

Table 6. Media technology literacy and digital citizenship of college students.

Media technology literate	Digital citizenship						Total	
	Nothing responsible		Not responsible		Responsible			
	n	%	N	%	n	%	n	%
Basic	37	8%	21	5%	0	0%	**58**	**13%**
Intermediate	57	13%	141	32%	15	3%	**213**	**48%**
Advanced	19	4%	104	23%	50	11%	**173**	**39%**
Total	**113**	**25%**	**266**	**60%**	**65**	**15%**	**444**	**100%**

From Table 6, 8% of university students register a basic level in the use of media technologies and a not at all responsible level in digital citizenship, while 11% reach an advanced level in the management of such technologies and show responsible behavior in the digital environment. This indicates that students with higher competencies in the use of technological tools, social networks, creation of digital content, and live transmissions tend to assume a more responsible attitude in the exercise of their digital citizenship.

Table 7. Media Aesthetics Literacy and Digital Citizenship of University Students.

Literate in media aesthetics	Digital citizenship						Total	
	Nothing responsible		Not responsible		Responsible			
	n	%	N	%	n	%	n	%
Basic	44	10%	11	2%	1	0%	56	12%
Intermediate	49	11%	147	33%	13	3%	209	47%
Advanced	20	5%	108	24%	51	11%	179	40%
Total	113	25%	266	60%	65	15%	444	100%

From Table 7, it is evident that 10% of university students have a basic level in the recognition of media aesthetics and a non-responsible level in digital citizenship, while 11% reach an advanced level in this competence and demonstrate responsible digital citizenship. This suggests that when students do not adequately develop the ability to analyze the visual elements present in various media, such as advertising, film, photography, television, or video games, their participation in digital spaces tends to be deficient or irresponsible.

Table 8. Literacy in media ideology and values, and digital citizenship of college students.

Literate in media ideology and values.	Digital citizenship						Total	
	Nothing responsible		Not responsible		Responsible			
	n	%	n	%	n	%	n	%
Basic	59	13%	24	5%	0	0%	83	18%
Intermediate	42	9%	176	40%	12	3%	230	52%
Advanced	12	3%	66	15%	53	12%	131	30%
Total	113	25%	266	60%	65	15%	444	100%

Table 8 shows that 13% of university students have a basic level in the recognition of the ideology and values present in the media, accompanied by non-responsible digital citizenship, while 40% reach an intermediate level in this competence and demonstrate responsibility in their digital participation. This indicates that many students are still in the early stages or in the process of developing a critical understanding of the commercial interests, cultural influences, political stances, beliefs, and values that underlie media content, which can positively or negatively impact society.

The hypotheses were verified using the standardized structural coefficient within the structural equation model. The asymptotic free distribution method was used for its estimation because the data analyzed did not exhibit behavior close to a multivariate normal distribution.

Table 9. Estimated weight coefficient of the regression between media literacy and digital citizenship.

Influence			Regression Weights		S.E.	C.R.	P
			Estimate	Standardized			
(F2) Digital citizenship	<---	(F1) Media literacy	0.772	0.724	0.077	9.996	0.00

A positive, significant, and strong structural influence was found between both variables. Since the p-value obtained in the coefficient test of the estimated regression weight (p = 0.000) is lower than the theoretical significance level (α = 0.05), the null hypothesis is rejected. This indicates that there is a structural relationship between media literacy and digital citizenship in university students. Consequently, the general hypothesis of the study is accepted. Media literacy has a significant and structural influence of 72% on digital citizenship. University students lack the ability to interact critically with media messages, which is reflected in poor responsible performance in processes and competencies related to digital citizenship. In addition, these students do not demonstrate capabilities in areas such as social justice or in the critical analysis of economic, political, and social impacts transmitted in digital environments, a situation that is also reflected in their daily lives (see Table 9).

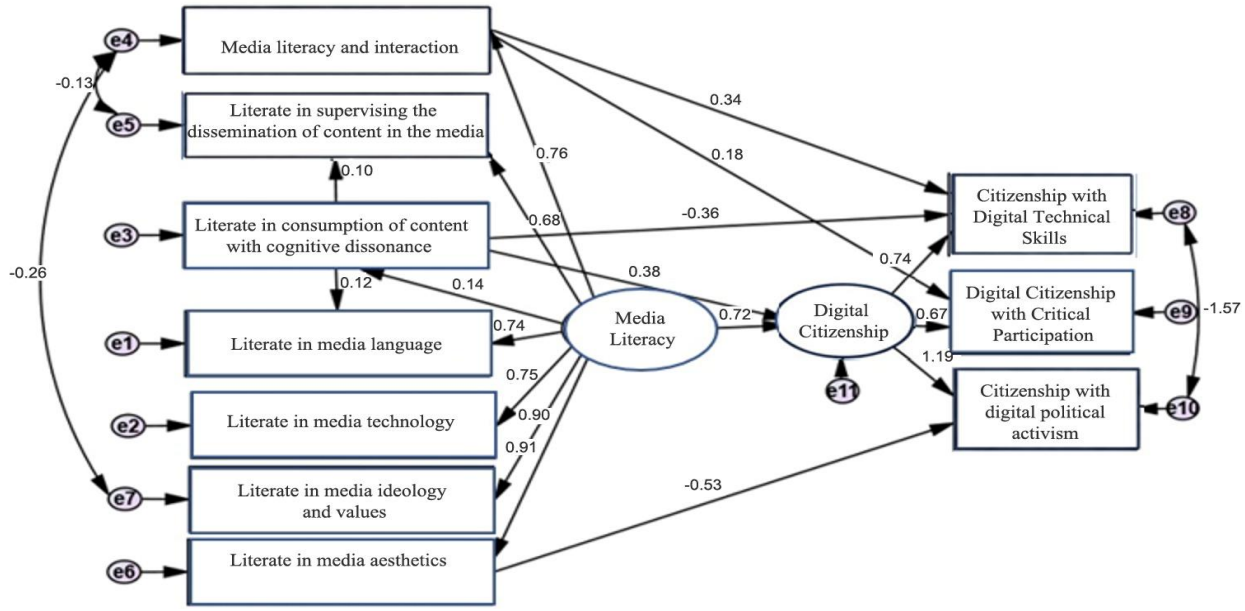

Figure 1. Structural equation model of media literacy in digital citizenship.

Note: Standardized coefficients.

Figure 1 shows that media literacy influences digital citizenship mainly through the contribution of media technology literacy, which accounts for 75%. However, university students lack essential skills to assess the credibility of information from online sources, understand the structure, organization, and purpose of different digital media such as television, radio, press, and social networks, and use technological tools to disseminate information effectively. This lack of skills has a negative impact on digital citizenship, evidenced by the absence of collaborative networks that promote social participation and limited social awareness in virtual spaces. Similarly, the use and interaction with the media contribute 75.5%, showing that university students present insufficient and underdeveloped skills to consume information with a critical interpretation of the messages transmitted by the media. In addition, they lack the skills to produce and share media content, distinguish between reliable and unreliable information, and act ethically in the creation and dissemination of information through different media. This situation negatively impacts digital citizenship, reducing political, social, and economic participation in digital spaces. The relationship between media literacy and digital citizenship is significant because the consumption of media content that provokes cognitive dissonance contributes to 14%. Students still lack the ability to analyze and distinguish information when the media

present different versions of the same event, which causes them discomfort, tension, or contradictions. This situation negatively affects digital citizenship, evidencing a low participation in activities related to social and political issues in forums and governmental or public administration digital platforms.

The results indicate that university students have a low level of literacy in content consumption with cognitive dissonance, which negatively affects (Y1) Citizenship with digital technical skills (-0.356). This suggests that if students are unable to compare, distinguish, and evaluate diverse and contradictory information about a fact, their digital technical skills and use of these skills make them less responsible. Students lacking media interaction skills, such as participation, interpretation, intercommunication, and comprehension, as well as the use of different media forms, impact 33.8% of citizenship with inadequate digital technical skills. Additionally, 18.4% of digital citizenship with critical participation, implying the use of digital tools and participation with a critical perspective on political, social, and economic information in line with ethics and responsibility, is affected. Students demonstrate that literacy in media aesthetics, such as understanding the aesthetic aspects used by media to communicate and narrate information, has a negative impact of 52.7%. In other words, the greater the understanding of media aesthetics, the less involvement students tend to have in political issues aimed at promoting social, political, and economic changes.

6. DISCUSSION

The results obtained in the research indicate that 11% of university students have a basic level of media literacy and a low level of responsible behavior in digital citizenship. On the other hand, 49% have an intermediate level of media literacy, but their responsibility as digital citizens remains low. It is evident that students still show deficiencies or shortcomings in their ability to critically understand the functioning of the media, which reflects in a scarcely responsible digital citizenship that limits their participation in social life. This situation coincides with Muñoz et al. [31], who point out that students are at a level of reflection located between technical and practical rationality, without yet developing critical rationality, which hinders effective academic interaction between the different actors in the educational field. Although technical and practical skills are indeed relevant, students must develop critical and reflective rationality; otherwise, their academic participation with other peers is limited, as is their exercise of responsible citizenship. It is therefore understood that one of the fundamental causes of deficiencies in media literacy among university students begins with the scant attention it receives within universities. Specifically, there is a significant absence of teacher training programs that include critical skills related to the analysis and ethical use of the media, which limits the ability to systematically integrate these contents into their teaching practices. This omission reveals an institutional tendency to underestimate media literacy as an essential cross-cutting skill for the comprehensive education of students, in addition to the lack of a national public policy that actively promotes the incorporation of media literacy into the education system, which reinforces its marginalization in curriculum design and educational innovation strategies. Taken together, these structural factors reveal a gap in the development of digital citizenship skills in Peruvian universities, which calls for coordinated action between universities, education policymakers, and other actors in the sector.

The study showed that 8% of university students have only a basic knowledge of media technologies, demonstrating irresponsible behavior in terms of digital citizenship. Conversely, 11% of students exhibit advanced mastery of these technologies and display a responsible attitude in their digital participation, including the use of technological tools, social networks, creation of digital content, and live broadcasts, indicating a higher level of commitment to digital citizenship. According to Icen [19], media literacy contributes to the strengthening of critical thinking. This perspective emphasizes the need for universities to incorporate educational activities focused on critical reflection and a comprehensive understanding of the media ecosystem. It is not merely about introducing media literacy content but designing and implementing coherent, sustained, and contextually relevant pedagogical strategies that enable students to engage with media through a dialogical, reflective, and transformative approach. Additionally, adopting active methodologies such as project-based learning, real-life case analysis, critical media

education, and collaborative digital content production is essential. These approaches promote critical thinking, self-regulation, and ethical commitment in digital participation. Through a comprehensive educational strategy, it becomes possible to empower students with the skills necessary to positively influence their environment, critically and consciously addressing the socio-technological challenges of the 21st century.

Based on this, it can be deduced that the inclusion of media literacy in curricular planning, through training activities that employ active methodologies, is essential. This implementation would allow fostering critical and reflective thinking in students, as well as the ability to question, assume responsibility for their actions, and strengthen their research skills. In this sense, it is very important to incorporate specific subjects that address media literacy from the first academic cycles; moreover, in line with McNelly and Harvey [32], the relevant training of students is hampered by political and social obstacles that hinder its implementation. Consequently, it can be concluded that the country's universities, despite being aware of the shortcomings of society in terms of media literacy, have not yet fully assumed the commitment to integrate it into academic training or the degree of priority it needs. In many cases, media literacy continues to be addressed in a fragmented manner, as part of elective courses or in purely theoretical contexts, without practical application or clear articulation with the contemporary challenges of digital citizenship, democracy, and critical participation in complex information environments. This omission not only highlights a lack of prioritization in curriculum agendas but also underscores a disconnect between university education and the real needs of the sociocultural environment. This is particularly worrying in courses related to teacher training, where the critical preparation of future professionals is limited and lacks a strategic vision that would enable them to act as multipliers of media literacy from the earliest stages of the education system.

It was identified that 9% of university students have a basic level in the mastery of media language and show a not very responsible digital attitude. On the other hand, 41% reach an intermediate level in the use of such language, although their exercise of digital citizenship is still limited and not very committed. Students are still in the process of developing skills to understand and effectively use the language of the media, as well as to produce messages through them. This situation has repercussions in a digital citizenship exercised in a not very responsible way in different digital environments. The findings of this study contrast with what [19] stated in his research, which showed that students demonstrated responsibility, critical thinking, and interest in research. These achievements were the result of the teaching influence, since practical activities with a critical approach were promoted in the classroom. Through this experience, students began to learn about media tools and understood that, without a clear knowledge of the purposes of the media, they run the risk of being exposed to erroneous or manipulated information. The findings presented here reaffirm the urgent need for university teachers to take an active role in incorporating media literacy as an integral part of their educational practice. It is not enough to recognize the importance of the issue from a theoretical perspective; it must be translated into concrete pedagogical strategies, training activities, and didactic proposals that, from the university classroom, involve students in a reflective, critical, and ethical exercise of information consumption and production. Media literacy cannot be conceived as complementary content, but rather as a cross-cutting skill that cuts across all disciplines and is essential for training individuals to interact with the media and digital platforms in a conscious, informed, and responsible manner. Therefore, the promotion of media literacy in higher education should not be understood as an option, but as an urgent educational responsibility that requires institutional commitment, teacher training, and an educational vision aligned with the contemporary challenges of the knowledge society. A positive, high, and significant structural influence was identified between both variables. Since the significance value obtained in the regression coefficient test ($p = 0.000$) is lower than the theoretical significance level ($\alpha = 0.05$), we proceed to reject the null hypothesis. This indicates that there is a structural relationship between media literacy and digital citizenship in university students. Media literacy has a significant and structural influence on digital citizenship, with an impact of 72%. However, many university students still lack the capacity to critically interact with the messages they receive through the media. As a result, their exercise of digital citizenship tends to be irresponsible. This lack is also reflected in the lack of skills related to social justice

and critical analysis of the economic, political, and social effects disseminated in digital environments, which ends up being replicated in their daily lives. These findings coincide with what Mateus and Suárez-Guerrero [26] argue that it is necessary to preserve the political and social approaches provided by media education, as opposed to a reductionist view that limits these competencies to the simple technical use of digital tools, without considering their role as deeply human and social influences within the complex experiences of life [13]. In this context, civic culture based on values such as solidarity and respect is essential. The results suggest that media education in universities should be oriented not only to the management of information technologies but also to the integral development in the educational, social, and political spheres [33]. In this way, media competencies help students to practice responsible and reflective citizenship, promoting social, economic, and political justice [34] as well as a civic culture based on respect and solidarity. The social implications of irresponsible digital citizenship are profound and worrying. Misinformation, the normalization of hate speech, cyberbullying, and passivity in the face of digital rights violations are just some of the consequences of digital participation that lacks critical thinking and ethics. This highlights the urgent need for universities to take on a more active and proactive role in training digital citizens. The cross-cutting incorporation of media literacy into curricula, not as an isolated course but as a skill integrated into various subjects and interdisciplinary projects, the promotion of collaborative projects with social impact in digital environments, and the continuous training of teachers in critical digital pedagogies can effectively contribute to fostering a university culture oriented toward digital responsibility.

7. CONCLUSIONS

This study confirms the existence of a positive, significant, and structural relationship between media literacy skills and responsible digital citizenship among university students. This finding demonstrates that the development of media skills not only influences how young people interact with digital environments but also conditions their ability to participate ethically, critically, and actively in the digital public sphere.

The main contribution of this research lies in offering solid empirical evidence on a phenomenon that has been little explored in the Peruvian university context, while proposing media literacy as a fundamental pedagogical tool for training conscious and committed digital citizens. By identifying gaps in the reflective use of media, the study provides key elements for the design of educational policies and university curricula that integrate critical thinking, media ethics, and digital social responsibility across the board from the earliest stages of education.

In a global context marked by information overload, misinformation, and digital polarization, the results take on special relevance: they promote a vision of higher education as a strategic space for strengthening democracy, digital inclusion, and citizen empowerment. Thus, this study not only contributes to academic knowledge about digital citizenship but also offers a concrete basis for educational interventions with a real impact on contemporary society.

8. LIMITATIONS AND RECOMMENDATIONS

Among the main limitations of this study is the geographic restriction of the sample, focused only on universities in the Lima region. This characteristic limits the generalization of the findings to other educational contexts in Peru or in countries with different sociocultural realities. Likewise, the research was developed under a cross-sectional design, which implies that the data collected correspond to a specific moment in time, making it difficult to identify trends or changes in media literacy and digital citizenship competencies over the years.

In view of these limitations, it is recommended to broaden the scope of future research, incorporating universities from different regions of Peru and even from other countries, to contrast the results and analyze the sociocultural particularities that may influence media literacy and digital citizenship. Likewise, it would be pertinent to develop longitudinal studies that allow observing the evolution of these competencies over time and at different moments of the formative process. Similarly, it is suggested to incorporate mixed methodologies that integrate quantitative analysis with qualitative techniques, such as in-depth interviews or focus groups, which allow a broader exploration

of perceptions, experiences, and barriers faced by students. From the educational practice, it is essential that universities include specific subjects or workshops on media literacy, with a critical and reflective approach that promotes autonomous thinking, ethical interpretation of messages, and responsible participation in digital environments. Finally, it is recommended that universities actively promote teacher training processes that go beyond the technical and instrumental mastery of digital technologies. These processes must be geared toward strengthening critical, reflective, and ethical skills, enabling teachers not only to incorporate digital tools into their teaching practices but also to become agents of critical thinking in relation to the media. The aim is to develop skills for analyzing media discourse, questioning the interests that underpin it, and fostering an active, informed, and responsible attitude in students in digital environments. It is through comprehensive teacher training, which articulates the technological dimension with the civic dimension, that it will be possible to move towards a university education committed to building a conscious, inclusive, and socially transformative digital citizenship.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
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REFERENCES

[1] M. Area and A. Guarro, "Information and digital literacy: Pedagogical foundations for competent teaching and learning," *Revista Española de Documentación Científica*, vol. 35, pp. 46–74, 2012.

[2] A. Pérez Escoda, *Media literacy, ICT and digital skills*. Barcelona, Spain: Editorial UOC, 2017.

[3] Badillo-Mendoza, *Digital citizenships, perspectives from the media, journalism and media literacy*. Bogotá, Colombia: Editorial Politécnico Grancolombiano, 2019.

[4] E. Schilder and T. Redmond, "Measuring media literacy inquiry in higher education: Innovation in assessment," *Journal of Media Literacy Education*, vol. 11, no. 2, pp. 95-121, 2019. https://doi.org/10.23860/JMLE-2019-11-2-6

[5] Parent and Community Impact, *Respect, educate, and protect: Cultivating digital citizenship in 21st century learners*. United States: Parent and Community Impact, 2018.

[6] T. Tan, "Educating digital citizens," *Leadership*, vol. 41, no. 1, pp. 30-32, 2011.

[7] M. S. Ribble, G. D. Bailey, and T. W. Ross, "Digital citizenship: Addressing appropriate technology behavior," *Learning & Leading with Technology*, vol. 32, no. 1, p. 6, 2004.

[8] M. Ribble, "Passport to digital citizenship journey toward appropriate technology use at school and at home," *Learning & Leading with Technology*, vol. 36, no. 4, pp. 14-17, 2008.

[9] M. Shelley *et al.*, "Digital citizenship: Parameters of the digital divide," *Social Science Computer Review*, vol. 22, no. 2, pp. 256-269, 2004. https://doi.org/10.1177/0894439303262580

[10] G. Öztürk, "Digital citizenship and its teaching: A literature review," *Journal of Educational Technology and Online Learning*, vol. 4, no. 1, pp. 31-45, 2021.

[11] E. Goldman, S. Brown, and L. Christiansen, *Expectancy theory: Thinking about drinking. In H. T. Blane & K. E. Leonard (Eds.), Psychological theories of drinking and alcoholism*. United States: Guilford Press, 1987, pp. 181–226.

[12] D. Kahneman, *Thinking fast and slow*. New York: Farrar, Straus and Giroux, 2011.

[13] E. W. Austin and S. Domgaard, "The media literacy theory of change and the message interpretation process model," *Communication Theory*, vol. 34, no. 4, pp. 167-177, 2024. https://doi.org/10.1093/ct/qtae018

[14] Poynter, "MediaWise: Digital media literacy for all," Retrieved: https://www.poynter.org/mediawise/. [Accessed 2024.

[15] J. Habermas, *Theory of communicative action (M. Jiménez Redondo, Trans.)*. Madrid, Spain: Tecnos, 1984.

[16] J. H. Guevara-Andino and J. A. Delgado-Salas, "Education for digital citizenship: Preparing students for responsible and critical participation in the connected society," *MQRInvestigar*, vol. 8, no. 2, pp. 4320-4338, 2024.

[17] Y. Inceoglu, "Reading the media correctly," presented at the The 1st International Media Literacy Conference, Istanbul, Turkey, 2005.

[18] H. İ. Önal, "Media literacy: A new frontier for libraries," *Türk Kütüphaneciliği*, vol. 21, no. 3, pp. 335-359, 2007.

[19] M. Icen, "Developing media literacy through activities," *International Journal of Educational Methodology*, vol. 6, no. 3, pp. 631-642, 2020.

[20] L. Garro-Rojas, "Media literacy in Latin America. Literature review: Issues and experiences," *Revista Educación*, vol. 44, no. 1, pp. 1-22, 2020.

[21] UNESCO, *Media and information literacy: Curriculum for teachers*. Paris, France: UNESCO, 2011.

[22] J. De Pablos Pons and J. Ballesta Pagan, "Media education in our environment: Realities and possible improvements," *Revista Interuniversitaria de Formación del Profesorado*, vol. 32, no. 1, pp. 117-132, 2018.

[23] S. Obeid, *Media literacy: From misinformation to mastery*. United States: Media & Education Policy Lab, Harvard Graduate School of Education, 2024.

[24] N. B. Mahadir, N. H. Baharudin, and Z. Jamil -Osman, "Digital citizenship literacy knowledge among undergraduates of Sultan Idris Education University: Preliminary studies," *International Journal of Academic Research in Progressive Education and Development*, vol. 10, no. 2, pp. 416–434, 2021. https://doi.org/10.6007/IJARPED/v10-i2/9070

[25] M. Choi, "A concept analysis of digital citizenship for democratic citizenship education in the internet age," *Theory & Research in Social Education*, vol. 44, no. 4, pp. 565-607, 2016. https://doi.org/10.1080/00933104.2016.1210549

[26] J. C. Mateus and C. Suárez-Guerrero, "ICT competence in the new Peruvian curriculum from the perspective of media education," *EDMETIC*, vol. 6, no. 2, pp. 129-147, 2017.

[27] A. Torres Chipana, G. R. Espinoza Rivas, P. R. Zuloaga Candia, and I. K. Rimascca Rodríguez, "Digital literacy in higher education teachers," *Revista InveCom*, vol. 4, no. 2, pp. 1–12, 2024. https://doi.org/10.5281/zenodo.10714274

[28] L. Verástegui Gutiérrez and R. Rodríguez Ahuanari, "Influence of the integration of ICT to the learning of secondary school students," *Cuadernos de Investigación Educativa*, vol. 15, no. 1, pp. 1–17, 2024. https://doi.org/10.18861/cied.2024.15.1.3633

[29] J.-C. Mateus, P. Andrada, and J. Ferrés, "Assessing media competence: A critical approach from the pedagogical, political and methodological perspectives," *Journal of Communication*, vol. 18, no. 2, pp. 287-301, 2019.

[30] D. Arteaga Toro and C. J. Osorio Carrera, "Digital competence in education: A systematic review," *Aula Virtual*, vol. 5, no. 12, pp. 842–857, 2024. https://doi.org/10.5281/zenodo.13227973

[31] L. A. Muñoz, Y. Oria, and Y. Regalado, "Learning diary: A strategy to develop reflective thinking in undergraduate students of the education degree," *Revista Académica de Docencia y Gestión Universitaria*, vol. 1, no. 1, pp. 11-23, 2023. https://doi.org/10.20453/spirat.v1i1.4313

[32] T. A. McNelly and J. Harvey, "Media literacy instruction in today's classrooms: A study of teachers' knowledge, confidence, and integration," *Journal of Media Literacy Education*, vol. 13, no. 1, pp. 108-130, 2021.

[33] A. Lozano-Díaz and J. S. Fernández-Prados, "Digital citizenship and its measurement: Psychometric properties of a scale and challenges for higher education," *Education in the Knowledge Society*, vol. 19, no. 3, pp. 83-101, 2018. https://doi.org/10.14201/eks201819383101

[34] D. Probst, "Social media literacy as an IEP intervention for social and emotional learning," *Journal of Media Literacy Education*, vol. 9, no. 2, pp. 45-57, 2017.