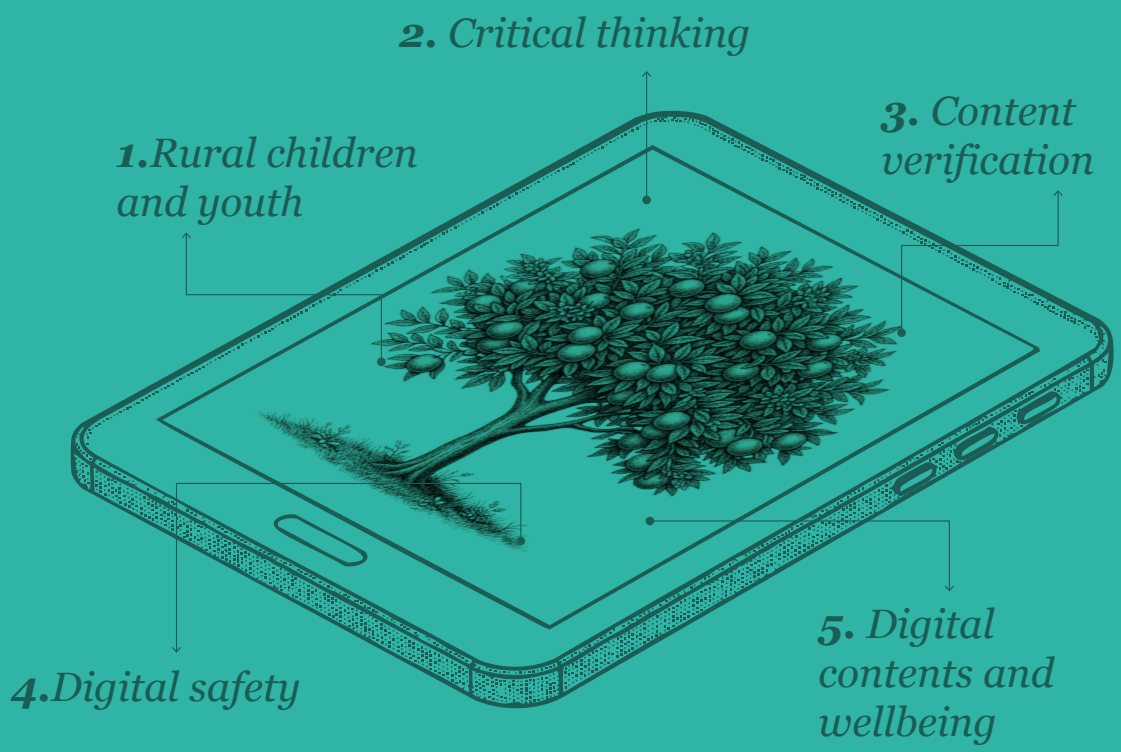
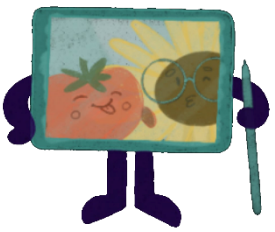
EDUCATIONAL NEEDS ASSESSMENT REPORT

RURCODE, 2026



RURCODE



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EXECUTIVE SUMMARY

Summary of the main findings

The findings show that **digital access is not the main challenge when addressing media literacy among young people**, as connectivity and devices are widely available across all contexts. The key issue lies in **how technology is used and the conditions of that use**, particularly in terms of autonomy, supervision and purpose.

A clear **age-based transition** is observed. Children aged 8-11 use digital technologies in a more mediated and controlled way, often relying on shared devices and family supervision. In contrast, adolescents aged 12-16 display **fully autonomous, constant and more intensive use**, increasing both opportunities and exposure to risks. Despite this autonomy, support and supervision are uneven, which affects how young people engage with digital environments.

Internet use is **fully integrated into the daily life of young people,** but remains strongly oriented towards entertainment, with limited use for information or learning. Social media platforms (YouTube, WhatsApp, TikTok) are central, and usage is predominantly passive, although interaction increases with age. Influencers also play a relevant role, particularly among younger users.

A relevant finding concerns **information-seeking practices**, which are frequent but not always critical or structured. Younger participants tend to rely on search engines such as Google and platforms like YouTube, while adolescents increasingly turn to social media and AI-based tools such as TikTok and ChatGPT as primary sources of information. This reflects a shift towards **algorithm-driven and platform-based information environments**, which are frequent but not always critical or structured. Younger participants tend to rely on search engines such as Google and platforms like YouTube, while adolescents increasingly turn to social media and AI-based tools such as TikTok and ChatGPT as primary sources of information. This reflects a shift towards a **gap between perceived and actual competences**.

Another key finding is the **early and widespread exposure to digital risks**, including advertising, scams, misleading content and violent or disturbing material. This exposure is often normalised and has a **significant emotional impact**, especially among adolescents..

Content consumption is dominated by entertainment formats, with preferences evolving with age. Participants are aware of harmful or unwanted content, but often lack tools to manage it. At the same time, they show interest in learning, with younger children focused on creative uses of technology and adolescents on security, privacy and understanding digital systems, despite a high level of self-confidence that does not always reflect actual competences.

Gender differences are not structural but appear in **content preferences, risk exposure and behaviours**, while contextual differences are mainly visible in younger age groups and tend to diminish in adolescence.

From the teachers' perspective, there is a **clear gap between the recognised importance of media literacy and its implementation in schools**, mainly due to lack of training and resources. Technology use is often approached through restriction rather than pedagogical integration, although teachers express a strong demand for practical support.

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Key Implications for curriculum design

1. First, materials should be adapted to different age groups, supporting the transition from guided to autonomous use and strengthening **digital decision-making and responsibility**.

2. The educational approach should build on students' real digital practices, focusing particularly on the consumption of entertainment content and transforming it into **learning opportunities**.

3. There is a need to prioritise **practical media literacy skills**, especially verification, source evaluation and critical thinking, through applied and hands-on activities.

4. The curriculum should explicitly address **digital risks and online safety**, including advertising, scams and harmful content, alongside basic security practices.

5. The educational approach should build on students' real digital practices, placing particular emphasis on their consumption of entertainment content and transforming it into meaningful **learning opportunities**.

6. Materials should promote a shift towards **active and critical participation**, moving beyond passive consumption..

7. **Teachers require practical, accessible and ready-to-use resources,** supporting the integration of media literacy into everyday teaching practice.

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Comparative summary table (regions/partners)

Category	Valencia (Spain)	Cantabria (Spain)	Brussels (Belgium)
Access(8–11)	Intermediate autonomy; mix of shared and personal use	Higher levels of early autonomy in some cases	More restricted; strongly mediated by families
Access (12–16)	Fully autonomous	Fully autonomous	Fully autonomous
Internet use	Daily use; mainly leisure-focused (afternoon)	Daily use; similar patterns	Similar use; more structured in younger ages
Social media use (8–11)	Mixed use of personal and shared accounts	Higher presence of personal accounts	Mostly shared accounts; limited personal access
Social media use (12–16)	Intensive, daily and autonomous	Intensive, daily and autonomous	Intensive, daily and autonomous
Information practices	Growing use of TikTok/ChatGPT; limited verification	Similar pattern; slightly more reliance on platforms	Similar trend; more mediated in younger ages
Media literacy focus (teachers)	Strong focus on risks (distraction, misuse)	Similar focus on risks and control	Greater focus on competences and critical thinking
Exposure to risks	High exposure (ads, scams, harmful content; e.g. Temu)	High exposure	Similarly high exposure
Emotional impact	Significant, especially in adolescents	Significant	Similar levels
Teachers' approach	More regulation/ control-oriented	More regulation/ control-oriented	More pedagogical orientation
Teachers' needs	Practical resources and training	Practical resources and training	Same needs; slightly higher conceptual familiarity



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1. INTRODUCTION

1.1. About the project

RURCODE (Rural Youth Co-Designing their Digital Education), co-funded by the European Union under the Citizens, Equality, Rights and Values (CERV) programme, is a collaborative project implemented by Fundación Maldita.es, the Federación Valenciana de Municipios y Provincias (FVMP), La Columbeta (COL), and Connect Brussels (CBR). **The project aims to strengthen digital literacy and raise awareness of online rights among children and adolescents aged 8- 16 in rural communities in Spain and Belgium.** It is grounded in the recognition that young people in these contexts face a set of specific vulnerabilities, such as limited digital infrastructure, geographical isolation, reduced access to high-quality educational resources, higher risk of poverty, and increased exposure to digital threats, which hinder their ability to navigate the digital environment safely and critically. These factors place them at a structural disadvantage compared to their urban peers.

This report is developed within the framework of Work Package 2 (Digital Literacy Resource Development), led by Fundación Maldita.es. The objective of this work package is to **design high-quality, multilingual educational resources co-created with rural children and young people**, in order to respond effectively to the challenges identified. The first task under this work package (T2.1) consisted of a needs assessment carried out through focus groups with minors and a questionnaire addressed to teachers and educators. The results of this assessment are presented in the following pages and constitute the empirical foundation for the development of the project's curriculum and educational materials in subsequent phases.



1.2. State of the art

1.2.1. Media consumption and vulnerability of children and adolescents to disinformation

The rapid transformation of information ecosystems highlights the need to place digital and media literacy at the centre of European education policies, particularly in a context **where 97% of young people in the EU use the internet on a daily basis** (Eurostat, 2025; Laaninen y Bol, 2025). **In Spain, 90% of adolescents** are regular internet users, primarily engaging in social media (79.8%), content consumption (78%), and communication (75%) (Save the Children, 2024). **In Belgium,** usage rates are even higher, reaching **93.7% among young people aged 12 to 24** (Retriever Media, 2024). One aspect that requires particular attention is the early age of access: by the age of 12, most minors in these countries already have profiles on platforms such as WhatsApp (68%), YouTube (66%), or TikTok (45%) (Laaninen & Bol, 2025), despite the fact that access to these platforms is formally restricted until the ages of 13 or 14, depending on national regulations and platform policies.

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In addition to this early access, there has been a shift in the main gateway to information which, particularly amongst young people, is moving away from traditional search engines towards social media, video platforms and, more recently, artificial intelligence (AI) chatbots. The Youth Survey 2024, which surveyed more than 25,000 young people aged 16 to 30 across the 27 Member States, identifies social media as the main source of information on political and social issues, ahead of television, with greater reliance among 16- to 18-year-olds (45 per cent) and with Instagram and TikTok as the dominant platforms (European Parliament, 2025). The Digital News Report 2026 confirms this trend on a global scale and notes **a decline in the use of traditional search engines as the main means of access amongst those under 35,** whilst usage remains stable in other age groups (Reuters Institute, 2026). Studies such as that by Almoqbel et al. (2025) have even documented the **use of TikTok as a search engine,** a function not envisaged in its original design and driven by the users themselves. As for chatbots, in the United States the Pew Research Centre estimates that around six in ten teenagers aged 13 to 17 use them to **search for information** (57 per cent) or for schoolwork (54 per cent) (McClain et al., 2026), whilst internationally, PISA 2025 ranks the **initial search for information on a new** topic as the second most frequent use amongst 15-year-old pupils, second only to general learning support (OECD, 2026).

Whilst this does not represent an abandonment of the search engine, it does signify a shift or a loss of centrality that occurs at a very specific age. In fact, the UK regulator Ofcom reports that 95 per cent of children aged 8 to 14 continue to use Google regularly (Ofcom, 2025), which places the turning point at the boundary separating the two age groups studied in this report. However, those who continue to use the search engine do not remain in the same environment either, as the traditional list of links is now supplemented by AI-generated summaries that answer the query without leaving the results page and reduce the frequency with which the original content is accessed (Ofcom, 2025). Complementary studies show that users who encounter one of these summaries are almost half as likely to click on links to other websites compared with those who do not see them, and are significantly more likely to end their browsing session altogether (26 per cent versus 16 per cent) (Chapekis and Lieb, 2025; Chapekis et al., 2025).

This loss of contact with the original source carries risks. An audit of four generative search engines found that only 51.5 per cent of the statements generated were fully supported by the sources cited (Liu et al., 2023). Added to this is the documented tendency of these models towards sycophancy, that is, to align with the user's assumptions and biases rather than challenge them, which can reinforce erroneous beliefs rather than correct them (Sharma et al., 2024). Nor do they provide a neutral or uniform environment for everyone, as their responses vary according to the dialect used and reproduce hidden racial and employability biases (Hofmann et al., 2024), and their accuracy deteriorates disproportionately amongst the most vulnerable users, such as those with lower levels of education or less proficiency in the dominant language (Poole-Dayan et al., 2026).

Growing up surrounded by technology does not imply that minors are able to critically navigate the information they consume. There is no empirical evidence supporting the assumption that they possess innate media or digital skills simply by virtue of being exposed to technology (CPEDSI, 2024), a misconception commonly referred to in the literature as the digital native fallacy. Beyond interpersonal risks associated with internet use, research indicates that young people are more likely than adults to believe in conspiracy theories, particularly those who spend extended periods on social media (CCDH, 2023). While they are often proficient in using digital interfaces, they generally lack the cognitive maturity required to assess the reliability of information (García-Ruiz et al., 2020). They also tend to rely on informal and ineffective verification strategies and often associate disinformation primarily with implausible or satirical content (Vraga & Tully, 2021), making them especially vulnerable to misleading formats that mimic the style and appearance of legitimate information (Herrero-Diz, Conde-Jiménez & Reyes de Cózar, 2020).

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According to Save the Children (2024), 51% of adolescents in Spain report not knowing how to identify false content; one in four does not verify information even when they suspect it may be inaccurate; and 56% of those who do verify rely on family members and friends.

This last figure is particularly relevant, as when close social environments consume information from similar sources and channels, social consultation may not function as a corrective mechanism but rather as an amplifier of misinformation, reinforcing rather than questioning inaccurate content. Gender differences are also observed in levels of trust: **23% of boys consider content creators to be a reliable source, compared to 9% of girls.** However, greater scepticism does not necessarily translate into greater protection. Although girls tend to trust these sources less, they are more exposed to other specific risks, such as cyberbullying, gender stereotypes amplified by algorithms, and hate speech targeting those who do not conform to expected norms of appearance or behaviour (Save the Children, 2024). Gómez-Calderón, Ceballos and López-Martín (2025) further confirm that **boys report higher self-perceived verification skills than girls** (44.7% of boys place themselves at the highest levels of confidence compared to 35.3% of girls), and that place of residence also plays a role: **the larger the municipality, the higher the confidence** in the ability to detect misinformation, particularly in areas with more than 50,000 inhabitants. However, this perception does not align with actual practices, as girls report verifying information more frequently (22.7%) than boys (19.2%).

Evidence on young people's vulnerability to disinformation is further illustrated by experimental studies. In one study involving Dutch students aged 11 and 12, participants were presented with a fake webpage about an imaginary endangered "tree octopus"; only 7% identified it as a hoax or joke (Loos, Ivan & Leu, 2018). When researcher Elena-Alexandra Dumitru (2020) replicated the experiment with 54 children and adolescents (aged 10–11 and 18–19) in a small Romanian city, this time using a fictional endangered "jackalope" as bait in a fake Greenpeace petition, none of the participants identified the source as deceptive. The four participants who refused to sign the petition did so because they considered the animal "dangerous" or "aggressive," not because they questioned its existence. The study also revealed the influence of peer pressure: two students who initially doubted the existence of the animal ultimately signed the petition out of fear of being ridiculed by their peers. In both cases, participants without specific media and information literacy (MIL) training not only failed to detect the deception but were also willing to act upon false information. In line with these findings, Herrero-Diz et al. (2023) highlight that adolescents' vulnerability to disinformation increases with time spent online, while higher levels of critical thinking are associated with more responsible content consumption.

1.2.2. Media and Information Literacy (MIL) and gaps in Primary Education

Evidence on the impact of **Media and Information Literacy)** provides a more optimistic perspective. The meta-analysis conducted by Lu et al. (2024), which integrates 33 independent studies with a total sample of 36,256 participants, demonstrates that MIL interventions significantly **improve individuals' ability to assess the credibility of information** (Hedges' g = 0,53; IC 95% [0,29–0,78]; $p < 0,001$) . The study concludes that **game-based interventions are the most effective**; although overall effectiveness also depends on the underlying pedagogical approach. Roozenbeek and van der Linden (2019) developed Bad News, an inoculation-based game in which players take on the role of disinformation producers and learn to recognise six documented techniques (polarisation, emotional manipulation, conspiracy, trolling, deflection of responsibility, and impersonation). In a large-scale evaluation involving 15,000 participants, users' ability to identify and resist disinformation improved significantly after gameplay, regardless of educational level, age, or ideology.

Interventions that combine theoretical explanation with hands-on verification practice

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have also shown positive results in the European context. Nygren et al. (2021) tested a session on types of disinformation followed by practical training using the InVID-WeVerify tool with secondary school students in France, Romania, Spain, and Sweden, finding improvements in the ability to assess false images and videos. Similarly, Tamboer et al. (2022), in a study with 258 Dutch adolescents aged 12 to 15, demonstrated that a three-session intervention based on creating and verifying their own news content improved media literacy self-efficacy, although it did not yet translate into consistent real-life application of these skills.

Although MIL is often framed as a "vaccine" against disinformation, most research and initiatives in this field have focused on late adolescence and secondary education. **The 8-12 age group,** precisely the stage at which children begin to own personal devices and increase their exposure to online content, while their cognitive development still makes them particularly susceptible to social influence (Lauricella et al., 2016), **remains comparatively underexplored**. Where it has been addressed, evidence shows that media literacy levels in this age group are generally medium to low across contexts (García-Ruiz et al., 2020). Already in 2015, Fueyo Gutiérrez et al. highlighted that MIL within European education systems largely depends on isolated activities and non-formal education; a decade later, this situation has not substantially changed. A comparative analysis of initiatives for children under 12 conducted by Verificat and Maldita.es (2024), based on a review of 29 initiatives in Spain, concludes that most programmes focus on the instrumental use of technology (parental control, device management, and digital safety), while the critical, communicative, ethical, and emotional dimensions of media literacy remain largely neglected.

At the same time, **teacher training remains insufficient.** According to a survey conducted among primary and secondary school teachers across Spain, the general perception is that little (47%) or no progress (13%) has been made in media literacy over the past five years (Cucarella & Fuster, 2022). One of the main challenges identified is the conceptual confusion between digital literacy and media literacy, with 32% of teachers conflating both terms (Herrero Curiel & La Rosa, 2023). In addition, many educators work without access to structured national training programmes on disinformation, fact-checking, or children's online rights. This situation is further exacerbated in rural areas, where higher teacher turnover, fewer professional development opportunities, and weaker peer networks hinder both continuous teacher training and pedagogical innovation. In Belgium, findings from the SMILES project show that, although Belgian trainers started with the highest level of theoretical knowledge in the international comparison (11.8 out of 15), only 60% reported feeling confident to deliver media literacy sessions on disinformation after receiving specific training. Another key challenge is the **lack of adapted materials.** Belgian educators reported that the terminology and language used in disinformation-related resources are often too complex for students, requiring them to spend excessive time simplifying concepts instead of focusing on developing critical thinking skills (Müller & Rotteveel, 2023).

1.2.3. Specific vulnerabilities in rural contexts

So far, children and adolescents have been treated as a relatively homogeneous group. However, the evidence requires the introduction of the territorial dimension, which rarely occupies a central place in the media and information literacy (MIL) debate, yet constitutes the core focus of **RURCODE**. Although up-to-date literature with a specific focus on rural youth remains limited, existing evidence indicates that the digital divide cannot be explained solely by infrastructure, but rather by the intersection of factors such as poverty risk, functional skills, and the availability of support networks. The general conclusion is not that rural children differ in their cognitive development or media needs, but that the conditions under which they develop these competencies are structurally different in peripheral, depopulated, or institutionally less dense contexts (EU CAP Network, 2026).

Although internet access is widespread across Europe, **connectivity continues to pose**

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challenges in rural and sparsely populated **areas**, and the digital divide remains a significant issue for children living in these environments. Across the European Union, 95% of urban households have internet access, compared to 91% in rural areas (Eurostat, 2024). While this difference may appear relatively small, it becomes more pronounced in terms of device usage: **60% of urban residents use laptops, compared to 49% in rural areas.** In Spain, households in Cantabria show one of the lowest rates of computer availability (31.5%), and 3.5% of municipalities with fewer than 10,000 inhabitants lack internet access altogether (Novalbos Gómez & Fernández Blanco, 2024). As a result, children living in low-density areas are particularly vulnerable to digital exclusion, especially when combined with socioeconomic disadvantage (European Commission, 2024).

Within the European Union, while approximately one-third of urban residents possess advanced digital skills, this figure drops to one in five in rural areas. Moreover, young people in rural contexts are 20% less likely to access structured media literacy programmes than their urban peers (Moskal, 2024). As noted in previous sections, the size of the municipality is a determining factor: confidence in detecting misinformation is higher in cities with more than 50,000 inhabitants, whereas in smaller municipalities verification practices are less frequent (6.3% compared to 8.3% in urban areas), and there is a greater reliance on informal sources such as family, friends, or influencers rather than traditional media (Gómez-Calderón, Ceballos & López-Martín, 2025). In addition, **higher teacher turnover and infrastructural barriers in rural areas limit opportunities for pedagogical innovation** (Sastre Reyes, 2019). This gap is further exacerbated by digital competence funding schemes and policy frameworks, which often fail to align with the actual capacities and needs of rural communities. Although not European, a comparative study between urban and rural primary school students (Sun et al., 2024) reinforces that disparities in digital media literacy are not determined solely by access to devices, but are significantly influenced by parental mediation and time spent using technology.

A specific factor in rural environments that increases vulnerability to disinformation is the existence of "news deserts," where the absence of local media or consistent coverage reduces access to verified information about the immediate environment. In Spain, 77.5% of municipalities -home to 11.6 million people, representing 24.5% of the total population- can be considered as such (Negreira-Rey et al., 2023). This lack of local information has been shown to push individuals towards relying on social media and influencers for local news (Medill, 2023), environments where content is not subject to editorial filtering and where exposure to disinformation is significantly higher.

Finally, gender constitutes another key dimension of digital inequality. Digital platforms tend to amplify gender stereotypes (UNESCO, 2023), and girls (12%) report higher levels of problematic social media use than boys (8%) (OECD, 2025). This inequality is further intensified for girls and women in rural areas, who face additional barriers in accessing and using information and communication technologies compared to their urban counterparts (Malgesini et al., 2022).

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1.3. Research objectives

The overall objective of this report is to **identify and analyse digital habits, access barriers, and educational needs related to digital literacy and online rights among children and young people** (8-16 años) **in rural areas of Spain** (Cantabria and Valencia) **and Belgium** (Brussels). The aim is to provide an empirical basis for the design of the educational programme to be developed in the subsequent phases of **RURCODE**. To this end, the following specific objectives are established

1. To identify the **devices available to** participants, as well as the type and quality of internet connectivity and overall conditions of digital access across the three intervention territories (Valencia, Cantabria, and Brussels).
2. To describe **patterns of internet and social media** use among participants, including platforms used, frequency and intensity of use, type of participation (creator, commenter, consumer), engagement with influencers, preferred content, and exposure to potentially harmful or risky content.
3. To explore the **the level of media and digital competence** among participants, with particular attention to their information-seeking and verification practices, as well as their basic digital security behaviours.
4. To collect the **perspectives of teachers and educators** regarding students' digital needs and the gaps identified in their educational contexts.
5. **To compare results across age groups** (8-11 and 12-16), gender, and, where relevant, territorial contexts (Spain and Belgium), in order to inform the differentiated design of educational materials.
6. To identify participants' **methodological and thematic preferences** regarding potential digital literacy training, as a direct input for the co-design of the project's curriculum.



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2. METHODOLOGY

A mixed-methods research design was adopted for the development of this report, combining both **quantitative and qualitative** analysis of the data collected (Hernández-Sampieri & Mendoza, 2018). Data collection was carried out through **eight focus groups** (Wilkinson, 1998), complemented by **a questionnaire** addressed to teachers and educators. The aim was to identify digital habits, access barriers, and educational needs related to digital literacy among children and young people in rural contexts in **Valencia, Cantabria, and Brussels.** The selection of focus groups as the primary research instrument is based on their suitability for exploring shared attitudes, perceptions, and experiences within peer groups, prioritising the understanding of social processes over statistical generalisation (Barbour, 2021).

As highlighted by Morgan (1997), unlike individual interviews, this method allows for the observation of how participants construct their ideas collectively, engaging in discussion and revising their opinions throughout the interaction. Furthermore, when working with minors, group dynamics help to mitigate the inherent power asymmetry between adult researchers and child participants, fostering more spontaneous expression by reducing the level of intimidation that may arise in one-to-one settings (Morgan et al., 2002; Punch, 2002). In practice, being among peers and engaging in interactive activities makes it easier for children to move away from feeling "assessed" and reduces the fear of giving an "incorrect" answer.

Beyond their exploratory function, the focus groups also operated as **co-design sessions**, as participants' contributions constitute a key input for the development of the **RURCODE** educational materials in subsequent project phases. Finally, the study incorporates a **cross-cutting gender perspective,** with data collected and analysed by sex, in line with existing evidence on gender differences in digital usage patterns among minors (Livingstone et al., 2011; Mascheroni & Ólafsson, 2014).

2.1. Sample and participants

The **focus group sessions were conducted between March and April 2026** across the three project intervention territories: Valencia (Spain), coordinated by the Valencian Federation of Municipalities and Provinces (FVMP); Cantabria (Spain), coordinated by La Columbeta (COL); and the rural area surrounding Brussels (Belgium), coordinated by Connect Brussels (CBR). In Valencia and Cantabria, a total of three sessions were conducted in each territory: two with participants aged 8–11 and one with participants aged 12–16, with each session including between 5 and 10 participants. In Brussels, two sessions were conducted, one per age group, with 5 to 6 participants each. The segmentation into these age groups responds both to the project proposal and to well-documented differences in usage patterns, perceived risks, and critical competencies across developmental stages. The 8–11 age group corresponds to primary education, a stage in which access to connected devices is increasingly early, while critical content evaluation skills are still in the early stages of development (Pilgrim & Vasinda, 2021; Smahel et al., 2020). The 12–16 age group corresponds to mid-adolescence and secondary education, a period characterised by more autonomous and intensive use of social media and digital platforms, alongside increased risks related to exposure to disinformation and the management of digital identity (Evercom, 2025; Livingstone et al., 2011)

In parallel, the questionnaire for teachers and educators was completed during March and April

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2026, with the aim of capturing the perspective of professionals working directly with minors. In total, the project engaged 25 respondents across the three regions.



Organisation	Territory	8-11 age group	12-16 age group	Teachers' questionnaire
FVMP	Valencia	18 part.	5 part.	12 part.
COL	Cantabria	15 part.	6 part.	6 part.
CBR	Brussels	5 part.	6 part.	7 part.

2.2. Data collection

Given that all focus group participants were minors, **data collection was conducted in accordance with an ethical framework specifically designed for this project** that complies with the applicable regulations in each territory.

In Spain, procedures adhered to Regulation (EU) 2016/679 (GDPR), Organic Law 3/2018 (LOPDGDD), and Organic Law 1/1982. Connect Brussels ensured compliance with the Act of 30 July 2018 on the Protection of Natural Persons with Regard to the Processing of Personal Data, which implements the General Data Protection Regulation (EU) 2016/679 (GDPR) at national level. To avoid the collection of personal data from minors, each session facilitator signed an attendance sheet recording the number of participants, disaggregated by gender. In addition, each organisation and participating educational centre was responsible for managing **informed consent from parents or legal guardians** from parents or legal guardians, where required, to enable minors' participation in the focus groups.
Each session was conducted by two professionals: a moderator, responsible for guiding the discussion and managing participation, and an assistant, responsible for data recording and logistical support. Information about the study was provided using age-appropriate language. In line with the project's gender perspective, the facilitation team paid particular attention to ensuring the participation of girls, whose contributions can sometimes be less visible in mixed groups, particularly during adolescence.

Three data collection instruments were used: (i) a **semi-structured focus group guide** organised into five thematic blocks (digital access and equipment, internet use habits, social media and digital

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participation, media literacy, and content, perception and online behaviour), with quantitative data recorded using a standardised template across the three territories (Annex I); (ii) a **qualitative session summary**, completed by the facilitation team after each focus group, documenting observations on group dynamics, representative participant quotes, and any relevant incidents; and (iii) an **online questionnaire** addressed to teachers and educators, focusing on their perceptions of students' digital habits and their own training needs (Annex II).

The following sections present the results, integrating and triangulating the quantitative and qualitative data collected through these instruments. Findings are reported for the overall sample, highlighting differences by age group, gender, and, where relevant, geographical context within each thematic block.

LIMITATIONS

The results should be interpreted in light of several methodological limitations that condition their scope and generalisability.

First, **the sample size is 55 participants**, which means that the findings are not generalisable to the broader population of children and adolescents, but should instead be understood as an exploratory approximation valid for the sample analysed.

In addition, **the sample distribution is not balanced across age groups.** The 8–11 age group (n = 38) is considerably larger than the 12–16 group (n = 17), which may introduce bias in the aggregated results and overrepresent patterns associated with younger participants. As a result, comparisons between age groups should be interpreted with caution.

Some indicators also present **limitations related to data collection design**, as not all categories are mutually exclusive. This may complicate the interpretation of certain aggregated results and requires careful reading, particularly in variables related to digital practices and competencies.

It should also be noted that the results have been organised according to the **thematic blocks defined in the study** and are presented following a consistent analytical structure based on **aggregated data, differences by age, differences by gender, and differences by context**.

These limitations do not invalidate the findings but require that they be interpreted as **indicative of trends and patterns**, useful for exploratory purposes and for informing the design of educational interventions, rather than as fully generalisable conclusions.

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3. RESULTS

3.1. Digital access: Devices, connectivity and parental control

The results for the full sample (n = 55) indicate that access to digital devices and connectivity is widely extended, although differences persist depending on the type of device and the level of autonomy in access.

> *"I would like to understand how the Internet travels «por el aire»"* *(Ages 8–11, Brussels)*

In terms of connectivity, the vast majority of participants report having **Wi-Fi access at home (89,1%)**, indicating a relatively consolidated domestic infrastructure. Additionally, more than half declare having access to **mobile data (52,7%)** and no cases of complete lack of internet access at home were identified. However, due to the structure of data collection, these categories should not be interpreted as mutually exclusive. **Access to the internet outside the home** is reported by **56.4% of the sample**, reflecting the presence of additional access environments (e.g. schools, community spaces, relatives' homes), although not universally. The most common devices among participants are **tablets and/or computers**, available in **81,8% of cases**, while access to a **personal smartphone** is significantly lower (**50,9%**), a difference that varies notably by age group. In this regard **shared device use** is reported by **38,2% of participants**.

In the **8–11 age group** access is less individualised and more closely linked to the household environment. Only **28.9%** report having a **personal smartphone,** while **73.7%** have access to a **tablet and/or computer.** Access to the internet outside the home is more limited (**36.8%**), suggesting usage patterns more centred within the family context. In this group, parental controls are present in **42.1%** of cases**.** In contrast, in the **12–16 age group,** access is significantly more autonomous and fully generalised. All participants report having both a **personal smartphone** and access to **tablets/computers** (**100%**), and all declare **internet access outside the home**. The presence of **parental controls** is slightly lower (**35.3%),** which is consistent with increased autonomy in device use. Overall, the data show a clear transition from a **mediated and partially shared** access model in childhood to an **individualised and ubiquitous** access model in adolescence.

Gender differences do not substantially alter the overall pattern of access. The availability of **personal smartphones** is similar among boys (**53.3%**) and girls (**48.0%**), as is access to **tablets and/or computers** (80% and 84%, respectively). However, there is a slightly higher tendency for **shared device** use among girls (**48%**) compared to boys (**30%).** Similarly, **parental controls** are somewhat more frequent among girls (**44% vs. 36.7%**).

Regarding **contextual differences**, these are more visible in the younger age group (8–11 years) and tend to diminish in adolescence. Within the **8–11 age group,** access to **personal smartphones** varies significantly across contexts: no cases are recorded in **Brussels**, while in **Cantabria** it exceeds 50%, and presents intermediate levels. Differences**Valencia** are also observed in the **presence of parental controls**, which are universal in Brussels, but less frequent in the Spanish contexts analysed.. In the **12–16 age group,** contextual differences are minimal. Access to devices and connectivity is fully generalised across all territories, suggesting a convergence in access conditions as age increases.

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3.2 Internet use

Aggregated results show that internet use is **widely normalised and frequent across the full sample**, although **differences in intensity** are observed **depending on age**.

In terms of frequency, the majority of participants report **daily use (70.9%)**, while the rest connect **several days per week** (**27.3%**). There are virtually no cases of sporadic or non-use, indicating that internet use forms part of e**veryday digital consumption**. Usage is primarily concentrated in the **afternoon** (**70.9%**), followed at a distance by the **evening** (**23.6%**), while morning use is marginal. This temporal distribution suggests a strong association between internet use and leisure time outside school hours.

Regarding purposes, **entertainment clearly dominates (90.9%)**, far exceeding other uses such as **information seeking (9.1%)**, indicating a strong orientation towards content consumption.

In the **8–11 age group,** use is frequent but more variable. Slightly more than half connect daily (**57.9%**), while a significant proportion (**39.5%**) do so several days per week. Usage is mainly concentrated in the **afternoon** (**68.4%**), with some presence of evening use (28.9%), reflecting patterns shaped by family routines. Time restrictions are present in around **40%** of cases. In terms of purposes, **entertainment is almost universal (92.1%**), while **information seeking remains very limited (5.3%)**.

In contrast, in the **12–16 age group** use is **fully daily (100%**) and more homogeneous. Although the **afternoon** remains the primary time of connection

(76.5%), usage is more distributed throughout the day (including morning and evening), suggesting greater flexibility and autonomy. While **entertainment** continues to be the dominant activity (**88.2%**), there is a slight increase in **information-seeking** behaviours (**17.6%**), indicating a gradual diversification of uses.

Overall, the data show a clear transition from **frequent but partially restricte**d use in childhood to **daily, intensive and more autonomous** use in adolescence. Contextual differences are primarily observed in the younger age group (8–11 years) and tend to diminish in adolescence. In the **8–11 age group,** variations in usage intensity are evident: in Valencia, daily use is fully generalised (100%), while in the other territories more intermittent use predominates. Differences are also observed in **usage timing**, with a greater presence of evening use in Brussels, while in Spain usage is more concentrated in the afternoon. Additionally, time restrictions are more systematic in Brussels than in the Spanish contexts.

In the **12–16 age group** patterns are largely homogeneous across territories: daily use is widespread, usage is concentrated in the afternoon, and entertainment dominates in all contexts. This suggests a **convergence of digital habits** with increasing age.

In this case, the analysis **does not identify substantial gender differences** in internet usage patterns.

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3.3 Social media and digital platforms

The results for the full sample indicate that social media use **is present from an early age, although with clear differences in terms of autonomy and intensity**.
In terms of platforms, YouTube emerges as the most widespread and transversal, used by a very high proportion of participants (**92.7%**), followed by **WhatsApp** (**69.1%**), **TikTok (60.0%)**, and **Instagram (36.4%)**. Participants also report occasional use of other platforms such as Telegram, Snapchat, X, Twitch, and Facebook.

Regarding **frequency of use**, the data show that social media is well integrated into everyday routines. Daily use (7 days per week) is particularly high for WhatsApp (41.8%) and TikTok (36.4%), followed by YouTube (29.1%) and Instagram (23.6%). When considering intensive use (5–7 days per week), these figures increase, reinforcing the idea that social media forms part of regular digital habits.

In terms of **user behaviour**, **54.5% of participants report** only **consuming content**, indicating a predominance of passive use, while **43.6% read comments**, **25.5% post comments**, and only **20% identify as content creators.**

Regarding engagement with influencers, **61,8%** report **following influencers**, highlighting their relevance in the digital ecosystem, while **21.8%** express a **desire to become influencers** and **18.2%** report **actively trying to do so**.

Differences by age constitute the main source of variation in social media use, both in terms of the type of accounts followed and frequency of use. In the **8–11 age group**, social media use is less individualised and more mediated by the family environment. On YouTube, only **28.9%** have their **own account**, while **60.5%** access through **shared accounts,** confirming its role as a supervised consumption platform at these ages. A similar pattern is observed on TikTok (**15.8%** own accounts vs. **26.3%** shared) and WhatsApp (13.2% own vs. **42.1%** shared). **Instagram shows very limited penetration**, with only **10.5%** of personal accounts, suggesting its adoption occurs later in the digital trajectory.

In terms of frequency, social media use is regular but less intensive than among adolescents. Daily use reaches **23.7%** for WhatsApp, **18.4%** for TikTok, 13.2% for YouTube and just **2.6%** for Instagram. These findings suggest that, although social media platforms are part of participants' digital lives, they are not yet fully integrated into the daily routines of the majority.

Profile privacy is also limited and inconsistent, often linked to the fact that many participants do not manage their own accounts. On **Instagram**, of the four participants who reported having their own account, two had a public profile. On **TikTok**, 16 children reported having an account on the platform (six with their own account and ten using someone else's account). Of these, five had a public profile and seven a private one. At this age, therefore, privacy appears to be less the result of an active management of online profiles and more a consequence of children's still limited or mediated access to certain social media platforms.

In contrast, the pattern observed among the **12–16 age group** is markedly different, reflecting a much more autonomous and intensive use of social media. The vast majority of participants reported having their **own accounts on all major platforms**: 94.1% on YouTube and Instagram, and **100%** on TikTok and WhatsApp. The use of someone else's account was negligible or non-existent, indicating that access to these platforms has become fully individualised.

The **frequency of use** is significantly higher in this age group. Daily use reaches **82.4%** for WhatsApp, 76.5% for both TikTok and Instagram, and **64.7%** for YouTube. This pattern reflects the full integration of social media into adolescents' daily lives, both in terms of access and intensity of use.

Regarding **privacy settings**, the pattern is much more consistent. On **Instagram**, 94.1% of participants reported having a private profile, while

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only **5.9%** had a **public** one. On **TikTok**, all participants reported having a **private** profile, with no cases of public profiles. This suggests a more established awareness and practice of protecting personal profiles on social media.

Whereas social media participation among the **8–11 age group** is characterised by a clear predominance of passive consumption (**60.5%** reported that they **only consume content**), the pattern changes markedly among **12–16-year-olds**, reflecting a higher level of interaction. The proportion of participants who only **consume content** decreases to **41.2%,** while more active forms of engagement become increasingly common. Specifically, **82.4%** reported reading comments, **58.8%** reported **posting comments**, and **29.4%** reported **creating content.**

With regard to **influencers**, it is interesting to note that **children aged 8–11** show a greater aspiration to become **influencers** (**23.7%**) and are also **more likely to report spending time trying to achieve this (18.4%)** than adolescents **(17.6% in both cases)**.

Gender differences in social media use are relatively limited, although slight differences emerge in relation to **privacy settings**. On Instagram, **private profiles** are somewhat more common among **girls** (**36%**) than **boys** (**30%**), while **public profiles** remain uncommon in both groups (**8% and 3.3%, respectively**). A similar pattern is observed on TikTok, where private profiles are slightly more prevalent among girls **(48%)** than boys **(40%),** whereas public profiles are again a minority in both groups.

Contextual differences are more pronounced among the younger age group and tend to diminish during adolescence. Among **children aged 8–11,** significant variations can be observed in the type of social media accounts used. In **Brussels**, social media use takes place almost exclusively through **accounts belonging to others,** with virtually no use of personal accounts on several platforms (for example, **100% of YouTube users reported accessing the platform through someone else's account**). In **Cantabria**, by contrast, higher levels of autonomy are observed, with **40%** of participants reporting having their **own YouTube account** and **33.3% their own TikTok and WhatsApp accounts. Valencia** represents an intermediate situation, with both personal and shared accounts being used, although with a lower degree of individualised access than in Cantabria.

These differences suggest that autonomous access to social media during childhood may be influenced by contextual factors. This interpretation is further supported by the qualitative evidence provided by the facilitator of the **8–11 focus group**: "*In Belgium, children aged 8 to 11 have very limited access to the internet. These restrictions reflect a broader cultural and educational norm and generally begin to ease only from the age of 12 onwards. Within the school system, formal introduction to the internet and computer use is intentionally delayed until secondary education*".

Among the **12–16 age group** contextual differences become considerably less pronounced. The availability of personal accounts is almost universal across all territories for TikTok and WhatsApp, and remains very high for YouTube and Instagram, indicating a convergence in social media use patterns as age increases.

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3.4 Competence: Information sources, verification and digital security

The results for the full sample indicate that competencies related to information seeking, basic content verification, and fundamental digital security practices show an uneven level of development. Overall, **participants demonstrate a high familiarity with certain search environments, but less consolidated habits in terms of verification and digital security**.

Regarding the **sources of information used on the Internet**, **Google** is by far the most widely used option, reported by **76.4% of the sample**. ChatGPT ranks second, mentioned by 52.7% of participants, showing a very significant presence of generative artificial intelligence tools in information-search practices. This is followed by YouTube, used by 43.6% of participants. The use of TikTok as a source of information is lower, although still relevant, reaching 25.5%. Wikipedia is mentioned by 18.2% of participants.

Regarding **disinformation**, **72.7%** of participants reported **believing that they can identify false content**, reflecting a high self-perception of critical competence, although this does not necessarily imply actual verified ability. However, when asked about their **verification habits**, only **45.5% of the sample** reported that, when they find something suspicious, they **look for the original source**.

Password management will be analysed separately by age group, since, during childhood, most participants do not manage their own passwords directly and, therefore, aggregated data could be misleading.

Age differences constitute the main factor of variation in this section, both in terms of the sources used and verification and security habits. In the **8–11 age group** **Google** is clearly the dominant source of information, used by **94.7% of participants**. This is a very high percentage, suggesting almost universal use. **YouTube** ranks second (**52.6%**), followed by **ChatGPT** (**47.4%**). By contrast, the use of **Wikipedia** is considerably lower (**23.7%**), while the use of **TikTok** as a source of information is very limited (**5.3%**). The "Other" category is marginal (**2.6%**): one child reported using Opera GX, a browser specifically designed for gaming.

In terms of **disinformation**, **76.3%** of younger participants **report being able to detect false content**, and **50%** state that they **check the source** when something seems suspicious. However, these figures should be interpreted with caution, as highlighted by the Brussels facilitator, who noted that this may reflect an overestimation of their abilities due to their developmental stage, pointing to a potential gap between perceived and actual competence.

Regarding **basic digital security**, 18.4% of participants reported using the **same password** across all websites, while only **7.9%** stated that they use different passwords. This suggests that autonomous password management is still limited and, in many cases, probably not yet fully developed. It may also reflect the fact that some participants do not personally manage multiple credentials or do not yet have a wide range of online accounts

In the **12–16 age group,** the pattern changes markedly. The most frequently used source of information is **TikTok**, mentioned by **70.6%** of participants, followed closely by **ChatGPT** (**64.7%**). **Google** is used considerably less than in the younger age group, with **35.3%** of participants reporting its use. The importance of **YouTube** as a source of information also decreases (**23.5%**), while **Wikipedia** becomes almost residual (**5.9%**).

Regarding **disinformation**, **64.7%** of participants believe they are able to detect fake news. However, when asked whether they verify the information they receive, only **35.3%** reported that they **look for the original source when they find something suspicious**.

With regard to **password management,** the adolescent group shows a more balanced pattern

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than the younger group. **While 47.1% reported using the** same password across all websites, **52.9%** stated that they use **different passwords**. Although the use of different passwords is slightly more common, the fact that nearly half of participants still reuse the same password suggests that basic digital security remains a vulnerable area even when digital use has become more autonomous and intensive.

Regarding **gender differences**, although they are not structural, it is worth noting that **Google is used more frequently by girls (84% vs. 70%)**, while **ChatGPT is used slightly more by boys (56.7% vs. 48%).** Boys also show a slightly higher tendency to reuse the same password (**33.3% vs. 20%**). In terms of verification habits, **48% of girls** reported that, when they find something suspicious, they look for the original source, compared with **43.3% of boys**. Although the difference is moderate and does not suggest a strong gender pattern, it does point to a slightly greater tendency among girls to verify information.

3.5 Content consumption and digital wellbeing

Regarding **digital media and news consumption**, **27.3% of the sample** report **following or reading digital media**, while **50.9%** state that they **encounter news online.** This difference suggests that exposure to news is more frequent than active media consumption, pointing to a pattern of incidental or platform-distributed news consumption, often shaped by algorithmic dynamics.

Exposure to advertising is universal, with 100% of participants reporting having **seen ads online.** The types of content mentioned include **"clothing", "make-up", "video games", "technology", and platforms such as Temu or AliExpress,** as well as influencer collaborations (e.g. unboxings, recommendations, product placements), which are not always recognised as advertising. In this regard, 60% report having seen **paid collaborations or sponsored content.**

> *"There are lots of ads that don't look like ads: they get you interested in something and then try to sell you something"*
>
> *(8–11 years old, Cantabria)*

Additionally, **63.6%** report having encountered **scams online,** including examples such as "**fake giveaways", "deceptive messages", "fraudulent websites", and "suspicious promotions".** These findings indicate that exposure to commercial content, including misleading or non-transparent formats, is a regular part of participants' digital environment.

Regarding **exposure to violent or disturbing content**, **67.3%** of participants reported having seen **videos of fights or verbal abuse**, indicating frequent exposure to this type of content. The **violent** content mentioned included "videos of fights shared through Telegram groups or channels", "insults", "bullying" and "extreme situations" on platforms such as TikTok and YouTube. The **emotional impact** of digital content consumption is also significant: **58.2%** of participants reported having felt sad or anxious after viewing content related to "violence", "negative comments", "injustice", "sad videos", or content specifically designed to frighten them. For example, one of the children interviewed described watching "a video of a spider that was supposedly going to get into your bed", which made them feel anxious and unable to sleep that night.

In terms of **content preferences,** consumption is primarily oriented towards entertainment, with a strong presence of **humour, video games, food, livestreams, lifestyle content, and current trends**.

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In the **8–11 age group,** exposure to informational content is present but not predominant. **26.3%** report **following or reading digital media**, while **55.3%** report **seeing news online**. **Exposure to advertising** is universal (**100%**), and more than half report having seen **paid collaborations** (**57.9%**) and **scams** (**63.2%**), indicating early exposure to commercial and potentially misleading content.

Exposure to violent or disturbing content reaches **52.6%**, showing that such content is already present at early ages. The **emotional impact** is significant, although lower than in adolescence, with **42.1%** reporting **feelings of sadness or anxiety** after consuming digital content.

In the **12–16 age group, 29.4% report following digital media**, while **41.2%** report **seeing news online. Exposure to advertising** remains universal (**100%**), while exposure to **paid collaborations (64.7%)** and **scams** (**64.7%**) is slightly higher than in the younger group.

The most notable difference concerns **exposure to violent content**, which is **universal (100%)** in this group. The **emotional impact** is also significantly higher, with **94.1%** reporting having felt **sad or anxious,** indicating a more intense digital experience from an emotional perspective.

Gender differences reveal some relevant patterns. Exposure to **scams** is higher among **boys** (**70%**) than **girls (56%)**, and exposure to violent content is also more frequent among **boys (76.7% vs. 56% respectively**). In terms of **emotional impact,** boys report slightly higher levels (**63.3% vs. 52% respectively**). Regarding **content preferences**, **video games** show a clear gender gap (**73.3% among boys vs. 16% among girls**), while **make-up (44%) and lifestyle content (40%) are more common among girls. Humour** appears as a transversal content type (**60% in both groups**).

Across territories, some differences are observed in relation to access to informational content, but the most relevant finding is that, **in all contexts and across both age groups, exposure to advertising and to violent or disturbing content is almost universal.** In the Spanish context, it is particularly notable that many participants mention exposure to advertising from Temu, often referring to "Temu tablets" or similar products, which they frequently identify as deceptive or misleading advertising



3.6 Perceptions of digital learning, self-confidence and areas of interest

Humour emerges as a transversal and highly valued type of content across all participants. They refer to **"funny 'fail' videos" and "watching people or animals doing silly things**", as well as "**humour and falling videos"**. In the older group, this preference expands to formats such as **"fails, prank videos, memes and short comedy sketches**", indicating continuity in content type but with greater diversification in adolescence.

The specific examples provided reinforce this preference for visual, immediate and humorous content, such as "a dog driving a car, a dancing cat, people falling" or **"people saying silly things".** Participants also mention content linked to absurd or everyday situations, such as "**talking cats (probably AI-generated), falls, children popping balloons**".

Alongside humour, **video games** constitute another central axis of content consumption, particularly in the **8–11 age group.** Participants refer both to playing and watching others play ("**watching others play video games"**), as well as specific titles such as "**FIFA, Brawl Stars or Clash Royale"**.

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In the 12–16 age group a **greater thematic diversification** is observed, including content related to "**food, video games, lifestyle, fashion, make-up, humour"**, as well as "**travel, music videos, music or film summaries"**. References also appear to content linked to digital creators and livestreams, such as "**live streams (Ibai)**".

Qualitative data also show that participants **clearly identify the type of content they dislike and would prefer to avoid on social media**. One of the most recurrent elements is the rejection of **intrusive and unwanted advertising**, especially when it interrupts the user experience. Examples include **"ads", "unskippable ads"** or specific references such as **"Temu ads".**

There is also an explicit rejection of **manipulative or coercive content**, particularly that which **appeals to emotions to drive engagement**. Examples include: "videos asking 'do you love Jesus more than your parents?'", "if you love your family, like the video" or "what would you choose: sleep with a snake or like the video".

Another relevant category of rejection relates to content that generates **disgust, fear or discomfort**. Participants mention "disgusting things that give them nightmares", "pimple-popping videos", "people crushing things" or "a spider in the bed video (which prevented them from sleeping)". In the younger group, there are also references to "jump scare videos" or content that provokes fear.

> *"You can find videos of fights and people insulting each other through Telegram links that take you to a group where those videos are shared. In those videos you can see arguments, girls pulling each other's hair, and even people being killed"*
>
> *(12–16 years old, Cantabria)*

In the older group, rejection extends to content with a more social or ethical dimension, including **"animal abuse and excessive violence"** and "bullying or aggression videos". Participants also identify as problematic digital environments characterised by **toxicity and hate**, referring to **"hate comments", "racist comments, cyberbullying and toxic behaviour"**. Additionally, one participant in this group explicitly stated not wanting to see "feminism-related videos".

There is also a clear rejection of **misinformation and misleading content**, expressed through terms such as "**false (uninformed) opinions" or "hoaxes about abuse in elderly care homes"**.

When asked about their learning interests, participants across both age groups identify three main areas: **content creation, digital security, and understanding how the digital environment works.**

In the 8–11 age group interests are strongly linked to creativity and practical uses of technology. Participants express interest in learning **"how to make fun videos" or "design games (specifically Minecraft castles)"**, reflecting a playful and creative orientation. There is also curiosity about basic technical aspects, such as **"how the internet travels through the air".** Alongside this, concerns related to **digital safety** emerge, such as **"avoiding viruses" or "how to block ads and detect fake news".**

In the 12–16 age group learning interests shift towards more technical and critical areas. Participants mention **video editing, content creation, and cybersecurity**, referring to **"protecting data from hackers/scams"**. There is also a clear interest in understanding the functioning of the digital environment, including "**how algorithms work"** and the use of digital tools for studying.

Participants also express specific concerns related to privacy and platform functioning, such as **"how to prevent your phone from 'listening'** to you **(ads appearing based on conversations)"** or risks

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associated with certain platforms (**"dangerous websites such as Omegle"**). **Artificial intelligence** emerges as a relevant topic, with critical reflections such as "**using ChatGPT makes you stop thinking and sometimes it gets things wrong"**.

A relevant finding emerging from the qualitative notes is the presence of ambivalent perceptions regarding the need for further learning, particularly among the older age group. In some cases, participants expressed a **high level of confidence in their own knowledge**, stating that they "**think they already know everything**" or that they "**already know everything there is to know".** However, this perception was tempered by the expectation that appropriate training could still provide added value, with some participants commenting that they **"would like to be surprised by discovering that they do not actually know everything".** Among the younger group, signs of confidence in their own abilities also emerged, particularly with regard to identifying problematic content ("**they say they notice everything"**), although these were combined with clear demands for practical learning opportunities

3.7 Teachers' perceptions of Media Literacy in their schools

Overall, teachers consider the use of technology in schools to be **moderate and in need of improvement**, positioning it somewhere between meaningful pedagogical integration and problematic use.

There is a **clear concern about the impact of digital device use on students,** particularly regarding **reduced attention spans, excessive use, and difficulties in identifying reliable information**. Likewise, conflicts arising from mobile phone use are perceived as frequent, resulting in a tendency to favour regulatory approaches based on limiting or prohibiting their use, rather than integrating them into educational practice.

Teachers identified the development of students' digital and media literacy competencies as a key priority. In the field of digital literacy, particular emphasis was placed on the **responsible use of technology, digital safety, and the appropriate management of digital devices.** Regarding media literacy, participants highlighted the importance of identifying **false content, critically analysing media content, and evaluating information sources.**

However, the **results reveal a gap between the importance attributed to these competencies and their effective implementation in the classroom**. This situation appears to be linked to a widespread lack of specific training, particularly in the field of media literacy. The training received by teachers is perceived as heterogeneous, non-systematic and, in many cases, insufficient to address the current challenges of the digital environment.

Teachers' responses reflect a clear demand for support in developing media literacy education through **educational resources and practical strategies to address disinformation, critical thinking, the responsible use of social media, and cybersecurity** in the classroom.

Participants also highlighted the importance of integrating media literacy across the curriculum and adapting educational content to the different age groups of students so that it reflects their actual digital practices and developmental stages.

Although the sample size limits the possibility of drawing generalisable conclusions, some **differences can be observed across the contexts analysed**. In **Spain** (**Valencia and Cantabria**), teachers' discourse focuses more strongly on the problems associated with mobile phone use, such as classroom disruption and distraction, resulting in an approach that is more oriented towards regulation and control.

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By contrast, in **Belgium** (**Brussels**), there are **more frequent references to the development of media literacy competencies and critical thinking,** suggesting an approach that is relatively more focused on the pedagogical integration of technology. **In both contexts, a lack of structured training** was identified, although participants in Belgium appeared to be more familiar with concepts related to media literacy.

Overall, the findings highlight the **need to move towards a more pedagogical approach to the use of technology in the classroom**, one that goes beyond a purely restrictive logic and is based on integrating students' actual digital practices into learning. In this regard, **the development of educational materials that support the practical acquisition of critical competencies,** particularly in relation to disinformation and source evaluation, is considered a priority.

It is also essential to **provide teachers with concrete and structured resources that facilitate the implementation of these topics** in the classroom, while **incorporating the emotional dimension** of digital media consumption and specifically addressing advertising, digital business models, and the risks associated with the online environment. Overall, the study highlights a clear need to support teachers in transforming students' digital practices into structured learning opportunities that are adapted to different educational stages and specific contexts.



4. DISCUSSION AND CONCLUSIONS

Overall, the findings indicate that the main challenge is not related to digital access itself, but rather to **how technology is used and under what conditions**. In addition, many children share devices or depend on family members to access them, particularly at younger ages. Therefore, one key implication is that educational materials should focus on the **responsible and critical use of digital devices.**

The most important differences in this area are associated with age. Between the ages of 8 and 11, technology use is more closely supervised and more dependent on the family, whereas between the ages of 12 and 16 access becomes fully autonomous and constant. This reflects a clear transition towards more independent use, but also greater exposure to potential risks. Furthermore, not all children receive the same level of parental supervision, as parental controls are not consistently present. Two additional key implications therefore emerge: the need to **adapt educational content to different age groups** (from guided to autonomous use), and the importance of **fostering digital autonomy and decision-making skills**, taking into account that not all students receive the same level of support at home.

The research shows that **internet use is fully integrated into children's everyday lives**, with most participants going online every day, particularly during the afternoon and in their leisure time. **Entertainment is by far the main purpose of internet use**, well ahead of activities such as searching for information. This suggests that, although access is widespread, internet use is primarily centred on content consumption rather than educational or critical purposes. Consequently, **educational materials should build on these real patterns of use and seek to transform entertainment into learning opportunities.**

Among children aged 8–11, internet use is frequent but more closely supervised, with some family rules and more limited schedules. By contrast, among those aged 12–16, use is daily, more autonomous and distributed throughout the day, with fewer restrictions. This reflects a transition towards more intensive and independent use, but also greater individual responsibility. Since device use is concentrated during leisure time and tends to increase with age, potentially encouraging excessive or unbalanced patterns of use, **it would be valuable to address time management and healthy digital habits with young people**. Educational materials should also provide practical tools and strategies to encourage a greater **diversity of online activities,** promoting not only content consumption but also the use of the internet for learning, information seeking and the development of more active and critical digital skills.

Social media are part of children's everyday lives from an early age, with **YouTube**, **WhatsApp** and **TikTok** being the most widely used platforms. However, use is predominantly **passive**: more than half of participants reported only consuming content, although interaction increases with age through reading comments, commenting and creating content. **Influencers** also play an important role in children's digital environments and, although not all participants aspire to become influencers themselves, this aspiration appears to be more common among the younger age group. In terms of how social media are used, children aged 8–11 tend to access platforms under greater family supervision, often through shared accounts, whereas those aged 12–16 use social media autonomously, on a daily basis and more intensively, through their own accounts and with higher levels of interaction. Privacy management also improves with age, although not always as a result of conscious decision-making.

Based on these findings, it is important to **help young people understand the role they adopt on social media**, as most participants are primarily content consumers rather than active contributors. Educational materials should **encourage more conscious participation**, supporting the transition from passive users to individuals who understand,

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analyse and, where appropriate, create content in a critical and informed manner.

It is necessary to address specifically the **relationship with influencers and content creators, as well as the influence they have,** since they are a regular reference point in young people's digital consumption. Educational materials should help participants understand how these figures operate, their relationship with advertising, and the potential impact they have on children's and adolescents' decisions, preferences and behaviours.

Young people frequently use the internet to search for information, but they do not always do so in a critical or safe way. Among the younger group (8–11 years), information seeking is mainly centred on Google and YouTube, whereas among adolescents (12–16 years), TikTok and ChatGPT become more prominent as sources of information. This finding is consistent with the academic literature on this subject, which suggests that the main gateway to information amongst young people is shifting from traditional search engines towards social media, video platforms and, more recently, artificial intelligence (AI) chatbots. However, although more than 70% believe they are able to identify false content, **fewer than half actually verify information when they have doubts about it.** This reveals an important gap between what they believe they know and what they actually do. A key implication is that educational materials should **address information verification through practical activities** that help develop real verification habits rather than simply reinforcing perceptions of competence. In addition, **it would be valuable to include content on how to select, evaluate and understand information sources**, particularly those encountered on social media.

The findings also show that young people are constantly exposed to a wide range of online content, **particularly advertising, entertainment and, in many cases, problematic content.** Although only a minority regularly follows digital news media, **many occasionally encounter news through social media or other platforms, indicating a relatively unstructured pattern of news consumption that is largely shaped by algorithms.** In addition, exposure to advertising is widespread and is often not clearly recognised as such, including influencer collaborations and sponsored content.

A large proportion of young people are also exposed to **violent or disturbing content,** which has a **significant emotional impact,** particularly during adolescence, where almost all participants reported having felt upset after viewing this type of content.
.

> ***"We would like other people to use social media responsibly, and for people online to be less judgemental."***
>
> *(8–11 years old, Cantabria).*

Therefore, in relation to content, we consider it a priority to **address early exposure to digital risks, as children** are already encountering scams, misleading content and inappropriate material from a very young age. Educational materials should anticipate this reality and provide practical tools to help them recognise and manage these risks. It is also important to address the **normalisation of digital overexposure,** as exposure to violent content, advertising and negative messages forms part of the everyday digital experience of many young people. Educational materials should therefore **help them develop a more conscious approach to the content they consume** and promote strategies to protect their well-being in digital environments.

The type of content most frequently consumed by young people is entertainment, particularly **humour and video games**, with a preference for **short, visual and easily consumable videos.** As they grow older, their interests diversify towards topics such as lifestyle, music and digital creators. At the same time, they clearly identify the types of content they dislike, including **intrusive advertising, misleading or manipulative content**, and material that makes them feel afraid, disgusted or uncomfortable, such as violent or bullying-related content. It is important to **address the emotional**

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relationship with digital content, as young people are able to identify what makes them feel bad (fear, anxiety or discomfort), but do not always have the tools to manage these emotional responses.

> ***"Some content makes them feel nervous or anxious (e.g. a video of a dog drowning). One girl even said that it sometimes gives her a headache"***
>
> *(8–11 years old, Valencia)*

In addition, young people show an interest in learning, although their needs differ according to age. Younger children are interested in learning how to create content and use technology in practical and creative ways, whereas adolescents are more interested in digital safety, privacy, algorithms and artificial intelligence. At the same time, participants display a high level of confidence in their own digital skills, which does not always correspond to their actual knowledge. For these reasons, the **educational materials should address how the digital environment works (including platforms, algorithms and digital content)**, as participants show both curiosity and confusion about these issues. The resources should therefore explain these systems in a simple and practical way in order to promote a more conscious and critical use of digital technologies.

As this project pays particular attention to **gender differences in relation to media literacy among children and young people**, the main findings are presented below. The focus group data do not identify structural gender gaps in digital access or use, but they do reveal **differences in patterns of use, mediation and preferences**. In terms of access, boys and girls show similar levels of device availability and internet connectivity. However, **girls appear to experience slightly higher levels of shared device use and parental supervision,** suggesting differences in family mediation rather than in access itself. Regarding internet and social media use, no significant differences are observed in frequency or intensity, although some differences emerge in the type of interaction: boys tend to participate somewhat more actively (through commenting and content creation), while girls show a slightly greater tendency to verify information. In the area of digital safety, **boys report reusing passwords more frequently**, which may indicate a lower adoption of basic online security practices.

The clearest differences relate to the **type of content consumed and exposure to online risks.** Boys show a stronger preference for video games and greater exposure to violent content and potential scams, while girls are more interested in lifestyle, fashion and beauty-related content. Likewise, although the emotional impact of digital content consumption is relevant for both groups, it is slightly higher among boys. Overall, these findings suggest that gender differences are less related to access or intensity of use than to patterns of **use, content preferences and digital experiences.**

Accordingly, it is recommended that the educational materials include examples and activities connected to a **range of interests,** such as video games or lifestyle-related content, in order to foster critical thinking through topics that are familiar and relevant to both boys and girls. This should be done without reinforcing stereotypes, while making use of these patterns to increase engagement. In this regard, it is important to consider that **girls may be more exposed to image- and lifestyle-related content,** whereas **boys may be more exposed to more competitive or intense forms of entertainment.** In addition, it would be valuable to include strategies that promote **self-awareness of one's own digital behaviour**, helping boys and girls to identify their own patterns of media consumption (what they consume, why they consume it and how it affects them) and to reflect critically on these patterns, building on the differences identified in content preferences and digital experiences.

Finally, as **teachers were consulted** to identify the needs that these educational materials should address, the findings show that educators perceive the use of technology in schools as an area that could

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be improved and one that raises concerns, particularly regarding distraction, excessive device use and students' difficulties in identifying reliable information. In response to these challenges, many schools choose to limit or prohibit the use of mobile phones rather than integrating them into learning. However, teachers agree that it is essential to develop digital and media literacy competencies, including the responsible use of technology, the identification of false content and critical thinking. Educational materials should therefore help shift **from a control-oriented approach to a more pedagogical one, supporting the meaningful integration of technology into classroom practice.**

At the same time, there is a **clear lack of training and resources for teachers,** making it difficult to implement these topics effectively in the classroom. Teachers call for concrete, easy-to-use materials that are adapted to students' ages and respond to their actual patterns of technology use. Differences between contexts also emerge: in Spain, the focus is more strongly placed on digital risks, whereas in Belgium greater emphasis is given to the development of digital and media literacy competencies. Consequently, two key principles should guide the development of the educational materials: first, the need to **provide teachers with practical and accessible resources;** and second, **the importance of addressing critical competencies in an applied way (including disinformation, social media and digital risks),** while taking into account both the educational context and the age of the students.









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