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MIL and PRE-BUNKING Approaches for Critical Thinking in the Education Sector

T3.3 Report of the workshops with students



Project Information

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Executive Summary

The MILES Project (Media and Information Literacy and PRE-BUNKING Approaches for Critical Thinking in the Education Sector) aims to strengthen young people's ability to critically navigate today's increasingly complex digital information environment. As part of Work Package 3, Task 3.3 focused on piloting the MILES Student Toolbox through classroom workshops implemented across the partner countries. The objective was to evaluate the usability and educational impact of the newly developed learning materials in authentic school settings.

The pilot activities were successfully carried out in nine European countries, involving approximately 845 students, significantly exceeding the project's initial participation target of around 540 students. The workshops took place in a wide range of educational contexts, including lower and upper secondary schools, vocational education settings and extracurricular learning environments. While partners adapted the activities to their national curricula and local teaching contexts, all workshops followed a common learner-centred pedagogical framework that promoted active participation, collaboration and critical reflection.

Across the consortium, the workshops consistently addressed key topics such as misinformation and disinformation, fact-checking and source verification, algorithms and filter bubbles, artificial intelligence, manipulated media and responsible digital citizenship. The flexible design of the Student Toolbox enabled teachers to integrate these themes into different curriculum subjects while adapting the activities to the needs and interests of their students.

The quantitative evaluation revealed a consistent positive trend across all participating countries. Students reported increased confidence in their knowledge of media and information literacy concepts, greater awareness of responsible online behaviour, and improved ability to identify appropriate verification strategies when confronted with potentially misleading information. Although the magnitude of improvement varied between countries, positive developments were observed throughout the consortium.

These findings were reinforced by qualitative evidence collected through classroom observations, teacher reflections and student feedback. Across all national reports, teachers described high levels of student engagement, particularly during practical activities such as fact-checking exercises, collaborative discussions, simulations and games. Students frequently related the workshop topics to their own digital experiences, demonstrating increased awareness of misinformation, artificial intelligence, algorithmic influence and responsible online behaviour.

The pilot implementation also highlighted several factors contributing to successful learning. Authentic examples drawn from students' everyday digital lives, interactive teaching methods and opportunities for discussion and reflection proved particularly effective in promoting critical thinking and active participation. At the same time, partners emphasised the importance of adapting activities to different age groups, allowing sufficient time for discussion and maintaining the flexibility of the modular toolbox.

Overall, the transnational piloting confirms that the MILES Student Toolbox provides a practical, adaptable and engaging educational resource that can be successfully implemented across diverse educational settings. The workshops not only strengthened students' media and information literacy competences but also established a strong foundation for the subsequent co-design activities in Task 3.4, where students further developed their learning by creating educational board games for teachers, families and other adults.

At a glance

- Countries involved: 9
- Students reached: ~845
- Educational contexts: Lower secondary, upper secondary, VET and extracurricular settings
- Core topics: Misinformation, fact-checking, AI, algorithms, digital citizenship
- Overall outcome: Positive improvements in students' media literacy knowledge, confidence and critical thinking across all partner countries.



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1. Introduction

Young people today grow up in an increasingly complex digital information environment. Alongside unprecedented access to information and opportunities for communication, they are regularly exposed to misinformation, disinformation, algorithmically personalised content, manipulated images and videos, and AI-generated media. Developing the competences required to critically evaluate digital information, verify sources and make informed decisions has therefore become an essential objective of education systems across Europe.

The MILES project (Media and Information Literacy and Pre-bunking Approaches for Critical Thinking) addresses this challenge by supporting teachers and students in developing the knowledge, skills and attitudes required for responsible participation in today's digital society. Within this framework, Work Package 3 (WP3) focuses on transferring the educational concepts and resources developed throughout the project into authentic classroom practice.

Task 3.3 represents the central piloting phase of WP3. Following the completion of the Continuing Professional Development (CPD) programme for teachers and the development of the MILES Student Toolbox, participating teachers implemented classroom workshops using the newly developed learning materials. These workshops provided an opportunity not only to test the usability and quality of the toolbox, but also to evaluate its impact on students' media literacy, critical thinking and digital citizenship competences.

The workshops aimed to strengthen students' ability to:

- critically evaluate digital information and online content;
- recognise misinformation and common manipulation techniques;
- verify the credibility of information and digital sources;
- understand the influence of algorithms, filter bubbles and AI-generated media;
- make informed and responsible decisions when using digital technologies;
- communicate evidence-based arguments and positively influence others through responsible online behaviour.

The MILES Student Toolbox was intentionally designed as a flexible collection of classroom-ready activities that could be integrated into different school subjects and educational contexts. Rather than providing isolated lessons on media literacy, the toolbox enables teachers to embed critical thinking and digital citizenship into existing curricula through interactive, learner-centred activities connected to students' everyday digital experiences.

The learning activities within the Student Toolbox are structured around the MILES O-P-I-R pedagogical approach (Observe – Participate – Investigate – Reflect). This framework encourages students to first observe and question digital content, actively participate in collaborative learning activities, investigate information using critical verification strategies, and finally reflect on their own digital behaviour and decision-making. Rather than promoting the passive acquisition of knowledge, the approach supports the development of critical thinking through active inquiry, discussion and real-world application.

According to the project plan, each partner country was expected to involve a minimum of approximately 60 students, resulting in an anticipated minimum participation of around 540 students across the consortium. The actual implementation considerably exceeded this target, with approximately 845 students participating in pilot workshops across nine European countries.

The present report provides a transnational overview of these pilot activities. It synthesises the implementation approaches adopted by the consortium, summarises quantitative and qualitative evaluation results, identifies common trends across countries, and highlights lessons learned for the further development and sustainability of the MILES educational approach.



2. Overview of the Student Workshops

2.1. Consortium Participation

The student workshops were successfully implemented in nine partner countries: Belgium, Italy, Poland, Germany, Austria, Portugal, Greece, Romania and Cyprus. Together, the partners involved approximately 845 students from lower and upper secondary education, significantly exceeding the minimum participation target established in the project proposal.

The workshops were delivered in a wide variety of educational settings, including general secondary schools, vocational schools, integrated comprehensive schools and extracurricular learning environments. Participating students ranged from approximately 11 to 19 years of age, allowing the consortium to pilot the Student Toolbox across diverse educational contexts and levels of prior digital experience.

Involvement of students

Country	Students	Age Group	Educational Context
Belgium	77	Secondary education	Atheneum Antwerpen
Italy	54	15–18	Upper secondary
Poland	58	15–18+	Vocational secondary
Germany	~250	Grades 5 and 7	Integrated comprehensive schools and extracurricular group
Austria	65	12–19	Secondary schools and youth college
Portugal	59	11–15	Lower secondary
Greece	148	Secondary education	Two participating schools
Romania	74	15–18+	Technical and secondary schools
Cyprus	60	13+	Secondary schools

Overall, the national reports illustrate that the MILES workshops were successfully implemented in a broad range of educational environments. Despite differences in school structures, curricula and learner groups, all partners were able to integrate the Student Toolbox into authentic classroom practice while maintaining the common pedagogical objectives of the project.

2.2. Different Delivery Models

Although all partners worked with the same pedagogical framework and Student Toolbox, the national reports describe different implementation models reflecting local school structures,

timetables and organisational conditions. The national reports describe three main approaches to organising the workshops.

Modular Curriculum Integration

Several partners integrated the toolbox into existing school subjects through shorter sessions distributed over several lessons. This model proved particularly suitable for embedding media literacy into regular classroom teaching without requiring dedicated project days. Activities were successfully incorporated into subjects such as Mathematics, Chemistry, Informatics, Civic Education, History, Literature and English, demonstrating the interdisciplinary nature of the MILES approach.

Intensive Workshop Model

Several partners organised the workshops as intensive learning events, allowing students to work through several media literacy topics within one or more extended sessions. This approach provided sufficient time for discussion, collaborative activities and reflection, while also enabling students to engage in creative production tasks.

Interactive and learner-centred learning

Across all countries, the workshops placed a strong emphasis on active participation. The partner reports describe a wide variety of learner-centred methods, including discussions, collaborative problem-solving, simulations, role play, games, quizzes, fact-checking activities and creative production tasks.

Several partners complemented the toolbox with digital tools such as Kahoot, while others developed local activities to illustrate specific concepts. For example, Cyprus used a "broken telephone" activity to demonstrate how information changes as it is passed on, and Romania used live online searches to illustrate how algorithms personalise search results and contribute to the formation of filter bubbles.

Throughout the consortium, teachers adapted the activities to their own educational contexts while following the common pedagogical objectives of the MILES project.

2.3. Integration into School Subjects

One of the strengths highlighted across the national reports is the interdisciplinary nature of the MILES Student Toolbox. Rather than being limited to a single subject, the activities were successfully integrated into a broad range of curricular areas.

Media literacy activities were incorporated into STEM-related subjects such as Mathematics, Chemistry, Informatics and Technical Education, where students analysed digital information,

discussed algorithms and evaluated online sources. At the same time, the workshops were embedded into Humanities and Language subjects, including History, Literature, Civic Education and English, where they supported discussions on communication, democratic participation, persuasive language and responsible citizenship.

Several partners also introduced creative learning elements. Germany extended the workshops through podcast production, enabling students to communicate their learning outcomes to a wider audience. Other partners encouraged collaborative game-based learning, debates or creative storytelling, illustrating how media literacy can be addressed through diverse pedagogical approaches.

The variety of subjects represented across the consortium demonstrates that media and information literacy is not confined to one curriculum area but constitutes a transversal competence that can be meaningfully addressed across different disciplines.

While implementation models and curricular integration varied across partner countries, the workshops addressed a remarkably consistent set of media literacy topics. The following chapter presents an overview of these common themes and illustrates how they were translated into practical learning activities across different educational contexts.

3. Workshop Topics and Learning Activities

Although the workshops were adapted to national curricula, age groups and local educational contexts, the national reports reveal a high degree of consistency regarding the core topics addressed. All partners worked with activities from the MILES Student Toolbox, selecting and combining individual exercises according to the needs of their students while following the common pedagogical framework developed within Work Package 3.

Across the consortium, the national reports show that the workshops consistently addressed the following key themes:

Understanding Misinformation and Disinformation

The starting point of most workshops was the distinction between misinformation, disinformation and fake news. Students explored why false information spreads, how it is created, and what motivations may lie behind its dissemination. Through discussions and real-life examples, students reflected on the impact of misleading information on individuals and society and considered their own role as responsible consumers and sharers of digital content.

Student Voices

"I learned that just because something has many likes doesn't mean it is true." – Student, Germany

"What impressed me the most is the hidden language used on social media." – Student, Greece

Fact-Checking and Source Verification

A central component of the workshops focused on developing students' ability to assess the credibility of online information. Students learned practical verification strategies such as checking the original source of information, comparing information across multiple sources, identifying trustworthy websites, recognising warning signs of unreliable content and using fact-checking techniques before sharing information online.

Many workshops included practical exercises in which students analysed authentic online posts, compared different news sources or worked collaboratively to verify the accuracy of digital information. These activities encouraged students to move beyond first impressions and develop a more systematic approach to evaluating online content.

Student Voices

"Fact-checking felt like being a detective. It was fun to find out what was actually true."

— Student, Belgium

"I learned that even scientific claims should be checked carefully." – Student, Poland

Algorithms, Filter Bubbles and Digital Footprints

Another recurring topic across the consortium concerned the influence of algorithms on the information people receive online. Students explored how search engines and social media platforms personalise content based on previous online behaviour and discussed the concepts of filter bubbles and echo chambers.

Several partners used practical demonstrations and simulations to illustrate algorithmic personalisation. Students reflected on their own digital footprints, considered how their online activities shape future recommendations and discussed strategies for broadening their information sources and avoiding one-sided information environments.

Artificial Intelligence and Manipulated Media

The rapid development of artificial intelligence was addressed in many workshops through activities focusing on AI-generated images, manipulated videos and deepfakes. Students analysed authentic examples, discussed the opportunities and risks associated with AI technologies and explored methods for identifying manipulated digital content.

This topic generated particularly high levels of interest among students, as many recognised similarities to content they regularly encounter on social media platforms.

Student Voice

"I didn't know that pictures and videos could be created so realistically with AI. Now I'll look twice before believing what I see online." — Student, Austria

Emotional Manipulation and Clickbait

Several activities examined how emotional language, sensational headlines and visual design are used to attract attention online. Students analysed examples of clickbait, discussed the role of emotions in digital communication and practised rewriting exaggerated headlines into more neutral and factual versions.

These activities helped students recognise persuasive techniques commonly used on social media and encouraged more reflective online behaviour.

Responsible Online Behaviour and Digital Citizenship

Throughout the workshops, students discussed their own responsibilities as digital citizens. Topics included online communication, respectful behaviour, privacy settings, password security, responsible sharing of information and strategies for responding constructively to misinformation encountered online.

Rather than focusing solely on risks, the workshops encouraged students to view themselves as active contributors to a healthy digital information environment.

Creative Learning Activities

The national reports highlight a wide range of creative and collaborative learning activities that complemented the Student Toolbox. Students participated in debates, simulations, role-playing activities, quizzes, group discussions and problem-solving tasks that encouraged active participation and peer learning.

Several partners extended the workshops through locally developed activities. Germany organised an extracurricular learning group in which students produced their own podcast on fake news and disinformation, applying the knowledge gained during the workshops to create media content for others. Cyprus used a "broken telephone" activity to demonstrate how information changes as it is transmitted from person to person, while Romania illustrated algorithmic personalisation through live online search demonstrations.

These examples illustrate the flexibility of the MILES Student Toolbox and demonstrate how partners successfully adapted the activities to their own educational contexts while maintaining the common learning objectives of the project.

Summary

Taken together, the national reports demonstrate that the MILES Student Toolbox provides a comprehensive and adaptable collection of learning activities covering the most relevant

aspects of media and information literacy. Although individual partners selected different combinations of activities, the workshops consistently promoted critical thinking, active participation and reflection on students' own digital experiences. The variety of approaches described across the consortium further illustrates that the toolbox can be successfully implemented with different age groups, within different school subjects and across diverse educational settings.

The thematic consistency described above is reflected in the evaluation results, presented in the following chapter. Using a common evaluation framework, the consortium assessed the impact of the workshops on students' knowledge, confidence and media literacy-related behaviours, while taking into account the diversity of educational contexts.

4. Summary of Quantitative Results

To assess the impact of the student workshops, all partners used a common pre- and post-workshop questionnaire developed within the MILES project. The questionnaire measured students' self-perceived knowledge of media and information literacy concepts, their confidence in applying responsible online behaviours, and their ability to identify appropriate responses in practical misinformation scenarios.

Although implementation conditions differed across countries, the use of a common evaluation framework allowed the consortium to identify overall trends while respecting national differences in educational settings and participant groups.

Across all participating countries, the partner reports indicate positive developments in students' self-assessed knowledge following participation in the workshops. Average knowledge scores increased in every national pilot, suggesting that the workshop activities successfully supported students in understanding key concepts such as misinformation, disinformation, fact-checking, filter bubbles, algorithms, digital footprints and AI-generated content.

The largest increases were reported by partners working with students who had relatively limited prior knowledge of media literacy concepts, while countries reporting higher initial scores generally observed more moderate improvements. These variations in learning gains appear to be linked primarily to students' initial levels of media literacy rather than to differences in educational settings or workshop formats. Countries reporting comparatively lower baseline scores generally observed larger improvements, while cohorts with higher starting levels tended to show more moderate gains. This pattern suggests that the MILES

Student Toolbox is sufficiently flexible to support learning across diverse educational contexts while being particularly effective in strengthening foundational media literacy competences.

Overall, the results reported by the partners indicate positive developments in students' self-reported confidence and media literacy skills.

Behaviour and Practical Skills

The workshops also aimed to strengthen students' confidence in applying media literacy skills in everyday online situations. The partner reports consistently indicate improvements in students' self-reported behaviour and confidence after completing the workshops.

Students reported feeling more confident in:

- checking the credibility of online information before sharing it;
- comparing information from different sources;
- recognising manipulative content;
- questioning sensational headlines;
- identifying trustworthy websites;
- reflecting on the influence of algorithms and personalised content.

These findings suggest that the workshops supported not only conceptual understanding but also the practical application of media literacy skills.

4.1. Scenario-Based Question

An important component of the common evaluation instrument was a scenario-based question requiring students to identify the most appropriate first steps when confronted with potentially misleading online information.

All partner reports describe improvements in students' responses following the workshops. While the extent of improvement varied across countries, the overall trend indicates that students became more likely to select appropriate verification strategies before accepting or sharing information.

In several countries, the proportion of students selecting both correct verification steps increased substantially after participation in the workshops, indicating greater awareness of responsible information verification practices.

4.2. Overview of Quantitative Results

Country	Knowledge (Pre → Post)	Behaviour (Pre → Post)	Scenario (Pre → Post)
Belgium	3.8 → 4.0	3.5 → 3.8	2.5% → 9%
Italy	3.45 → 4.38	3.50 → 4.31	45% → 70%
Poland	3.0 → 4.5	3.0 → 4.5	3.4% → 36.2%



Country	Knowledge (Pre → Post)	Behaviour (Pre → Post)	Scenario (Pre → Post)
Germany	3.3 → 4.0	3.1 → 4.1	65% → 85%
Austria	3.18 → 3.67	2.60 → 3.43	4.6% → 12.3%
Portugal	3.78 → 4.24	3.37 → 3.87	18.6% → 19%*
Greece (Kastoria)	3.97 → 4.26	3.27 → 4.13	35% → 55%
Greece (Veroia)	3.5 → 4.0	3.0 → 3.5	36% → 56%
Romania	4.14 → 4.50	3.86 → 4.30	10.8% → 24.3%
Cyprus	3.93 → 4.43	3.71 → 4.25	32.6% → 41.9%

*In Portugal, although the percentage of students selecting both correct answers remained largely unchanged, the national report highlights a clear shift towards prioritising official and trustworthy information sources before sharing content online, indicating a positive change in students' reasoning processes.

4.3. Overall Trends

Taken together, the quantitative findings reported by the partners suggest a consistent positive trend across the consortium. All countries reported improvements in students' knowledge and confidence, while the scenario-based question indicates that students became more likely to apply appropriate verification strategies after participating in the workshops.

Although the magnitude of change differed between countries, reflecting differences in age groups, workshop formats and prior experience, the overall findings suggest that the MILES Student Toolbox can contribute to strengthening media and information literacy across a range of educational contexts. The quantitative results are complemented by qualitative observations from teachers and facilitators, presented in the following chapter, which provide additional insights into students' engagement, learning processes and classroom.

While the quantitative findings demonstrate measurable improvements in students' self-perceived knowledge, confidence and decision-making, they do not fully capture how these changes were experienced in the classroom. The qualitative findings presented in the following chapter therefore provide valuable additional insight into students' engagement, teachers' observations and the learning processes that underpinned the reported outcomes.

4.4. Methodological Considerations

While the common evaluation framework enabled meaningful comparisons among partner countries, several methodological considerations should be taken into account when interpreting the findings. The quantitative results are based on students' self-assessments and therefore reflect perceived, rather than objectively measured, competence development. In addition, differences in educational systems, workshop duration, participant age, class

composition, and cultural response styles may have influenced the extent of reported changes. Nevertheless, the consistency of positive trends across all participating countries, together with the qualitative evidence presented in the following chapter, provides strong support for the educational value of the MILES Student Toolbox.

5. Qualitative Findings from the National Reports

In addition to the quantitative results, all partner organisations collected qualitative feedback through classroom observations, discussions with students, teachers' reflections and, in several countries, written comments from participants. Although the methods of collecting feedback varied, the national reports reveal several common themes regarding the implementation of the MILES Student Toolbox and students' experiences during the workshops.

Student Engagement and Participation

The partner reports consistently indicate a high level of student engagement during the workshops. Students actively participated in discussions, contributed examples from their own online experiences and showed particular interest in activities linked to social media, misinformation and artificial intelligence.

Several reports noted that collaborative activities, such as group discussions, quizzes, fact-checking exercises, role play and educational games, encouraged participation from a broad range of learners. In some cases, teachers observed that students who were usually less active in class became more engaged when analysing authentic online content or working together to solve practical tasks.

Teacher Voice

"The students remained engaged throughout the workshop because they recognised the examples from their own online lives." – Teacher, Cyprus

Relevance to Students' Everyday Digital Lives

A recurring finding across the partner reports was that students readily connected the workshop topics to their own everyday use of digital media. Discussions frequently moved beyond the prepared activities as students shared personal experiences related to social media, online rumours, manipulated images, AI-generated content and misleading information encountered online.

Several partners reported that this close connection between the learning activities and students' own experiences helped make media and information literacy more meaningful and encouraged learners to reflect on their own online behaviour.

Learning through Practical and Interactive Activities

The reports consistently highlight the value of practical, learner-centred methods. Students analysed online posts, verified information, compared sources, identified clickbait, discussed AI-generated images and reflected on the influence of algorithms and digital footprints. Rather than focusing on theoretical explanations alone, the workshops encouraged students to apply critical thinking strategies to realistic situations.

Many partners also reported positive experiences with interactive methods such as quizzes, simulations, debates, role play and collaborative group work. In several countries, teachers complemented the Student Toolbox with locally developed activities that reflected their students' interests and educational context.

Teachers' Reflections

Teachers generally expressed positive views regarding both the relevance of the workshop topics and the usability of the Student Toolbox. Several reports highlighted that the materials addressed issues that students encounter regularly but that are rarely explored systematically within everyday classroom teaching.

Teachers also appreciated the flexibility of the toolbox, noting that activities could be adapted to different age groups, subjects and lesson formats. Ready-to-use materials, practical examples and interactive exercises were identified as important factors supporting successful implementation.

Some teachers observed that while many students were confident users of digital technologies, they often lacked structured strategies for evaluating online information critically. The workshops therefore helped strengthen students' ability to question information, verify sources and reflect on their online behaviour.

Teacher Voice

"I was amazed by the students' speed in decoding subtexts." – Teacher, Romania

Students' Reflections

Students generally described the workshops as interesting, relevant and different from traditional lessons. Across several national reports, students indicated that they had become more aware of how misinformation spreads, how algorithms influence the information they receive and how artificial intelligence can be used to manipulate digital content.

Many students reported that they intended to verify information more carefully before sharing it and to pay greater attention to the credibility of online sources. Practical activities and opportunities for discussion were frequently mentioned as particularly valuable learning experiences.

Student Voice

"Now I understand why my social media feed keeps showing me the same kinds of posts." –
Student, Romania

Examples of Local Adaptation

While all partners implemented the common MILES Student Toolbox, the national reports demonstrate considerable flexibility in adapting the activities to local contexts.

Germany, besides the classroom workshops, conducted also an extracurricular media literacy group in which students produced a podcast on fake news and disinformation. Cyprus introduced a "broken telephone" activity to demonstrate how information changes as it is passed from one person to another. Romania used live online searches to illustrate algorithmic personalisation and modelled fact-checking strategies by verifying information together with the students. Other partners integrated the activities into existing classroom teaching across a range of curriculum subjects or complemented them with quizzes, debates and collaborative learning activities.

These examples demonstrate that the Student Toolbox provided a common pedagogical framework while allowing teachers sufficient flexibility to adapt the learning activities to their own educational settings.

Summary

Taken together, the qualitative findings complement the quantitative results by illustrating how the workshops were experienced in practice. Across the partner reports, students were described as highly engaged, particularly when activities reflected their own digital experiences and encouraged active participation. Teachers valued both the relevance and flexibility of the MILES Student Toolbox and reported that the workshops supported students in developing a more critical and reflective approach to evaluating online information.

The findings presented above not only illustrate how the workshops were experienced by students and teachers but also provide the basis for reflecting on their practical implementation. The following chapter therefore examines the main highlights, challenges and lessons learned that emerged across the consortium.

6. Highlights, Challenges and Lessons Learned from Implementation

The national reports demonstrate that the MILES Student Toolbox can be successfully implemented in a wide variety of educational contexts. Although the participating countries differed with regard to school systems, curricula, age groups and workshop formats, several

common experiences emerged across the consortium. These relate not only to successful implementation but also to practical challenges and recommendations for future use.

6.1 Highlights

Strong relevance to students' everyday lives

One of the most frequently reported strengths of the workshops was their close connection to students' everyday digital experiences. Topics such as fake news, social media, artificial intelligence, online influencers, manipulated images and algorithms reflected situations that students encounter regularly outside school. Teachers reported that this relevance stimulated lively discussions and encouraged students to contribute their own experiences and examples. Several partners observed that students continued discussions beyond the planned activities, demonstrating both curiosity and a willingness to reflect critically on their own online behaviour.

Active and collaborative learning

The consortium reports demonstrate that interactive learning methods were identified as an important success factor. Fact-checking exercises, debates, simulations, educational games, quizzes, role play and collaborative group work encouraged students to analyse information actively rather than simply receiving theoretical input.

Many teachers reported that practical activities enabled students to develop critical thinking skills through experience and discussion. Several partners also highlighted that collaborative tasks promoted communication, peer learning and joint problem-solving.

Flexibility of the Student Toolbox

Another strength repeatedly highlighted by the partners was the flexibility of the MILES Student Toolbox. Teachers successfully adapted activities to different age groups, school subjects and lesson formats while maintaining the common learning objectives.

The reports demonstrate that the toolbox was implemented in lower and upper secondary education, vocational schools and extracurricular learning settings. Activities were integrated into subjects including Informatics, Mathematics, Chemistry, Civic Education, Languages, Literature and History, illustrating that media and information literacy can be addressed as a cross-curricular competence.

6.2 Challenges Encountered During Implementation

Adapting activities to different learner groups

Several partners reported that the workshops had to be adapted to the age, prior knowledge and learning needs of different student groups. While older students were generally able to engage with abstract concepts such as algorithmic personalisation, pre-bunking or AI-generated content, younger learners benefited from additional explanations, visual examples and simplified terminology.

Teachers therefore adjusted both the pace of the workshops and the selection of activities according to the characteristics of their classes.

Time constraints

A challenge mentioned in several national reports concerned the limited time available for workshop implementation. Teachers frequently reported that discussions developed beyond the planned schedule because students were eager to analyse current online examples and share their own experiences.

Some partners therefore recommended allowing additional time for discussion, reflection and practical activities or spreading the workshops across several teaching sessions.

Supporting critical reflection

Several reports observed that students were confident users of digital technologies but were not always accustomed to questioning the credibility of online information systematically. Practical fact-checking activities sometimes revealed that identifying misleading information was more challenging than students had initially expected.

Teachers reported that repeated opportunities to practise verification strategies and discuss authentic examples helped students develop a more reflective approach to evaluating digital content.

6.3 Lessons Learned

The implementation of the student workshops generated several common lessons that may inform the future use of the MILES Student Toolbox. The reports from all partners show that students engaged most strongly with authentic examples drawn from their own digital environments. Using current social media content, real online discussions and practical verification tasks helped learners recognise the relevance of media and information literacy in their everyday lives and encouraged them to reflect critically on their own online behaviour.

The reports also indicate that sufficient time should be allocated for discussion and reflection. In many workshops, students extended conversations beyond the planned activities by sharing personal experiences, debating current online phenomena and questioning the reliability of information sources. These exchanges were described as an important part of the learning process and suggest that flexibility in workshop planning can enhance learning outcomes.

Another common lesson concerns the value of the toolbox's modular design. Teachers appreciated being able to select, adapt and combine activities according to their students' age, prior knowledge and curriculum requirements. This flexibility enabled partners to integrate media and information literacy into different subjects and educational settings while maintaining the common learning objectives of the project.

Finally, the national reports demonstrate that media and information literacy is most effective when students actively apply their knowledge rather than only learning about concepts. Activities involving fact-checking, collaborative analysis, discussion and media creation supported not only knowledge acquisition but also the development of critical thinking, communication and responsible online behaviour.

Overall, the transnational piloting confirms that the MILES Student Toolbox provides a flexible and practical resource that can be successfully adapted to diverse educational contexts while promoting meaningful and engaging learning experiences.

7. Conclusion

The student workshops carried out under Task 3.3 successfully demonstrated that the MILES Student Toolbox can be implemented across a wide range of educational contexts while effectively supporting the development of media and information literacy, critical thinking and responsible digital citizenship.

The pilot activities involved approximately 845 students in nine European countries, considerably exceeding the participation target defined for this phase of the project. Despite differences in educational systems, age groups and implementation models, the national reports reveal a high degree of consistency in both the workshop topics addressed and the learning outcomes achieved. Across the consortium, students showed increased confidence in recognising misinformation, verifying online information, understanding the influence of algorithms and artificial intelligence, and reflecting more critically on their own digital behaviour.

The qualitative findings further demonstrate that students engaged particularly well with authentic, learner-centred activities that reflected their everyday digital experiences. Teachers valued the flexibility of the Student Toolbox and successfully adapted the materials to different subjects, curricula and classroom settings while maintaining the common pedagogical objectives of the project.

Beyond validating the educational materials developed within the MILES project, the workshops also established an important foundation for the next phase of Work Package 3. In several partner countries, the pilot activities already encouraged students to think creatively about how media and information literacy concepts could be communicated to others. Building on the knowledge, skills and critical awareness developed during these workshops, Task 3.4 will engage students in the co-design of educational board games that enable them to become active creators and ambassadors of media and information literacy for teachers, families and other adults.

Overall, the transnational piloting confirms that the MILES educational approach provides a practical, flexible and engaging framework for strengthening young people's ability to navigate today's complex digital information environment. The experience gained across the consortium offers a strong basis for the continued development, refinement and wider dissemination of the project's learner-centred approach to media and information literacy.