

# Media and Information Literacy in Colombian Teacher Education: Insights from Implementing the UNESCO MIL Curriculum

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## Abstract

Colombia has reached a level of maturity concerning the establishment of enabling technologies. Nevertheless, the country's educational system has yet to achieve consistent and widespread quality across the entire national territory. Evident disparities exist in academic achievements among secondary school students in urban versus rural areas and between the official and nonofficial sectors. However, this study reveals that the country possesses contextual conditions conducive to advancing media and information literacy (MIL). These conditions stem from advancements in technological infrastructure and the alignment of the United Nations Educational, Scientific and Cultural Organization (UNESCO) MIL curriculum learning outcomes for teachers with both the interests and content of the national curriculum and the curricula implemented by the schools studied. This study introduces the initial stages of piloting the UNESCO MIL curriculum across 23 schools in Colombia, marking the initial strides toward developing an MIL policy for the country.

*Keywords: Media and information literacy, MIL policy, MIL curriculum, MIL education, teacher training.*

**M**edia and information literacy (MIL) is a comprehensive and integrative concept developed and refined by various organizations over several decades. MIL interconnects various dimensions within education, communication, information, digital literacy, and media education, combining these aspects into a unified approach. The objective of the MIL framework is to cultivate critical citizenship, reinforcing the responsible and ethical appropriation and creation of content, information, and media (Durán-Becerra & Lau, 2020).

Colombia has instituted significant regulations, policies, and programs concerning educational technologies and their deployment across different educational levels. The country has made remarkable strides in terms of expanding access to basic and secondary education and creating links with tertiary education. Nevertheless, disparities in education quality continue to persist, notably reflected in the results of the Saber 11 Tests for high school graduation evaluation (ICFES, 2021; 2022a). These assessments reveal marked variations in scores between the private and public sectors, as well as between genders, underscoring inherent weaknesses in the country's education system.

Against the backdrop of evolving ICT policies pervading the national education system, alongside the necessary endeavor to integrate media, information, and digital competencies into learning processes (Durán-Becerra & Machuca, 2021), this chapter presents the primary outcomes of a project executed in Colombia by two higher education institutions along with 23 elementary and secondary schools. The project aimed to pilot an adaptation of UNESCO's MIL curriculum for educators (Grizzle et al., 2013a) and design (draft) an MIL public policy framework targeted toward bridging the digital divides across the territory through education.

Documenting the stages of implementation across different fields of policy and practice is important for benchmarking purposes in different countries. We can learn about country-specific MIL ecologies by observing the system within a particular country. Comparisons and mutual learning processes are important because accessing and using media and information has

emerged as a significant social challenge globally. The proliferation of ICT leads to hyperconnectivity and has significantly improved access to information sources (Salvat & Serrano, 2011). However, it has also revealed disparities in technical and social infrastructures across different territories.

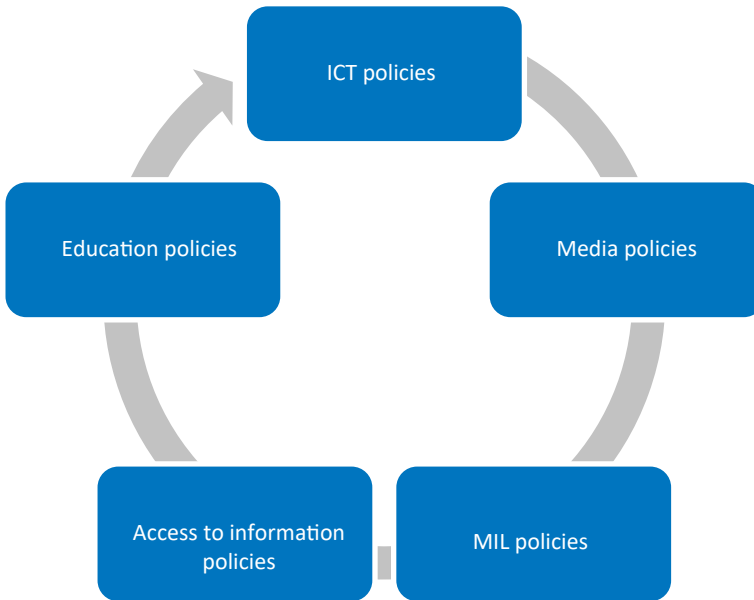
## UNESCO's Framework

The concept of traditional literacy (reading and writing) has evolved to meet the demand for providing citizens with the skills to navigate, select, and critically engage with the expansive domain of information circulating in the media (Durán-Becerra & Machuca, 2021). Currently, there is a pressing need to plan actions concerning information uses and potentials, advocate for freedom of expression as a cornerstone of active democracy, and recognize the roles of media, museums, libraries, and other information providers. Equally important is understanding how these actions align with national curricula and education.

UNESCO has been pivotal in providing a diverse array of components geared toward strengthening education and creating opportunities within the scope of lifelong learning (Grizzle et al., 2013b). These approaches are centered on perceiving education as a fundamental right (Aguaded, 2014) and acknowledging the intricate transformations in space–time triggered by the proliferation of an information and knowledge society, particularly within a culture significantly influenced by technology and digitization (López & Aguaded, 2015). In addition, they underscore the necessity of establishing environments that foster the development of critical global citizenship. These environments also prioritize multilingualism and ideological pluralism (Mendel et al., 2017; Durán-Becerra & Machuca, 2021).

Therefore, UNESCO recognizes the fundamental necessity to align technological, media, and information access policies (Grizzle et al., 2013a) with educational mechanisms through a convergent approach (see Figure 1).

**Figure 1.** Policy flows



Source: Adapted from UNESCO (Grizzle et al., 2013a, p. 20).

Following this rationale, the alignment of governmental policies focusing on capacity building, under a rights-based approach, constitutes a pivotal axis that consolidates the potential of MIL within educational institutions such as schools (López & Aguaded, 2015). This alignment seeks to promote citizen empowerment through critical education concerning media and information and their sources (Grizzle et al., 2013a). It serves as an extended endeavor to create conducive conditions for conscientious interaction.

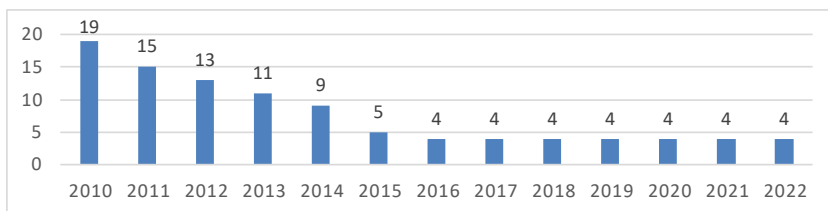
In this context, aspects such as cultural diversity, gender, and multiculturalism emerge as key components of the curriculum. These elements interweave across diverse perspectives of public engagement, significantly contributing to the reinforcement of democracy. This integration is complemented by the development of strategies that amplify MIL in accordance with sociospatial contexts. These strategies are scalable and strengthened through the integration of public policies.

## Colombian Digital Context

Several key data points highlight Colombia as a country with considerable potential. The country boasts an internet penetration rate close to 74.4 percent. In the first quarter of 2022, there were 8,479,292 fixed internet connections, constituting a 16.4 percent penetration rate, and 37,667,136 mobile internet connections, with a penetration rate of 73 percent (Colombia TIC, 2022). Additionally, according to DANE (2023), in 2022, 72.8 percent of Colombians over the age of 5 years reported using the internet, primarily through smartphones. While social networks are the most commonly used features (84.3%), information search (51.9%) and media consultation (17.4%) also stand out.

These statistics are the outcome of an infrastructure-strengthening process. Initiatives such as Plan Vive Digital (2014), Plan TIC (2018–2022), the National Fiber Optic Project, and the National High-Speed Project have significantly enhanced internet access, extending their reach to even remote regions. Concurrently, programs promoting technological adaptation, such as the national Computers to Educate program, have notably increased the number of students per terminal (PC or tablet) (see Figure 2).

**Figure 2. Students per terminal**



Source: Elaborated with data from Colombia TIC (2022).

In addition to these strategies, it is important to highlight the efforts made by the Ministry of ICT, exemplified by initiatives such as Territorial Portals (Portales Territoriales), which have created spaces to promote traceability and transparency in the operations of public entities. This drive is further supported by Law 1978 of 2019, which focuses on ICT modernization, where recognition is given to “the right to communication, information, education, and basic ICT services” (Congress of Colombia, 2019).

Several programs have been instituted to facilitate ICT appropriation. Notably, *Ciudadanía Digital* (2011–2020) trained 1.1 million individuals in digital citizenship. *RedVolución* (2015–2020) reached out to 620,251 individuals, educating them on the uses, opportunities, and risks associated with new technologies. In addition, *En TIC Confío*, an ongoing program since 2011, focuses on preventing risks and crimes on the internet. A total of 13 million Colombians, primarily children and adolescents, have benefited from this program.

Colombia boasts extensive regulatory development that supports numerous initiatives and programs, as depicted in Table 1.

**Table 1.** *Digital development policies*

Law 489 of 1998	Whereby rules are issued on the organization and operation of the entities of the national order, provisions, principles, and general rules are issued for the exercise of the powers provided for in numbers 15 and 16 of Article 189 of the Political Constitution, along with other provisions.
Law 1507 of 2012	Whereby the distribution of competencies among state entities in matters of television is established and other provisions are issued.
Decree 1078 of 2015	Whereby the Sole Regulatory Decree of the ICT sector is issued.
Law 1341 of 2009	Whereby principles and concepts on the information society and the organization of ICT are defined, the National Spectrum Agency is created, and other provisions are issued.
CONPES Document 3975 of 2019	National Policy for Digital Transformation and Artificial Intelligence.
Law 1978 of 2019	Whereby the ICT sector is modernized, competencies are distributed, a Single Regulator is created, and other provisions are enacted.
Law 1955 of 2019	Whereby the National Development Plan 2018–2022 Pact for Colombia, Pact for Equity is issued.
Resolution 2112 of 2020 MinTIC	Whereby guidelines on regulatory projects within the Ministry of Information and Communications Technologies are adopted and issued, Resolution 2871 of 2017 is repealed, and other provisions are issued.
Resolution 500 of 2021 MinTIC	Guidelines and standards for the digital security strategy and adoption of the security and privacy model as an enabler of the Digital Government policy.
CONPES Document 4070 of 2021	Policy guidelines for the implementation of an open-state model.

Resolution 460 of 2022 MinTIC	National Data Infrastructure Plan.
Resolution 1117 of 2022 MinTIC	Digital transformation guidelines for smart cities and territories strategies defined by territorial entities.

Source: Own elaboration.

While some programs targeting ICT appropriation have been implemented, this landscape primarily emphasizes technology provision based on coverage. This indicates a challenge in bolstering policy frameworks and strategies geared toward leveraging technology beyond mere access, emphasizing its use and benefits. An additional challenge lies in prioritizing citizen empowerment and fostering information and media literacy competencies. This shift is crucial to transcend ordinary training processes and concentrate efforts on bridging the digital divide prevalent in the country.

## Curriculum in Colombia

The Colombian curriculum acknowledges “the spatio-temporal vicissitudes typical of a country inserted in the Latin American reality” (Machuca, 2018, p. 892), wherein, amid significant progress, issues such as new literacies (e.g., media or digital literacy) emerge as necessities in our hyperconnected world.

An examination of the regulations associated with the national curriculum reveals how the 1991 Political Constitution of Colombia positions education as a fundamental right. Moreover, alongside the General Law of Education (Law 115 of 1994), it initiates the regulation of educational services. It defines the curriculum as “the set of criteria, study plans, programs, methodology, and processes contributing to integral formation and the construction of national, regional, and local cultural identity, encompassing human, academic, and physical resources to execute policies and carry out the institutional educational project” (Congress of Colombia, 1994).

Furthermore, three sets of documents have been released to direct the implementation of the curriculum in the fundamental and compulsory subjects outlined in Article 23 of Law 115 of 1994: (i) the Curricular Guidelines from 1998, delineating the epistemological, pedagogical, and curricular foundations (MEN, 2002); (ii) the Basic Competency

Standards, published in 2006, establishing axes for knowledge and skills in the Colombian educational system (MEN, 2006); and (iii) the Basic Learning Rights (BLR) of 2016, encompassing learning in terms of knowledge, skills, and attitudes (MEN, 2017). These three sets of documents and regulations generally form the basis of the Colombian curriculum configuration.

BLR are particularly significant in comprehending the manifestation of information, media, and digital competencies within curricular frameworks. A thorough analysis of BLRs per school grade showed a gradual integration of MIL competencies, particularly focusing on subjects such as language, social sciences, and citizenship. For instance, a fifth-grade BLR in social sciences aims for students to “understand that changes in communication, driven by technological advances, have transformed the way people interact in today’s society” (MEN, 2016a). Similarly, a sixth-grade BLR in language encourages students to use “information provided by the media, considering the message, interlocutors, intentionality, and production context, to engage in communicative processes within their environment” (MEN, 2016b).

However, despite the Competency Standards and Basic Learning Rights indicating a (partial) presence of informational and media-related topics, there is a lack of regulations explicitly emphasizing MIL processes within the curriculum.

## Digital Education and MIL Competencies

Given that MIL is a pertinent topic in Latin America, various entities, such as UNESCO, endeavor to bolster local capacities in this field. UNESCO aims to enhance citizens’ capacities by promoting a critical and responsible use of digital environments. Additionally, the organization supports policymakers, educators, and media professionals, assisting member states in developing national MIL policies and strategies (UNESCO, 2023). Thus, UNESCO provides technical assistance to countries interested in implementing national policies and strategies to foster active, critical, and responsible citizenship in the digital era.

In Colombia, a significant national challenge pertains to invigorating the provision and adoption of technological infrastructure. Despite substantial



internet access, according to data from the Colombian Institute for the Evaluation of Education (ICFES, 2022a), 22 percent of educational institutions lack this service, a figure that rises to 50 percent for rural educational institutions. Simultaneously, the COVID-19 pandemic highlighted pronounced disparities, particularly in the use of digital applications, which lagged behind the usage of physical guides and strategies (80% compared with 69%).

These statistics paint a complex picture, emphasizing the critical need to reinforce both the provision and adoption of MIL competencies across various social dimensions, notably within the country's educational communities. This study utilizes the MIL framework, which maps MIL competencies by focusing on access, evaluation, and usage perspectives (see Table 2).

**Table 2.** UNESCO -GLOBAL Competencies Map (2013)

<b>Access and retrieval</b>	Access	Access to information, media content, and information providers.
	Articulation/ definition	Definition and articulation of information needs.
	Search/ localization	Search and location of information and media content.
	Retrieval/ storage	Retrieval and storage of information and media content
<b>Understanding and evaluation</b>	Understanding	Understanding (comprehension) of information and media.
	Assessment	Appraisal of information, media content, and information and media providers.
	Evaluation	Evaluation of information, media content, and information and media providers.
	Organization	Organization of information and media content.
<b>Creation and dissemination</b>	Creation	Knowledge creation and creative expression.
	Communication	Communicating information, media content, and knowledge ethically and effectively.
	Participation	Participating in social and public activities as an active citizen.
	Monitoring	Monitoring the influence of information, media content, knowledge production and use, and media and information providers.

Source: Adapted from UNESCO (Grizzle et al., 2013a, p. 59).

These competencies necessitate a thorough analysis of the enabling conditions (Durán-Becerra & Lau, 2020), such as MIL education, policies for promoting or developing MIL, MIL availability, access to and use of MIL, and the relationships between civil society and MIL competencies and skills. Overall, these elements form a complex ecosystem that integrates MIL into the social fabric.

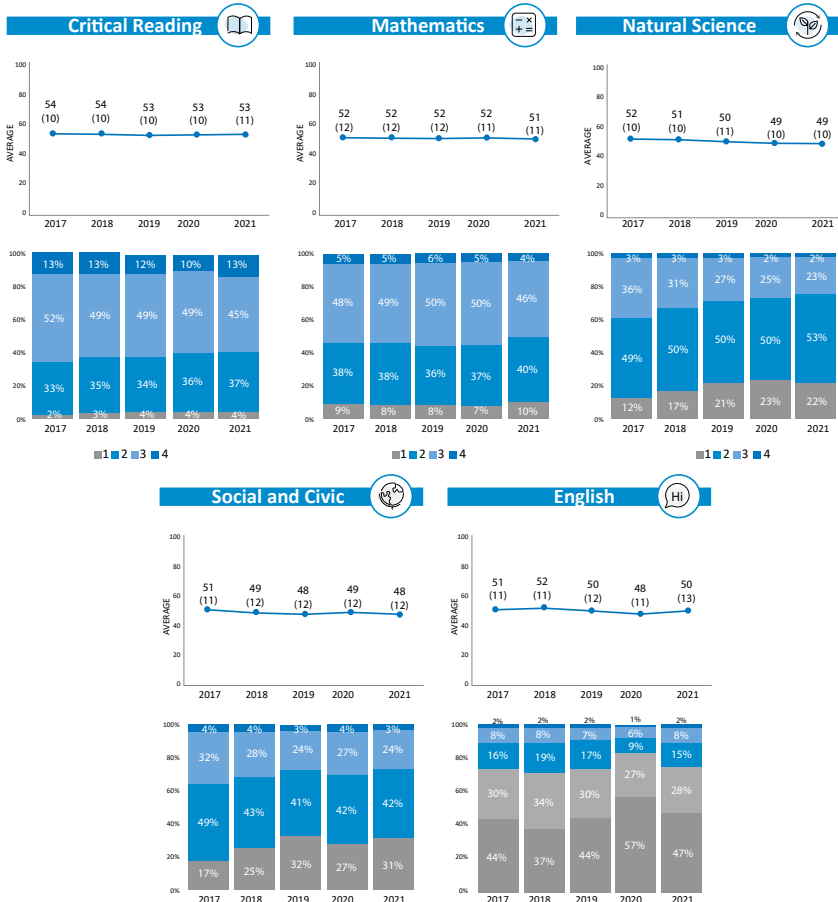
As previously stated, MIL competencies represent a set of skills that empower individuals to access, analyze, evaluate, and create messages across various media and formats. These competencies create the fundamental basis for cultivating critical citizenship, democratic participation, and lifelong learning. In Colombia, students are evaluated through Saber 11 state tests (final year of high school test) across several knowledge areas, including critical reading and written communication. These knowledge areas align with MIL competencies because they encompass the use of diverse languages, media, and textual formats to comprehend and engage with the world. Consequently, in Colombia, MIL competencies are integrated into the Saber 11 tests, serving as both an educational objective and a tool for fostering other competencies.

For instance, the Critical Reading test assesses students' aptitude in comprehending, analyzing, and interpreting various types of texts while reflecting on their purpose, context, and audience. These skills are fundamental in MIL as they enable individuals to critically and responsibly access, evaluate, and use information. The Social and Citizenship test evaluates students' ability to comprehend and engage in social, political, economic, cultural, and environmental processes, which impact their surroundings. MIL relies on these skills to encourage active citizenship, respect for diversity, intercultural dialog, and the defense of human rights. Finally, the English test assesses students' proficiency in communicating in a foreign language, both orally and in writing, within everyday and academic settings. These skills are crucial to MIL as they facilitate access to diverse global information sources and promote the exchange of ideas and experiences across various cultures and contexts.

By 2021, in the Saber 11 test, the areas associated with critical reading and mathematics had the highest scores (ICFES, 2022a). However, when we compare these scores with those of other countries, Colombia's results in these areas fall below the reference group (ICFES, 2022b). Furthermore, the Saber 11 test results in Colombia reveal significant score disparities based on the origin of the educational institution. Official institutions outperformed unofficial ones by an average of 11 points in critical

reading skills, 13 in mathematics, and 13 in citizenship. There are also pronounced differences by geographical area, where rural institutions face challenges due to limited access to connectivity, resources, and teacher qualifications, directly impacting their lower averages. In 2021, students from nonofficial institutions (often associated with calendar B, starting in the second semester of the year and ending in the first semester of the following year) averaged 315 points on this test, whereas students from the official sector (usually in calendar A, coinciding with the calendar year) scored 250 points (ICFES, 2022a). This indicates a positive correlation between the socioeconomic index and the score obtained. Regions with lower socioeconomic indices obtained the lowest average scores (ICFES, 2022a, p. 29) (see Figure 3).

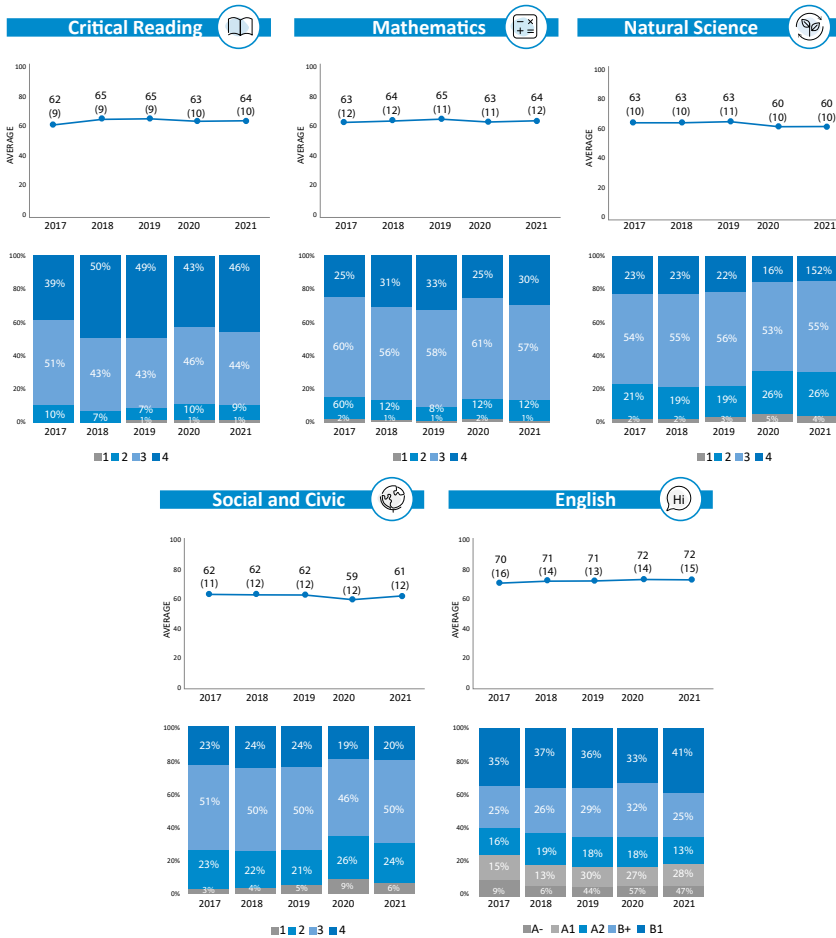
Figure 3. Saber 11 outcomes: Calendar A



Source: ICFES (2022a).

Compared with the calendar A group, higher averages were observed among calendar B students. A difference of 11 point in critical reading, 11 in natural sciences, 13 in social sciences and citizenship, 13 in mathematics, and notably, 22 in English was observed. In this context, it is important to emphasize that both critical reading and English have shown the highest results in the past 5 years (see Figure 4).

Figure 4. Saber 11 outcomes: Calendar B



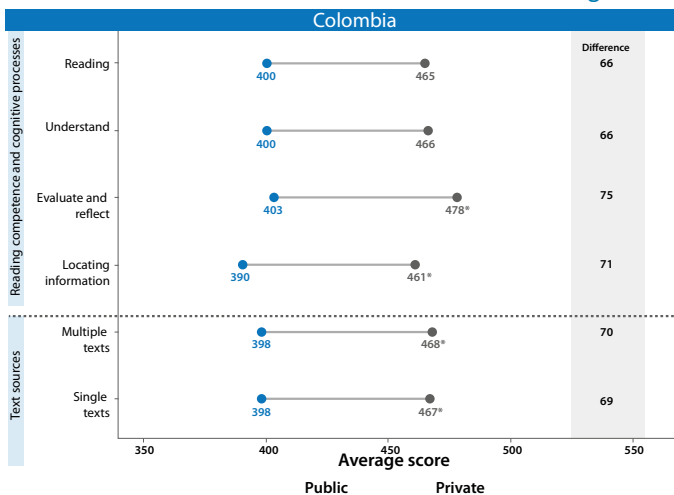
Source: ICES (2022a).

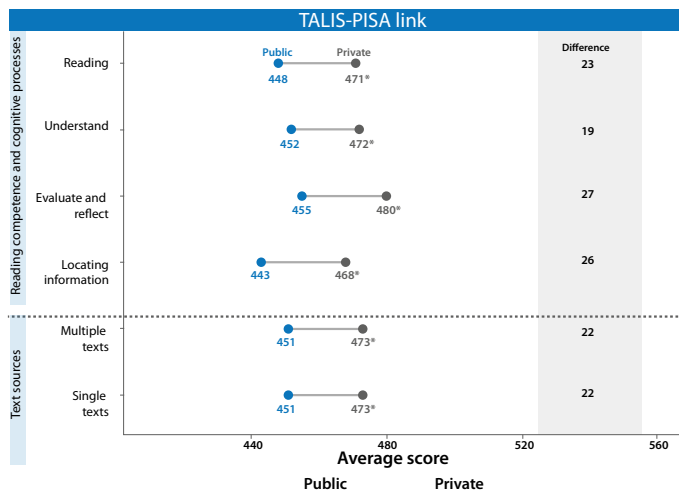
Although there were significant differences between calendars A and B, critical reading and mathematics showcased the best performance. Notably, in calendar B, scores exceeded 90 percent in the two highest levels (3 and 4), whereas calendar A showed a score of 38 percent in level 2, with a noticeable yearly increase in scores in the two lowest levels (1 and 2). These differences are linked to disparities between sectors (official and private) and geographic locations (rural and urban). In the same vein, in 2021, calendar A's average score was over 250 points, while calendar B reached 315 points.

An examination of the Saber 11 tests illustrates a correlation between the socioeconomic index and the obtained scores. This correlation is evident as departments (Colombia is divided into 32 departments) with lower index values tend to achieve lower scores, reflecting unmet needs in those regions. This leads to reduced opportunities for advancement and access to tertiary education (ICFES, 2022a).

The Teaching and Learning International Survey (TALIS), conducted by the Organization for Economic Cooperation and Development and presenting results from 2018 (ICFES, 2022b, p.15), highlights that Colombia's performance, when compared with reference countries (Denmark, Australia, Czech Republic, Argentina [only applied in Buenos Aires] Turkey, Malta, and Georgia), falls below the average and ranks higher than Georgia only (see Figure 5).

**Figure 5.** Colombia's outcomes vs. the TALIS-PISA LINK average















Source: ICFES (2022b).

Compared with other countries, Colombia achieved its highest scores in the “cognitive process of evaluating and reflecting” (419 points), followed by “understanding” (414) and “locating information” (405) (ICFES, 2022b, p. 33). Concerning the development of competencies associated with the areas evaluated by the ICFES, there is a noticeable positive correlation between the Saber 11 results and those of higher education (Saber T&T for technical and technological education and Saber Pro for professional education). This correlation implies that most students maintain their academic performance levels upon graduation from higher education compared with their performance at the time of completing secondary education. This highlights the country’s limited capacity to enhance students’ overall skills, including those related to critical reading and information management (ICFES, 2021, p. 29) (see Figure 6).

**Figure 6. Correlations between Saber 11 and Saber Pro/Saber T&T**

		Saber Pro					
							
		Quantitative Reasoning	Critical Reading	Citizenship Skills	English	Written Communication	Overall Score
Saber 11	Modules						
	Tests						
	Social and citizenship sciences	0.52	0.58	0.54	0.53	0.26	0.66
	Mathematics	0.63	0.48	0.43	0.55	0.23	0.63
	English	0.46	0.51	0.45	0.77	0.27	0.67
	Biology	0.55	0.54	0.48	0.52	0.23	0.262
	Philosophy	0.46	0.55	0.49	0.51	0.25	0.61
Physics	0.54	0.45	0.40	0.46	0.20	0.55	

		Saber TyT					
							
		Quantitative Reasoning	Critical Reading	Citizenship Skills	English	Written Communication	Overall Score
Saber 11	Modules						
	Tests						
	Social and citizenship sciences	0.43	0.46	0.47	0.38	0.21	0.54
	Mathematics	0.45	0.33	0.28	0.33	0.14	0.42
	English	0.32	0.35	0.32	0.57	0.19	0.49
	Biology	0.44	0.42	0.39	0.36	0.17	0.50
	Philosophy	0.33	0.38	0.38	0.31	0.17	0.44
Physics	0.41	0.34	0.31	0.30	0.15	0.42	

Source: ICFES (2021, p. 29).

This holds significant relevance for the pilot implementation of UNESCO’s MIL curriculum, as it emphasizes the significance of considering regional and school-type differences when assessing student competencies. Moreover, it serves as a clear indication of the importance of engaging the public in developing the curriculum, aiming to integrate these competencies into the development of Colombian children.

## The Project

Teacher training plays a central role in social transformation processes, especially in an increasingly hyperconnected world. Consequently, developing competencies and skills associated with digital, media, and information dimensions is inevitable for all Latin American countries. Integrating these competencies into school curricula has emerged as an indispensable strategy to bring communities closer to new learning processes, replacing traditional methodologies and emphasizing meaningful processes that enhance critical and digital citizenship.

In 2022, Corporación Universitaria Minuto de Dios—UNIMINUTO was chosen by UNESCO to pilot an adaptation of its MIL curriculum for educators, titled *Media and Information Literate Citizens: Think Critically, Click Wisely!* (Grizzle et al., 2021). To achieve this, UNIMINUTO closely collaborated with Institución Universitaria Politécnico Gran Colombiano and Corporación Educativa Minuto de Dios (CEMID), which oversees more than 23 schools across 10 of the country's 32 departments.

The project had four main focuses: (i) constructing a background document to initiate discussions on implementing the MIL curriculum in public policies; (ii) developing a comparative analysis of UNESCO's MIL curriculum in relation to both the national curriculum and the curriculum of CEMID's institutions; (iii) characterizing teachers in terms of MIL competencies; and (iv) identifying the ICT use habits and MIL competencies of students. This discussion focuses on the work done with the teachers (iii), which involves (a) establishing working meetings with CEMID to understand the school context and design the pilot, including the roadmap; (b) characterizing teachers to gather perceptions from prioritized educational institutions regarding various elements of the MIL curriculum and understanding key contextual factors within their regions; (c) training teachers in the MIL curriculum through a virtual classroom and synchronous sessions with a trainer, with the aim to provide context and assist in developing strategies for implementing MIL in their classes; and (d) providing ongoing support to teachers through learning communities with invited experts. These sessions aimed to share tools and methods for implementing MIL in the classroom, fostering the skills acquired during training to continue integrating MIL elements into their pedagogical and educational practices.



## Methodology

In the working meetings with CEMID, a strategy was devised for engaging teachers: first, characterizing as many teachers as possible by inviting all schools to encourage their participation through a survey. Second, a selected group of teachers would undergo MIL training based on the pilot's results. Finally, teachers would receive ongoing support by establishing a learning community throughout the first semester.

The characterization survey comprised three sections: (i) demographic and professional details of the teachers (gender, school, location, subjects, and courses taught); (ii) open-ended questions about their integration of media and digital elements in classes; and (iii) aligning UNESCO's MIL curriculum learning objectives with their teaching content. To facilitate this, 115 MIL learning objectives aimed at learners (including educators) were prioritized. Teachers were asked to indicate the level at which their classes contributed to each objective. To ensure comprehensive feedback, the objectives were distributed across 10 random surveys, with each teacher evaluating only 11 or 12 objectives. Importantly, each objective received responses from at least 50 teachers.

The aim of this study was to correlate learning objectives with actual teaching practices to identify pertinent subjects for MIL training and pilot development. This process aimed to supplement theoretical cross-referencing by identifying relevant areas from the learning objectives and the Unique Learning Lists (LUAs) of these schools.

## Results

### *Demographic and professional characterization of the teachers*

A comparison of over 200 learning objectives outlined in the 14 modules of the UNESCO curriculum with the Unique Learning Lists of CEMID schools revealed a 34 percent correlation with the content currently taught by teachers in their daily educational practices. A significant finding of this analysis is that while there exists an underlying need for teacher training and student education in MIL content, it is equally crucial to reinforce pedagogical and educational practices in educational institutions. This

reinforcement is essential for a more organic integration into teacher training strategies.

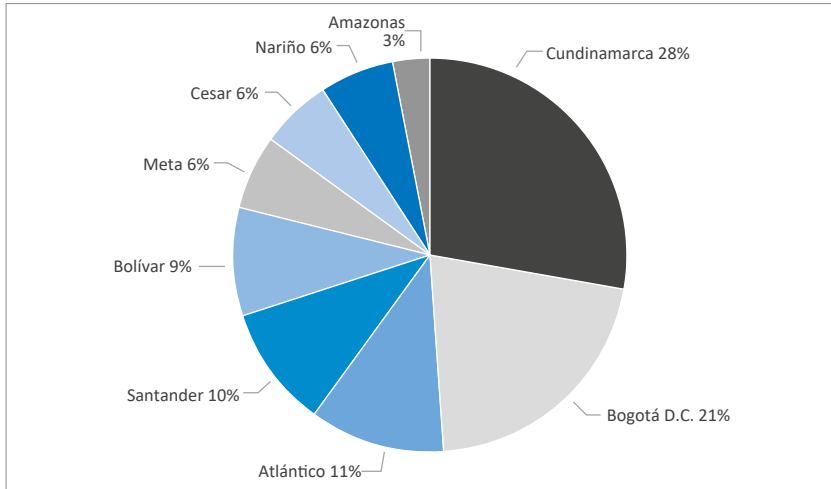
Taking this into account and in collaboration with CEMID's curriculum advisors, we decided to conduct the pilot program with teachers who taught Spanish language, social sciences, and technology and computer science. These subjects were specifically identified because of their strong alignment with UNESCO's proposed learning objectives. Furthermore, we decided to work exclusively with students in the third, sixth, and ninth grades, as these grades generally face more challenges in terms of coexistence. This challenge is particularly influenced by the cognitive, emotional, and social development stages of children and adolescents, coupled with their usage of ICTs.

Although this specific sample was chosen for the pilot program, it was deemed crucial to grasp the overall context of schools regarding media and information literacy. Therefore, a survey was administered to all teachers at these institutions.

A total of 789 teachers from 21 schools in 8 of the 32 departments of Colombia, primarily from Cundinamarca and Bogota, participated in the survey.<sup>1</sup> Of these schools, 38 percent belong to the official sector, while the remaining 63 percent are private. Additionally, the number of teachers per school varies from 10 to 72, depending on the number of students and economic factors (see Figure 7).

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<sup>1</sup> Although it is the main city of Cundinamarca, Bogotá is considered a capital district, and its data is generally analyzed outside of the department to generate clearer readings, since around 70% of the population of Cundinamarca lives in Bogotá.

**Figure 7. Teachers per department (%)**

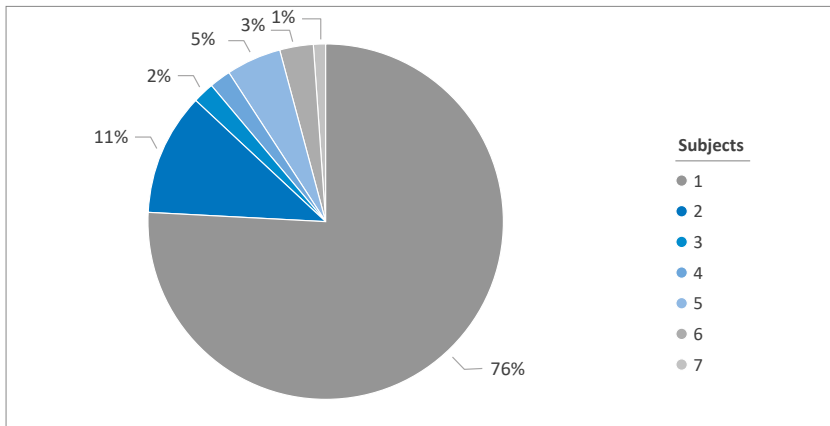
Source: Own elaboration (N = 789).

Most teachers typically instruct only 1 subject, but 24 percent of the respondents (190 teachers) are responsible for at least 2 subjects and, in some instances, up to 7 subjects within the same school. Departments such as Amazonas (35%) and Meta (32%) have a higher percentage of teachers who are responsible for multiple subjects. These educators not only manage multiple subjects but also teach across several school years. For instance, among the 10 teachers instructing 7 subjects, 50 percent oversee teaching between 3 and 6 years.

Of the 789 surveyed teachers, 72 percent oversee more than one school year, while 22 percent manage 5 or more. There are even 11 teachers responsible for teaching across 11 school years (see figures 8a and 8b).

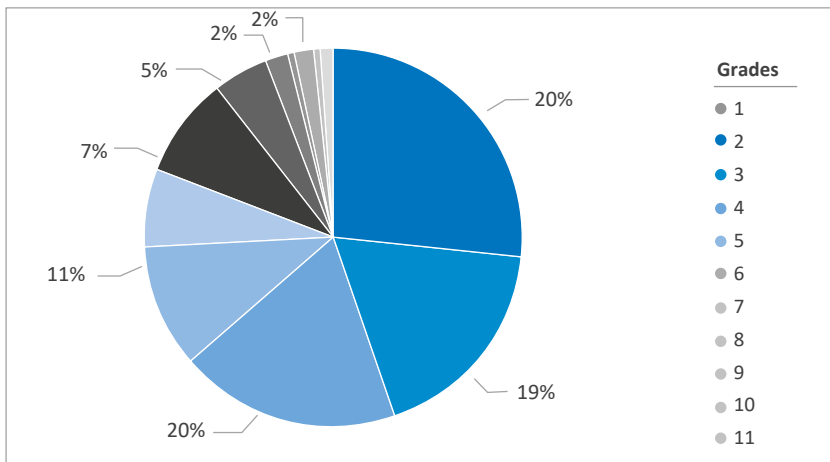
This amalgamation results in a diverse group of teachers, although there is a trend toward non-specialization. This lack of specialization poses a challenge when implementing the pilot program for two primary reasons: i) Teachers with numerous obligations and multiple subjects find it challenging to devote ample time to comprehend the curriculum, and ii) it is difficult to segregate participating teachers from nonparticipating ones, as most teachers are involved in some courses or subjects. This situation may introduce biases into the sample.

**Figure 8a.** Number of subjects oriented by the same teacher (%)



Source: Own elaboration (N Teachers=789; N Subjects=9).

**Figure 8b.** Number of grades oriented by the same teacher (%)



Source: Own elaboration (N Teachers=789; N Years=12).

This situation can be viewed as both a challenge and an opportunity: Teachers involved in the pilot program can impart their understanding of MIL to students across grades or subjects beyond those targeted by the pilot program. However, teachers handling multiple subjects or grades often lack sufficient time to introduce innovations based on their new learning. This aspect is particularly crucial as it was observed that the teachers instructing the subjects selected for the pilot program were typically those overseeing multiple subjects.

### *Linking the subjects to the learning objectives of the MIL curriculum*

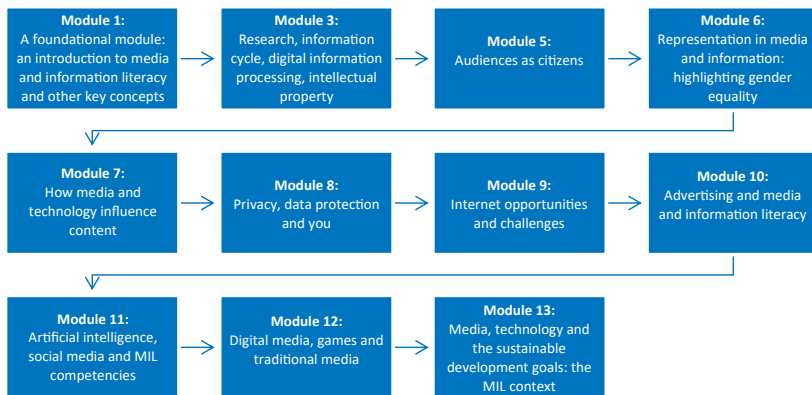
The survey administered to the teachers aimed to validate two hypotheses:

1. Teachers are already addressing MIL learning outcomes in the classroom.
2. The MIL curriculum content is being addressed in the subjects selected for the pilot program.

To test these hypotheses, teachers were asked to indicate for each of the 11 or 12 randomly selected MIL learning objectives (belonging to the modules in Figure 9) whether they felt the objectives were related to what they already covered in their classroom and whether they believed they should be related.

These responses were assigned scores of 6 = significantly related, and it should be; 5 = significantly related, but it should not be; 4 = partially related, and it should be; 3 = partially related, but it should not be; 2 = unrelated, but it should be; and 1 = unrelated, and it should not be.

**Figure 9.** Modules of the UNESCO MIL curriculum considered



Source: Own elaboration.

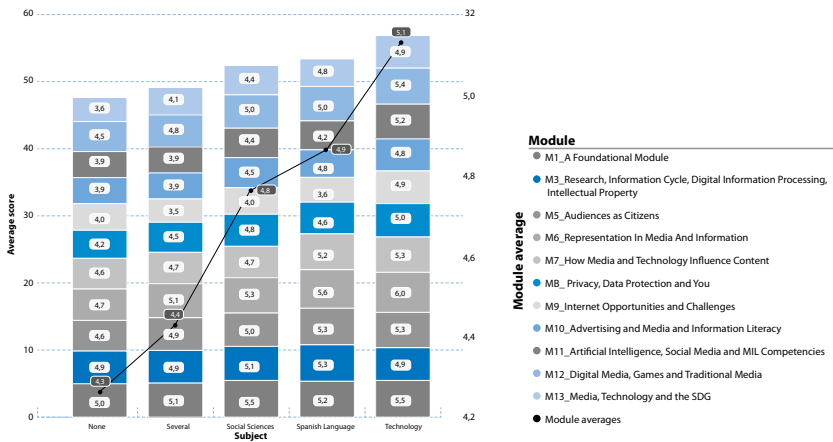
Out of the 789 surveyed teachers, approximately half (46%) stated that the learning outcomes are significantly related to what they teach in their classrooms and should be, while another 33 percent indicated a partial relationship. Only 14 percent stated that these outcomes should not be related to their content. Notably, 11 percent believed that the outcomes are neither related nor should be related. This was particularly prominent in modules 9: Internet opportunities and challenges, 10: Advertising and MIL, 11: Artificial intelligence, social media, and MIL competencies, and 13: Media, technology, and sustainable development goals. The last module saw the highest percentage (20%) of respondents choosing this option, possibly due to its advanced focus on property rights and information commodification, which are generally not addressed in schools.

Furthermore, 7 percent of the respondents indicated “not related, but should be”, suggesting MIL content that teachers find relevant to their subjects but are not being addressed currently. This sentiment was prominent in modules 11: Artificial intelligence, social networking, and MIL competencies (11%), 9: Internet opportunities and challenges (9%), 10: Advertising and MIL (8%), and 7: How media and technology influence content (8%). Modules 9, 10, and 11 could be considered controversial as they are not being addressed in classrooms, and opinions on whether they should be addressed are divided.

Figure 10 displays the scores assigned to each of the MIL curriculum modules (consisting of 3 or more learning objectives). Perception of MIL

varies across subjects. Technology teachers, followed by Spanish and social sciences teachers, tend to believe that learning objectives significantly relate to their teachings. It is also noticeable that when teachers guide more than one subject in the pilot program, they perceive a lesser relationship. This is possibly due to managing multiple subjects, resulting in less depth in planning and teaching. Finally, teachers overseeing subjects not chosen for the pilot program believe that MIL curriculum learning objectives are less related to their teachings, reinforcing the second hypothesis.

**Figure 10.** The average response for the question “Is your subject related to this learning objective?”



Source: Own elaboration (N Teachers=789; N Subjects = 9, N Modules = 11).

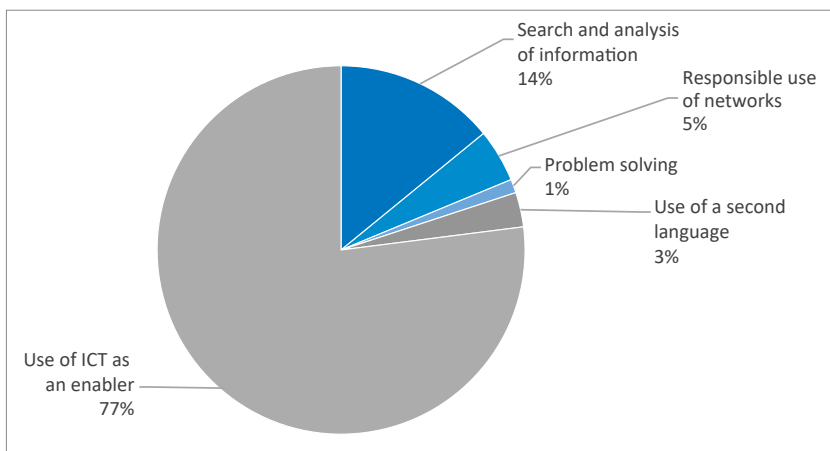
Furthermore, teachers were asked about their methods of incorporating media and digital elements into their classes to identify existing classroom practices and their interpretation of media and digital elements (see Figure 11). It became clear that teachers integrate the use of videos (the most popular medium), applications, platforms, and various interactive tools to facilitate learning in the classroom. These tools are employed for activities such as research, consultation, observation, and other learning strategies.

The responses underwent coding and categorization, revealing that most teachers (77%) utilized ICTs as facilitators within the classroom. For example:

- “Information and communication technologies can be applied in the classroom to promote collaboration and innovation.”

- “Utilizing technological tools to aid the teaching-learning process using resources such as TV and sound recorders.”
- “Engaging students through meme analysis, utilizing games on digital platforms, and employing digital resources that contribute to the topics covered in class.”

**Figure 11.** How do you incorporate media and digital elements into your classes?



Source: Own elaboration (N Teachers = 789).

### ***Teacher's training***

Considering the findings of the survey and aiming to familiarize teachers with MIL and its integration into classes for the upcoming school year, training spaces were developed. These spaces were based on the MIL competency framework for trainers (Grizzle et al., 2021), which encompassed the following competencies:

- Understanding the role of information, media, and digital communications in sustainable development and democracy.
- Understanding content and its uses.
- Accessing information effectively and efficiently and practicing ethics.
- Critically evaluating information and information sources and ethical practices.
- Applying digital and traditional media formats.



- Situating the sociocultural context of information, media, and digital content.
- Promoting MIL among learners/citizens and managing required changes.

The training aimed to qualify CEMID's teachers in integrating the MIL curriculum by using the proposed competency framework for MIL trainers. By the end of the training, teachers were expected to accomplish various goals, such as raising awareness about the MIL curriculum (including historical generalities and MIL concepts), recognizing how MIL competencies manifest in their daily works, comprehending MIL competencies and their adaptation mechanisms, and crafting a proposal for MIL adaptation to the grades and subjects they teach.

This pedagogical experience included a 20-hour training program delivered through 4 synchronous sessions and an individual assignment. Notably, UNESCO's MIL curriculum was adapted after considering the unique characteristics of each educational institution. Consequently, 17 educational institutions participated, engaging 116 teachers who were trained through online sessions with instructors. Various tools and methodologies, such as PowerPoint presentations, Miro, videos, infographics, Virtual Learning Objects, group discussions, and case studies, were employed during these sessions.

In addition, the curriculum was adapted as a certification program for the professional development of active educators. The sessions covered different topics, including the seven competencies, pedagogical approaches, and the benefits of MIL. Due to internet connectivity issues, a face-to-face training session was conducted at Colegio Cristo Rey in Leticia (frontier with Brazil). At the training's conclusion, an evaluation revealed that while the time allocated was insufficient to cover the topics comprehensively, the teachers found the training relevant to their daily work. They expressed a desire to deepen their understanding of the MIL curriculum further.

During the program, the teachers presented several proposals, which showcased various alternatives for incorporating MIL within the official curriculum (Competency Standards and Basic Learning Rights), manifested in the LUAs for CEMID. It was notable how the teachers incorporated elements related to intercultural and interreligious competencies, promoting tolerance and combating hate and radicalization. Furthermore, they linked

these aspects with MIL and integrated gender equality issues into the process.

This scenario led to the development of a pathway for MIL curriculum adaptation, involving the following:

- Alignment of curricula through collective work considering the correlations between the official curriculum and MIL strategies.
- Teacher training in MIL through workshops emphasizing the configuration of learning communities, recognizing MIL practices and components, and prioritizing articulation mechanisms with national curricular frameworks.
- Recognition of teacher training in MIL through the process of linking teachers to processes, knowledge, and practices.
- Disseminating MIL culture in educational settings, providing environments for collective knowledge construction and experiences among students, institutions, and academic communities.
- Learning communities with experts (webinars) as a means of the ongoing consolidation of MIL learning communities.

Thus, the establishment of networks and meeting spaces around MIL is driven by the necessity to connect dispersed actors within educational communities. This effort also aims to foster a culture focused on longitudinal processes present in the curriculum through research and the systematization of institutional agents' experiences. It also aims to recognize and address social issues stemming from glocal tensions, digital media, and information.

## Discussion

Colombia has established a legislative route, policies, and programs aimed at enhancing installed capacities and MIL facilitators, mainly associated with technological coverage, internet access, and technology appropriation (especially within a digital competency scenario). This pathway has facilitated governmental actions concerning endowment, access to technology and resources, and, to some extent, training programs and policies regarding specific MIL components related to technology use and digital issues. This scenario is promising for the development of MIL programs and policies because it builds upon a contextual situation

nurtured by years of programs aimed at enhancing the country's digital and technological capabilities.

From the educational system's perspective, the positive correlation of scores in the skills evaluated by different Saber tests highlights both an opportunity and a necessity for MIL development across various educational scenarios and levels. These results indicate that passing through higher education does not enhance the exit scores related to MIL-related competencies.

In the evaluation results of educational systems, Colombia ranks lower when compared with reference countries in international comparisons (TALIS tests). This emphasizes the need to include programs, micro-curricula, and methodologies in curricular spaces at different levels to improve results in various evaluated areas. Based on these results, MIL presents a significant opportunity for enhancing competencies related to critical reading, mathematical logic, and citizenship.

Additionally, a comparison between the MIL learning objectives and the LUAs of the three grades and the three prioritized areas revealed that most of these learning objectives are not directly associated with any specific area. However, 34 percent of the objectives, which are related, are primarily linked to the Spanish language, followed by social sciences and digital technology. Extrapolating from this, cross-checking LUAs for all grades and areas might indicate that a significant portion of the MIL curriculum is already being addressed in prioritized schools. Moreover, 73 percent of the MIL learning outcomes relate to the analyzed LUAs, indicating that much of the MIL curriculum content might already be covered in schools.

The characterization of teachers revealed significant heterogeneity in terms of the number of areas and grades they teach. This highlights a major challenge within educational institutions during the pilot implementation, as teachers in charge of multiple areas and grades tend to cover the content with less depth. Consequently, teachers in this situation could identify fewer connections between what they teach in the classroom and the MIL learning objectives.

The collected data also revealed that the teachers are already addressing a large portion of the MIL learning objectives in their classrooms. Among

the learning objectives that are not fully covered, those from three specific modules (related to 9: Internet opportunities and challenges, 10: Advertisement and MIL, and 11: Artificial intelligence, social media, and MIL competencies) are contentious, as the teachers could not reach a consensus on their integration into their teachings. This might be because these modules are considered “advanced,” potentially exceeding the scope deemed appropriate for secondary education by teachers.

Furthermore, the teacher training raised awareness among CEMID’s academic community regarding the historical, conceptual, and curricular aspects of MIL. It also facilitated the recognition of these competencies in teachers’ daily practices, adaptation mechanisms, and training opportunities. From this pedagogical experience, one aspect to improve upon is the possibility of conducting face-to-face sessions to encourage deeper discussions on the implementation of MIL content. It is also crucial for the teaching team to ground different MIL contents through experiential practice. Similarly, it is important to motivate teachers to contribute from their practices toward strengthening MIL topics in educational institutions.

## Conclusion

Even though it may require additional resources, maintaining constant dialog with teachers’ directors is key to enabling spaces for teacher qualification in MIL. This close collaboration generates opportunities for implementing MIL content in the curriculum. By providing time and resources, the educational community can be mobilized to work on this subject in an integrated manner. Furthermore, despite the training focusing on certain areas, ensuring that MIL teachers take leadership roles in promoting curricular integration processes is vital. Eventually, different areas can be involved in harmonizing MIL contents.

All these elements lay the groundwork for further work on the MIL curriculum implementation pilot program in Colombia, considering the lessons learned from teacher training and insights gained from the characterization of teachers. Working with CEMID schools offers a significant opportunity to pave the way for national adaptation. These schools belong to both the official and private sectors and are situated in diverse contexts across the country (rural and urban), each with distinct

social needs, connectivity levels, and teaching facilities. This diversity allows for the measurement of results across a wide spectrum of scenarios closer to the national reality.

In the forthcoming months, we will continue to work with teachers to build the learning community, and a baseline survey will be conducted with students. This survey will aim to understand students' information consumption and production habits, their relationship with the media, and their level of MIL competencies. The findings will enable recommendations for curriculum implementation through public policies and contribute to discussions concerning the current state of the country in this area. Moreover, it will provide data and information to support decision-making processes.

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