

Building Digital Citizenship in France

Lessons from the
Sens Critique project

Cooper Gatewood

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Digital Citizenship refers to the ability to engage positively, critically and competently in the digital environment, drawing on the skills of effective communication and creation, to practice forms of social participation that are respectful of human rights and dignity through the responsible use of technology.

Council of Europe's definition of Digital Citizenship

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1. Acknowledgements

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Finally, we thank members of the Institute for Strategic Dialogue (ISD) – especially Jonathan Birdwell, Henry Tuck, Louis Reynolds, Chloe Colliver, Angharad Guy and Cécile Guerin – for the quality of their thoughtful comments and proofreading.

1.1 Support

ISD and Facebook are working closely with representatives of Civic Fab and What the Fake, as part of the OCCI, a non-profit programme to support civil society efforts to fight against hate and extremism online. This programme provides members with training, resource access and networking opportunities, helping to intensify the impact of their online counterspeech activities and social cohesion initiatives offline.

This series of workshops is supported by the CIPDR, with the logistics support of Buffon (Paris XV) and Pierre et Marie Curie (Paris XVIII) sixth-forms. Facebook France also supported this programme by granting funding to the ISD to allow the secondment of researchers responsible for evaluating the programme and drafting this report, while opening up its premises during a workshop and an evening in which films were broadcast to pupils parents.



Civic Fab representatives have secured further funding through Facebook's Fonds pour le Civisme en ligne, launched in December 2018, and will be rolling out the Sens Critique programme across France. Half a dozen workshops are set to take place between March and December 2019, which will involve over 100 students in six different regions.

1.2 Partners

Civic Fab is a social innovation think tank seeking to combat hate, extremism and online manipulation. It is home to What the Fake, an online initiative developed by members of civil society and supported by public authorities. It drives counterspeech campaigns and educational projects that build young vulnerable audiences' critical thinking and resilience to hate and extremism.

The FJPI is a federation of young producers whose ambition is to support the diversity of audiovisual creativity by encouraging new people to become involved in independent production, with a particular focus on priority urban districts. It aims to inform secondary school pupils about the audiovisual production professions and to familiarise them with the various forms of storytelling for film and the audiovisual sector. Through its involvement in youth projects in partnership with other civil society organisations and web-based companies, such as **Toi-même tu filmes** or **Sens Critique**, FJPI also aims to raise public awareness of hate speech, fake news and online manipulation.

Impulsion 75 is a sports and education association that fights against dropping out of school. In a context where the unemployment rate among non-graduates is close to 50%, Impulsion 75 re-motivates and supports young people aged 13 to 25 to integrate into the world of work, training or pre-schooling. Beyond its sports association activities, Impulsion 75 focuses on young women and men who struggle to enter employment in the Paris region. The association supports them in their professional goals through a major project, the Preparatory Class for Employment and the Future (la Classe Préparatoire à l'Emploi et à l'Avenir; **la CPEA**), which is supported by a team of enthusiasts who help young people adopt the behaviours necessary to prepare a smooth entry into training or employment.

ISD is a global non-profit organisation. It is dedicated to creating and disseminating research and action programmes and co-ordinating multisectoral networks, the aim of which is to fight effectively and sustainably against violent extremism and hatred, to contribute to a more inclusive, cohesive and resilient society. Over the years, ISD has gained specific experience in designing educational programmes and organising digital citizenship training workshops for different types of audiences, including younger age groups, covering such topics as emotional manipulation, false information, divisive societal rhetoric, or even hate speech, notably through the programmes **Digital Resilience**, **Be Internet Citizens** and **Young Digital Leaders**. ISD has also been a pioneer in evaluating such programmes, as well as designing, producing and evaluating online counterspeech campaigns such as **YouthCAN** and the Online Civil Courage Initiative (**OCCI**).

Lumières sur l'Info is a non-profit association composed of professional journalists; it organises classroom activities to combat disinformation among young people. During such activities, journalists always start from information that young people actually encounter on their computer or phone screens. The goal is to search for sources of information and to teach pupils if a source is reliable and valid.

2. Summary

The advent of new communication technologies and their ubiquity has many benefits for information sharing at a global level. However, these new technologies have also created new challenges which our societies are now faced with: the spread of disinformation, manipulation and online hate. It is therefore essential that young people are trained to use new communication tools in a conscientious and safe way.

There is growing recognition of the influence of online disinformation and conspiracy theories and the threats that these phenomena may pose to social cohesion. These dynamics have led the French government to address these issues within various relevant ministries. At the same time, many initiatives are emerging from civil society.

It is in this context that the Sens Critique pilot programme arose, initiated by the think tank Civic Lab via the initiative What the Fake, and supported by a group of associations involved in various fields of expertise such as education, disinformation and counter-extremism. The programme aims to raise awareness among pupils on the dangers of fake news and hate speech. The programme includes awareness-raising exercises concerning disinformation and emotional manipulation, while at the same time building skills that may be useful for those who wish to pursue jobs in film industry professions. The programme was piloted with 22 pupils from three schools in the Paris region. In order to evaluate the programme's impact, pupils completed pre- and post-survey questionnaires measuring outcomes on a range of measures, including confidence in identifying trustworthy sources of information, fake news and emotional manipulation, and in creating online content of their own. Interviews were also conducted with five pupils and their parents about their feelings surrounding the programme.

The evaluation pointed to several positive outcomes from the trial:

- More than eight out of ten pupils (82%) reported feeling more confident when they consume information online.
- About seven out of ten pupils (71%) expressed their belief that what the programme taught them was useful for their lives.
- Two out of three pupils (67%) expressed confidence in their ability to identify disinformation online, compared with less than half (47%) before the intervention.
- More than four out of five pupils (87%) reported being confident in their ability to check whether online information is reliable, compared with less than half (47%) before the intervention.
- Approximately four out of five pupils (79%) reported being confident in their ability to find reliable sources online, compared with three out of five (64%) before the intervention.
- Over half of the pupils (57%) reported understanding how stories can be adapted for different audiences online (a measure of understanding emotional manipulation), compared with two out of five (43%) before the intervention.
- Approximately seven out of ten pupils (71%) reported understanding how disinformation can contribute to online hate, compared with three out of five (64%) before the intervention.

In this initial pilot, evaluation focused on students' self-assessed confidence and knowledge gains. Future iterations of the programme should be further evaluated with knowledge tests and behavioural questionnaires.

During the interviews, all parents expressed their satisfaction with the programme, mentioning the urgent need for this type of training, and agreeing that this type of training should be further integrated into the school curriculum.

The evaluation of this programme has highlighted the value of this type of education, as well as some significant needs in the sector, in particular:

- the need to prepare teachers with the right tools and strategies to confront conspiracy theories in digital literacy education; this pilot project revealed the real risk this phenomenon poses to young people, degrading their trust in all media and institutions, and teachers need to be equipped to address this with their students
- the importance of striking the right balance between educational content and engaging, fun exercises, which should be supplemented with written materials and resources that are age-appropriate for the target audience
- the need to incorporate research on media consumption and socio-cultural references for this young audience – an important element to ensure the educational materials resonate
- the importance of including diverse partners in developing this type of curriculum, and ensuring each element is aligned and co-ordinated in order to achieve maximum impact.



3. The Sens Critique programme

3.1 Objectives of the programme

The Sens Critique initiative was thought up by What the Fake, in partnership with the FJPI, Impulsion 75, ISD and Lumières sur l'Info, and supported by Buffon and Pierre et Marie Curie sixth-forms, the CIPDR and Facebook France.

The programme included a series of five training, discussion and creative workshops during June 2018, for 22 junior high school pupils (aged 13–15 years), on topics related to digital citizenship, media literacy and critical thinking.

It aimed to make these young people aware of the dangers of fake news, through disinformation awareness, emotional manipulation and hate speech exercises, awakening them to the film professions by making a two-minute film using their mobile phone.

Each partner had to use their various areas of expertise to ensure the professionalism and credibility of the programme and maintain pupils' interest in each workshop. With a view to proposing an educational format adapted to these voluntary workshops, and in order for pupils to maintain their interest and involvement throughout the programme so lessons had maximal impact, expert activities always alternated between theoretical explanations, stimulating visual resources and creative, fun exercises.

In order for programme participants to gain self-confidence and feel they were accessing new opportunities, we added elements to the curriculum that made it a creative, immersive and emancipatory experience:

- visits to new educational establishments (prestigious sixth-forms, Facebook premises)
- production of a campaign strategy and a film
- meetings between different profiles (pupils from priority educational networks and top priority educational networks with sixth-form pupils from more privileged districts, artistic producers, journalists, civil society experts, representatives of the technology sector, cyber-influencers, YouTube creators, etc.).

Creative co-operation between pupils from different social and cultural backgrounds around the theme 'hearsay', broad enough to be able to speak to each of them and to provoke reflections and discussions directly related to the objectives of the programme, was intended to awaken participants' desire to express themselves freely on these subjects and to develop their sense of empathy, even their civic engagement, as well as their creative abilities.

Young people are frequently the most exposed to emotional manipulation, conspiracy theories, fake news, deficient critical thinking or social polarisation and hatred, yet are the least equipped to fight them. A recent report by the think tank Fondation Jean Jaurès found that youth are four times more likely than the French national average to subscribe to conspiracy theories⁽¹⁾. Meanwhile, the increasing length of time spent by young people on the internet means that they are at greater risk of being exposed to a range of misleading content. A 2017 Ipsos study on French under-20 youth's engagement on social media showed that young people aged between 13 and 19 spent on average 15 hours and 11 minutes per week online, and 81% owned a smartphone (up from 77% in 2016).⁽²⁾

The creation of campaigns to raise awareness among this target audience around these issues was intended to ensure the message relayed resonated with young people, magnifying the impact of the programme and its potential for spin-offs.

3.2 Structure of the programme

Sessions with Lumières sur l'Info [30 May and 6 June 2018]

The organisation Lumières sur l'Info was responsible for leading the first two workshops on fake news, which included various group exercises that covered researching, identifying and discussing fake news online. This session was an opportunity to recall the distinction between fact and opinion and to acquire methodological reflexes when verifying sources in the search for information.

The second session introduced pupils to Igor Sahiri, a BFMTV journalist who phone-interviewed the Kouachi brothers hidden away in a printing plant in Dammartin-en-Goële while fleeing the police in 2015. Some

(1) R. Reichstadt (2018) *Le Conspirationnisme dans l'Opinion Publique Française*, Fondation Jean Jaurès, Paris, <https://jean-jaures.org/nos-productions/le-conspirationnisme-dans-l-opinion-publique-francaise>

(2) Junior Connect (2017) *Les Jeunes ont Toujours une Vie Derrière les Écrans!*, Ipsos.



teenagers didn't understand how he'd been able to interview a terrorist live over the phone and doubted the veracity of the story, which they identified as fake news. The discussion served to put into perspective certain pupils' mistrust towards media outlets that produce information constantly, enable debate journalistic ethics and educate many pupils about a profession plagued with myths.

Session with ISD in the Facebook France premises [6 june 2018]

ISD organised an awareness and reflection session on communication techniques and emotional manipulation as well as a workshop for creating and presenting a communication strategy by pupils at Facebook. Specifically designed for an audience of young French people aged 13–15 years, the workshop provided a series of short presentations punctuated by discussions with pupils, which covered learning the main communication techniques illustrated by examples drawn from history, politics or popular culture.

Through video prompts, pupils were instructed to think about the goals of a message and the tactics used in advertising, for example to intensify its impact. Participants discovered that emotional manipulation uses rhetorical, visual or auditory techniques that are sometimes very simple but effective and could have either relatively commendable objectives (fundraising by charitable organisations to encourage political mobilisation, awareness-raising around a social issue) or more nefarious ones (disinformation to sow social unrest or division).

The pupils then learned the different stages of a communication strategy and each group of five pupils created their own message, objective, audience, tone and promotional strategy on the theme of hearsay, which they had to present to a panel made up of experts from Facebook's marketing teams and digital campaign creators.

ISD has experience in research and the statistical and qualitative evaluation of educational programmes, and assessed the impact of the Sens Critique pilot programme. This evaluation, conducted in line with the highest statistical and ethical standards, was required to test the model, prove that the concept could have a positive impact, and modify certain aspects which would have worked less well for this type of audience in future versions of the initiative.

Sessions with the FJPI at Buffon sixth-form [13, 20 and 21 June]

The FJPI introduced the topic of hearsay in set design and set out the purpose of the exercise for pupils through a presentation resonating in a very particular way with the filmographic imagination of this audience and the news. It used a metaphor based on a modern hero and a parallel between the blockbuster film Spider-Man and the incredible story of Mamadou Gassama, a young undocumented Parisian who climbed three floors of a building in Paris' 18th arrondissement with his bare hands to rescue a young child hanging in the void. FJPI organised the last three screenwriting, production and editing workshops for the two-minute films made by Pierre et Marie Curie, Utrillo and Buffon sixth-form pupils.





In the first session each group created a storyboard. The second session focused on filming, for which pupils received extensive advice on filmmaking and acting. The third session allowed groups and supervisors to take up the technical challenge of editing, uploading and showing films to a challenging audience comprising parents and partners in the same day.

Final movies' screening session at Facebook France [21 june]

The evening of 21 June consisted of participants presenting the programme, its speakers and objectives, and then projecting the films in front of an audience made up of the families of the young learners, actors and producers, as well as representatives of various partner structures from civil society or the government. Facebook, which supported the Sens Critique initiative as part of its work in media literacy and the fight against hate speech and disinformation, provided a conference room and the outdoor seating area of its magnificent Parisian offices for a cocktail party. Parents were able to learn more about the work of their children during June and discover the finished product at the same time as the apprentice producers and actors when the very short films were screened.

4. Evaluation of the programme

4.1 Objectives and evaluation framework

The programme had two main objectives:

- to educate pupils about issues related to online disinformation (including false news, conspiracy theories, manipulation and hate speech)
- to increase pupils' self-esteem (in general and in relation to the issues mentioned above).

To do this, each session had a very specific goal to achieve, on which the success of the two main objectives hinged, that pupils can:

- distinguish between facts and opinion (session 1)
- check the reliability of information sources (session 2)
- define the purpose, message, tone and audience of a campaign (session 3)
- identify the stages of development of a video (script, filming, editing, etc.) (sessions 4–6).

ISD developed the evaluation framework set out in Table 1 to better understand the practical impact of this pilot programme.

Objective	Make pupils aware of the challenges related to disinformation online		Increase pupils' self-esteem	
	Result	Intermediate result	Activity	Result
	Pupils felt that they had the knowledge and confidence to distinguish between facts and opinion	Pupils can check the reliability of information sources	Pupils can define the purpose, message, tone and audience of a campaign	Pupils are aware of the stages of development of a video
	22 pupils trained	22 pupils trained	22 pupils trained; communication strategy for videos	22 pupils trained; 6 videos produced
	Workshop on distinguishing between fact and opinion	Workshop on the reliability of online sources	Workshop on the development of a counterspeech campaign	Workshops on the production of a video

Each activity could contribute to the success of the two main objectives of the programme, but we chose to present the activities below the objective where they could have the most direct impact.

4.2 Evaluation procedure

Through this framework, ISD developed a three-step evaluation process in order to understand early signs of the programme's impact in relation to the two main objectives: a pre-survey, a post-survey and interviews.

1/ Pre-survey

After asking some questions on pupil demographics (gender, age and secondary school), the pre-survey asked pupils to answer 19 questions using a Likert scale ⁽³⁾, which focused on their:

- knowledge of the topics to be discussed in the workshops
- level of confidence during their interaction with online information
- skills in various areas (the full survey is provided in the appendix).

Pupils were asked to respond on a scale of 1 to 7, where 1 was 'strongly disagree' and 7 'strongly agree'. These 19 questions corresponded to the objectives defined above and are analysed as indicators in the section 'Analysis and results', below.

2/ Post-survey

Students completed the post-surveys two weeks after taking part in the programme. The post-survey asked pupils the same questions they had been asked in the pre-survey. Surveys were coded and linked anonymously, which allowed us to evaluate the change in each indicator individually. The post-survey also asked pupils ten questions about the structure and format of the programme, and about their level of satisfaction with the workshops.

3/ Interviews

ISD conducted interviews with five pupils who participated in the programme and their parents. This provided us with qualitative feedback on

the programme so we could find out what was relatively effective, what had the most impact, what particularly caught these pupils' attention and generated their interest, and what was lacking in the programme. Interview participants were paid for their time with a gift card.

ISD then analysed matched pre- and post-surveys (n=15) to identify statistically significant differences. The results of this exercise are presented in section 'Analysis and results', below.

(3) A Likert scale is a tool used to measure people's attitude to a topic. It consists of a question with answer options on a scale from 1 to 7. These seven choices are used to qualify the level of agreement with the survey questions.

4.3 Limitations

It is important to note the limitations of this exercise. First, as this was an initial pilot programme, there is a small sample size of 22 pupils (with 15 linked post-attrition surveys). While statistical significance tests were conducted on this small sample, there are limitations to the interpretation of the data.

The results discussed below may be considered indicative of this programme's potential impact; however, further trialling with a larger sample and a comparison group will be necessary to make generalisable claims about the programme.

Second, secondary school pupils of this age are not always able to assess their knowledge accurately. In the pre-survey, there was a risk of participants overestimating their knowledge, skills and confidence when answering Likert-type questions. Consequently, some results may tend to underestimate the actual impact of the programme. Future evaluations of this programme should include knowledge-based questions, which will allow for greater understanding of impact on gains in understanding of concepts.

Third, it was not possible to include a comparison group against which to test the impact of the pilot programme. Future versions of the programme and evaluation would benefit from including a comparison group to assess its impact on participants more accurately.

We used statistical analysis to demonstrate the potential impact of the programme if it was replicated and trialled on a larger scale. It is certain that a larger sample could have provided more accurate insights into impact, progress margins and programme improvement.

5. Analysis and results

5.1 Summary of results

As explained above, we asked pupils to answer 19 Likert-type questions, which corresponded to 19 indicators of the programme's success. The differences between pre- and post-surveys were analysed to identify a statistical significance. Below we present a summary of the key findings for each indicator. A detailed presentation of the analysis is provided in the appendix.

Of these 19 indicators, three showed a statistically significant positive impact ($p < .05$):

- More than four of five (87%) pupils said that they would be capable of knowing whether something they saw online was reliable, compared with one of two (47%) before the intervention, with an average increase in confidence of 39%.
- Around two of three (67%) pupils said they would be capable of identifying disinformation online, compared with one of two (47%) before the intervention, with an average increase in confidence of 25%.
- Around four of five (79%) of pupils said they knew how to find reliable sources online, compared with three of five (64%) before the intervention, with an average increase in confidence of 20%.

Three indicators showed a positive change close to the statistically significant level ($p < .1$):⁽⁴⁾

- More than two of five (43%) pupils said they knew how to design a campaign message for an online audience, compared with three of ten (29%) before the intervention, with an average increase in confidence of 38%.
- Around three of five (57%) pupils said they understood how stories can be designed for different audiences, compared with two of five (43%) before the intervention, with an average increase in confidence of 27%.
- More than seven of ten (71%) pupils said they thought that disinformation could contribute to online hate, compared with six of ten (64%) before the intervention, with an average increase in confidence of 13%.

Ten indicators did not reach the statistically significant level but showed a positive trend. Pupils said they:

- were more familiar with the different stages of writing a script to produce a video, with an average increase of 22%
- knew better how to define a target audience for an online campaign, with an average increase of 19%
- knew better how to evaluate the performance of a video online, with an average increase of 14%
- were more capable of identifying conspiracy theories online, with an average increase of 13%
- would be more capable of identifying fake news online, with an average increase of 10%
- were more confident in their ability to promote their point of view online using social networks, with an average increase of 9%
- knew better how to distinguish between fact and opinion, with an average increase of 8%
- would be more capable of identifying hate speech online, with an average increase of 5%
- would be more confident in knowing how to respond to comments under the content they shared on social networks, with an average increase of 2%.

One indicator did not undergo any change. Pupils said they:

- were aware of the different reasons why some stories might be told.

Finally, there were statistically insignificant negative changes for three indicators. Pupils reported:

- less understanding of how to define an objective for an online campaign, with an average decrease of 12%
- feeling less able to play a role in the fight against disinformation online, with an average decrease of 18%

(4) While this is not generally used as a statistical significance threshold, given the small sample size of this study, we felt it was useful to set these questions apart for analysis. For discussion around thresholds of statistical significance, see S. Greenland, S. J. Senn, K. J. Rothman, J. B. Carlin, C. Poole, S. N. Goodman and D. G. Altman (2016) *Statistical Tests, P Values, Confidence Intervals, and Power: A Guide to Misinterpretations*, *European Journal of Epidemiology*, 31(4), 337–50.

- being less likely to get involved in campaigns to fight against disinformation online, with an average decrease of 20%.

These final two indicators will likely need to be reassessed in future iterations of the programme in order not to damage student confidence, as discussed further below.

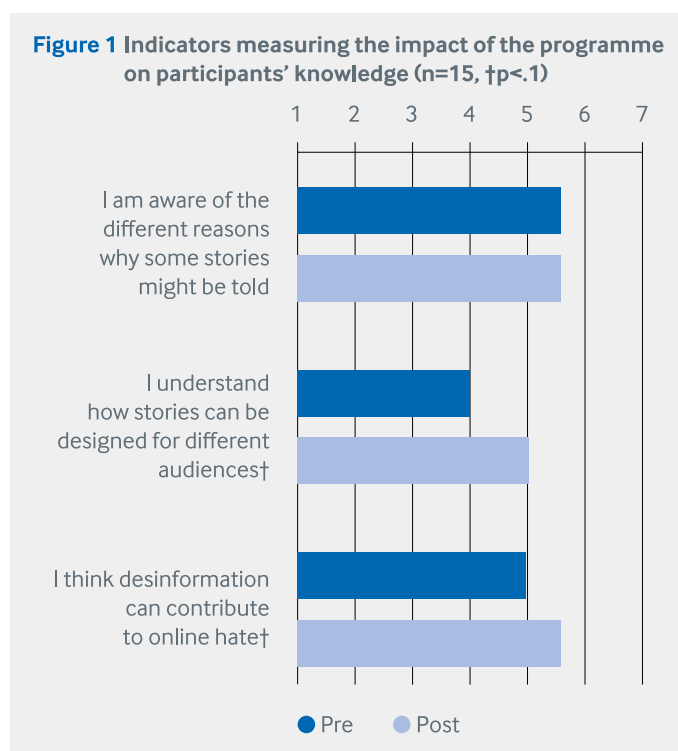
These indicators have been divided – as detailed above – into three categories: knowledge, skills and confidence. The results for each category are given below.

In the post-survey, pupils were asked about their satisfaction with the programme and whether they thought they would change their behaviour as a result of participating in it. All their answers are set out below, but the following points can already be noted:

- All pupils said that they liked the programme, which may demonstrate pupils' interest and need for educational programmes around these topics.
- More than four-fifths (82%) of pupils reported feeling more confident when consuming online information after participating in the programme, which tends to reinforce the results of other success indicators.
- More than two-thirds (71%) of pupils thought the programme's teachings were useful for their lives, further demonstrating the need for this type of programme.
- However, only 41% of pupils thought they would behave differently online as a result of the programme. Hence our desire to address, in this section, how this programme could be adapted to improve this statistic.

5.2 Knowledge

Three indicators measured the impact of the programme on pupils' knowledge (Figure 1).



The first indicator ("I am aware of the different reasons why some stories might be told") measured pupils' understanding of the risk of online emotional manipulation. This topic was addressed in the second session, and there was no significant change in pupils' understanding of it afterwards. There were increases close to the statistically significant level ($p<.1$) of 27% and 13% respectively in pupils' understanding of the topics relating to the other two indicators ("I understand how stories can be designed for different audiences" and "I think disinformation can contribute to online hate") after the programme.

During the interviews, the pupils' feedback echoed these results:

"Before the workshops, I was less aware of the risks linked to disinformation and hatred. Now, I am more wary of it. I am not more worried, I feel more in control."

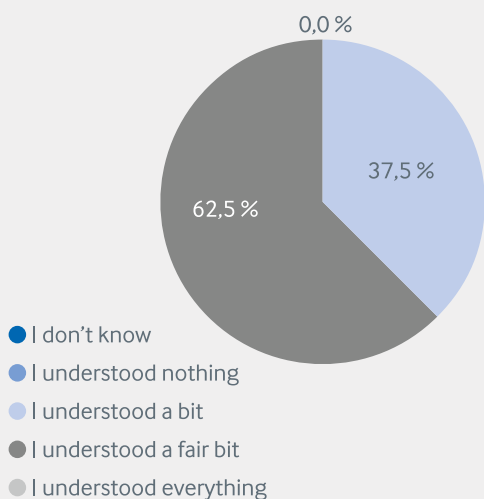
"I already knew it was necessary to carry out research before believing all news stories but now we have

more evidence, more explanations, more in-depth knowledge. Because we see that this can harm people and we need to carry out research first, as there are many things online that aren't true."

All pupils reported having at least partially understood the topics covered in the programme (Figure 2).

Figure 2 The extent to which participants understood the topics covered in the programme (n=17)

After this programme do you believe that you understood the topics covered?

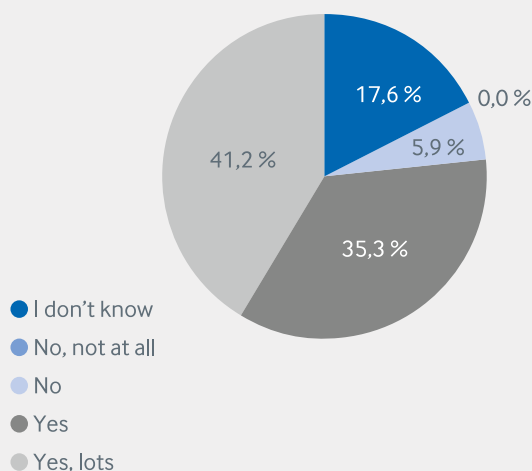


All the girls indicated they had understood "quite a lot", while most boys indicated they had understood "a bit". In future sessions could perhaps be redesigned to achieve better results among boys.

Almost 77% of pupils reported having acquired new knowledge (Figure 3), which further supports the results of the previous section.

Figure 3 The extent to which participants thought they acquired new knowledge from the programme (n=18)

Do you believe you have acquired new knowledge?



5.3 Skills

Two categories of skills were tested:

- skills relating to disinformation and hate speech
- and skills relating to video production.

Skills related to disinformation and hate speech

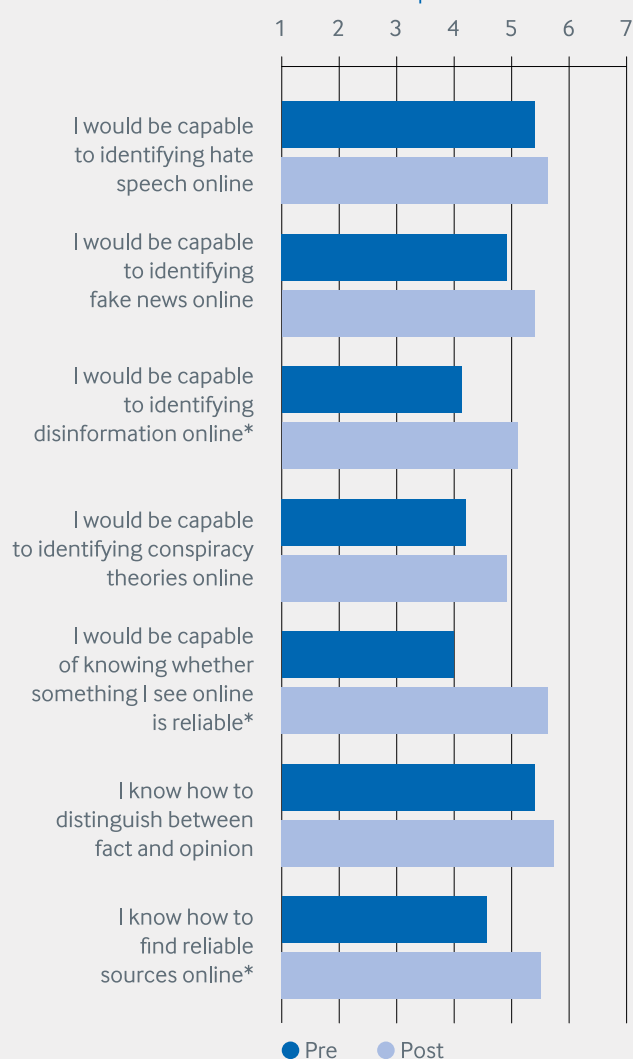
Seven indicators measured the impact of the programme on participants' skills in countering disinformation and hate speech.



Before the workshops, I was less aware of the risks linked to disinformation and hatred. Now, I am more wary of it. I am not more worried, I feel more in control. ”

Figure 4 Indicators measuring the impact of the programme on participants' skills in countering disinformation and hate speech (n=15, *p<.05)

Skills (disinformation and hate speech)



After pupils participated in the programme there was a statistically significant increase in their understanding of the topics related to three of these indicators:

- **“I would be capable of identifying disinformation online”**, 24% increase, showing that pupils felt far more confident in their ability to identify disinformation online, a key objective of the first session.
- **“I would be capable of knowing whether something I see online is reliable”**, 39% increase, the largest increase of all the indicators, suggesting

the effectiveness of the programme with regard to participants' ability to identify reliable information – another important element of critical thinking.

- **“I know how to find reliable sources online”** 20% increase, supporting the result of the previous indicator. This result is interesting, as the average pre-survey response was different for the three schools (see appendix). Although one of the schools had a higher base level than the others, the impact of the programme was the same for pupils from all three schools (average increase of 20%).

The increase in pupils' understanding of the topics related to the following indicators after participating in the programme did not reach statistical significance level, but nevertheless shows positive trends:

- **“I would be capable of identifying hate speech online”**, 13% increase. The programme did not explicitly cover the topic of hate speech, but we wanted to measure how this type of digital literacy education may impact students' understanding of this issue. It is encouraging that pupils understand this concept better after the programme, and see its relationship with disinformation. In future versions of the programme, this concept should be discussed in more depth during one of the sessions.
- **“I would be capable of identifying fake news online”**, 10% increase. Although this indicator shows a positive trend, pupils experienced difficulties during the exercises to identify fake news. Future iterations of the programme should focus more on this topic and explore whether knowledge-confidence gains increase through, for example, using more refined and specific resources, as this is one of the key concepts of the programme.
- **“I would be capable of identifying conspiracy theories online”**, 13% increase. Like the indicator on hate speech, the identification of conspiracy theories was not directly covered in the sessions, but it is encouraging that pupils felt better equipped to identify them after the programme. As conspiracy theories are linked to disinformation online, it would probably be beneficial to add this topic to future versions of the programme, especially since some pupils reported that they encounter conspiracy

“I would no longer think, “This doesn’t seem true, I shouldn’t believe it.” I would think, “Perhaps it’s fake, but perhaps it’s true as well, so I need to confirm it. I mustn’t disregard it.”

theories online, using the Illuminati theories as an example during the discussion on emotional manipulation.

- **“I know how to distinguish between fact and opinion”,** 8% increase, which was not statistically significant. This element of the programme must be improved in future versions, so pupils feel better informed and more confident in their ability to make this important distinction.

Pupils’ feedback in interviews reflected these results:

“Before, I would not have done this. I would only have researched a news story in more depth if I had the impression it was fishy or a bit weird or exaggerated. But now, with this, every time I read something, I automatically click on a link or go and search for it on another site to see if they say the same thing.”

“I would no longer think, “This doesn’t seem true, I shouldn’t believe it.” I would think, “Perhaps it’s fake, but perhaps it’s true as well, so I need to confirm it. I mustn’t disregard it.”

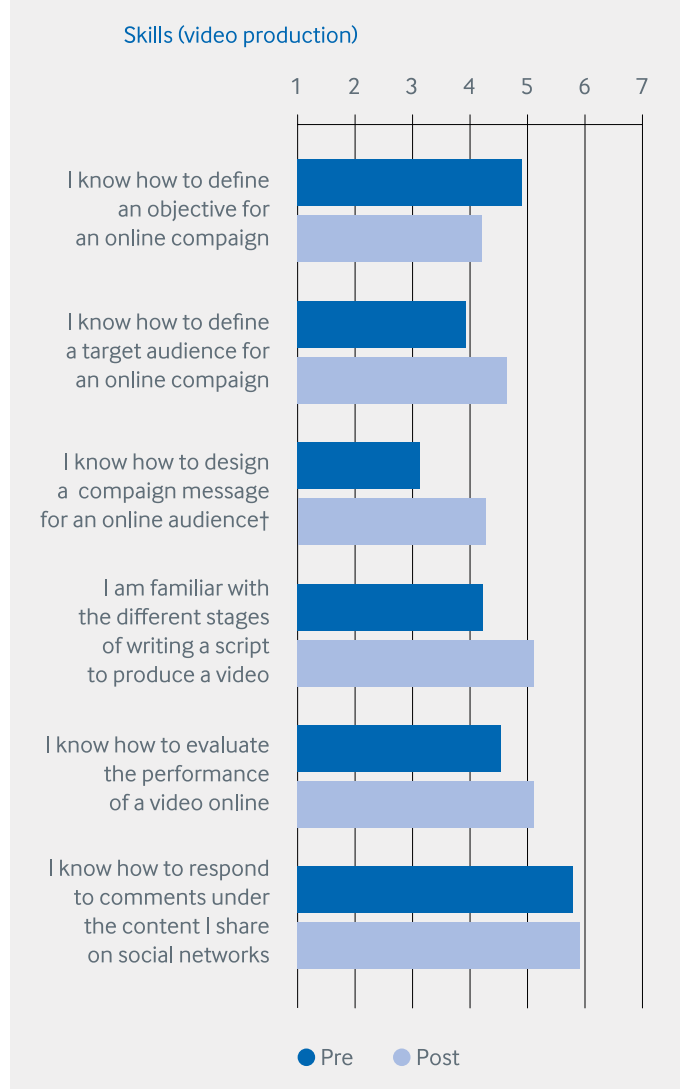
“This programme taught us things and it also changed my view of certain things. I’ve already shared things with my classmates.”

“I learnt several things: for example, how to detail (break down) or how to recognise fake news, how to scrutinise a news story, analyse a message.”

Skills related to video production

Six indicators measured the impact of the programme on participants’ skills in video production (Figure 5).

Figure 5 Indicators measuring the impact of the programme on participants’ skills in video production (n=15, †p<.1)



There was a statistically significant increase in pupils’ understanding of topics related to only one of these six indicators after they had participated in the programme: “I know how to design a campaign message for an online audience” (+ 39%). This indicator was linked to one of the next stages of the programme: promote the videos produced by pupils online. In the end, for image rights reasons, we were unable to promote them and this element of the programme therefore proved

less relevant. It is nevertheless interesting to note that pupils' ability to define a message for an online campaign improved.

There were non-statistically significant increases in pupils' understanding of topics related to the following indicators after they had participated in the programme:

- **"I know how to define a target audience for an online campaign"**, 19% increase. This indicator was linked to the video promotion envisaged at the start of the programme. Once again, although this change was not statistically significant, it is interesting to note that pupils were able to improve their skills in this area.
- **"I am familiar with the different stages of writing a script to produce a video"**, 22% increase. This increase again demonstrates the value of the programme. After three writing and video production sessions, pupils felt far more at ease regarding video production, a completely new skill for most participants.

- **"I know how to evaluate the performance of a video online"**, 14% increase. This indicator was also linked to the planned promotion. The increase is fairly significant given the age of the pupils, some of whom thought this part of the programme could be better integrated. If video promotion is still considered in future versions, it must be modified to better equip participants.
- **"I know how to respond to comments under the content I share on social networks"**, 2% increase. As for the previous indicator, this element of the programme must be modified and better integrated to increase its impact. Incidentally, in the interviews pupils often raised their interest in learning about safety measures and what behaviour they should adopt online in the event of harassment.

In general, training in skills related to video production only had a moderate impact on pupils. The concepts covered are indeed fairly complex for pupils of this age. It will probably be necessary to adapt the programme slightly, or spend more time on these skills so pupils feel better equipped and more capable, which could also boost their self-confidence.

In future versions of this programme, a clearer connection between sessions must be made so pupils understand how the concepts discussed in each one are linked. As one student noted, *"We began to write a script for our film and our ideas and everything, but in the end we didn't do the same thing (during filming)."* Better co-ordination between partners seems key.

Despite this, pupils seemed very satisfied to have participated in this part of the programme, and particularly appreciated the fun and participatory format:

"I loved learning about film production and taking part in the editing as well. We were taught to make plans (storyboards) and we were also given advice on how to perform better, to become better actors. I think I will use this knowledge again. It could help me in my drama lessons, for example."

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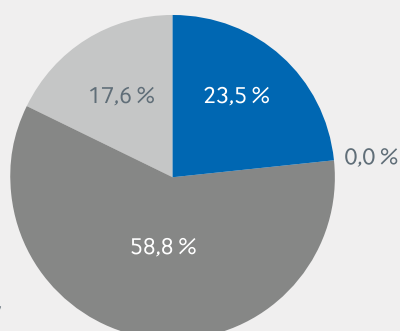


Overall skills

Almost 77% of pupils said they had acquired new skills after participating in the programme (Figure 6). It is encouraging that no pupils claimed to have acquired no skills.

Figure 6 The extent to which pupils acquired new skills from participating in the programme (n=18)

Do you believe you have acquired new skills?



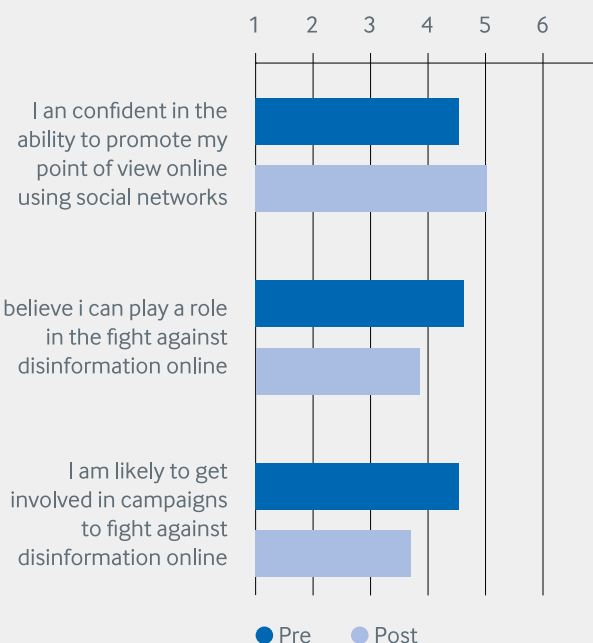
- I don't know
- No, not at all
- No
- Yes
- Yes, lots

Asked about their knowledge and skill acquisition, one pupil remarked: "Yes, I feel I have already acquired new skills. This is my first time making a film, so the first-time filming, directing, producing it, etc. It was our first time doing something like this. Afterwards, I had developed my knowledge. Because in secondary school, we had already been taught about rumours, etc. So, I already knew about that, but I feel I've developed my knowledge."

5.4 Confidence

Three indicators measured whether pupils had gained confidence after taking part in this pilot programme (Figure 7).

Figure 7 Indicators measuring whether pupils gained confidence after participating in the programme (n=15)



Self-confidence is a very broad concept, which can be difficult to influence through a six-week programme. It is therefore not surprising that the results in this category are less clear.

After having taken part in the programme there was a slight increase of 9% in the number of pupils who were confident in their ability to promote their point of view on online social networks ("I am confident in my ability to promote my point of view online using social networks"). This increase did not reach the statistically significant level.

We noted a decline in confidence among pupils with regard to the other two indicators:

- “*I believe I can play a role in the fight against disinformation online*” : 20% decrease.
- “*I am likely to get involved in campaigns to fight against disinformation online*” : 20% decrease.

This likely represents an effect known as response shift bias⁽⁵⁾, and is in line with the results of other research of ISD, which have found that programmes such as this one can have a negative impact on the confidence of certain pupils (see impact report of the Young Digital Leaders programme). This could be because – as noted above – pupils may overestimate their confidence in the pre-surveys, and then the programme effectively demonstrates the complexity of issues which they had previously underestimated.

This programme aimed to educate pupils in online risks, but after completing it pupils feel less confident when they find information on the internet. This is not necessarily a negative result, as the decrease in confidence is coupled with an increase in understanding of the risks online. A healthy level of scepticism among participants can be viewed as a positive outcome, although this should be viewed alongside qualitative feedback and other behavioural indicators to ensure that participants are not likely to withdraw from using the internet as a useful source of information.

However, the changes in pupils’ responses to these two indicators after taking the programme only demonstrate a negative trend as they did not reach the statistically significant level. More research will be necessary to better identify the true impact of this programme on pupils’ confidence.

Finally, it is important to note that above all these indicators were included in the surveys to gauge the pupils’ level of understanding, self-assessment and potential need in relation to these concepts, which had only been covered indirectly in this version of the programme.

On the other hand, the pupils’ qualitative feedback was fairly positive:



I feel I have more self-confidence online. I learnt things that help me. For example, if ever someone bothers me online, I can talk about it. I know how to react, whereas before, I didn’t really know what to do. I also feel more confident in expressing myself, thanks to the activities we did with the films. ”

“I feel I have more self-confidence online. I learnt things that help me. For example, if ever someone bothers me online, I can talk about it. I know how to react, whereas before, I didn’t really know what to do. I also feel more confident in expressing myself, thanks to the activities we did with the films.”

“After these workshops, I feel much more confident online. For example, I remember there was a fake video in which someone died by slipping on a spicy sausage and I shared it. Now, when I see a news story, even if it’s believable and seems legitimate, I will automatically do my own research first. It makes sense.”

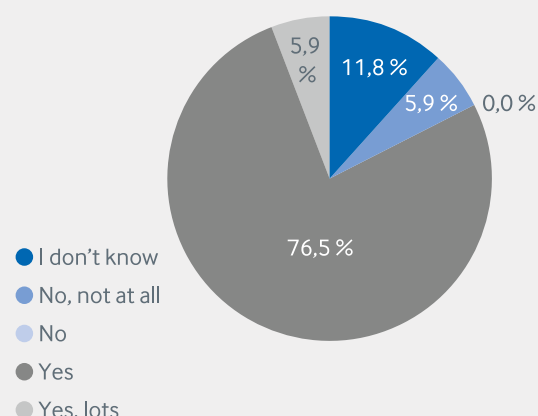
Even if pupils did not leave feeling they could act in the fight against disinformation online at this stage, the vast majority (82%) claimed to feel more confident in their consumption of information online than previously

(5) For more on response shift bias, see J. Klatt and E. Taylor-Powell (2005) *Synthesis of Literature Relative to the Retrospective Pretest Design*, Joint CES/AEA Conference, Toronto, 19 October, <http://comm.eval.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=31536e2f-4d71-4904-ae5d-056e3280c767>

(Figure 8), which is an important achievement of the programme.

Figure 8 The extent to which pupils felt more confident when consuming online information after participating in the programme (n=18)

After this programme, do you feel more confident when consuming information online?

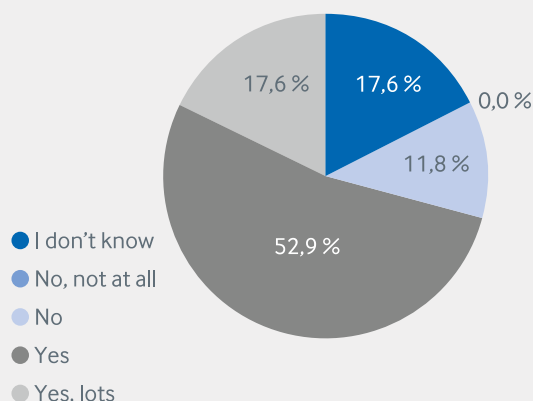


One pupil remarked: *"I think I will pay more attention and it will be easier for me to identify slightly dubious news stories."*

The majority (71%) reported feeling more confident in expressing themselves in front of an audience – a key element of self-confidence – after participating in the programme (Figure 9). However, responses suggest that girls are less confident than boys in public speaking (see appendix). This could be an area for improvement in future versions of the programme.

Figure 9 The extent to which pupils felt more confident expressing themselves in public after participating in the programme (n=18)

After this programme, do you feel more confident expressing your ideas in front of the audience?

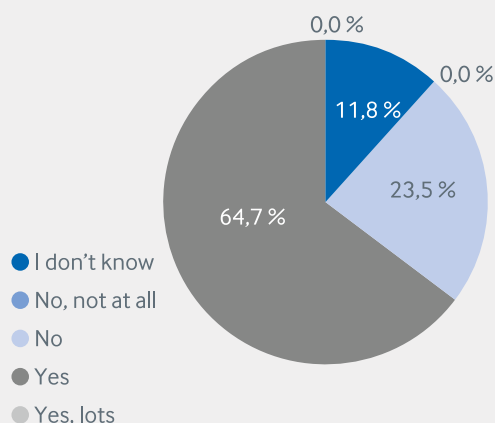


After taking part in the programme, 65% of pupils reported feeling more confident than before in expressing themselves creatively (Figure 10), a measure which is linked to self-confidence in general.

However, no one reported feeling "a lot more" confident, which finding could be linked to the lack of confidence mentioned above.

Figure 10 The extent to which pupils felt more confident expressing themselves creatively after participating in the programme (n=17)

After this programme, do you feel more confident expressing your ideas creatively?



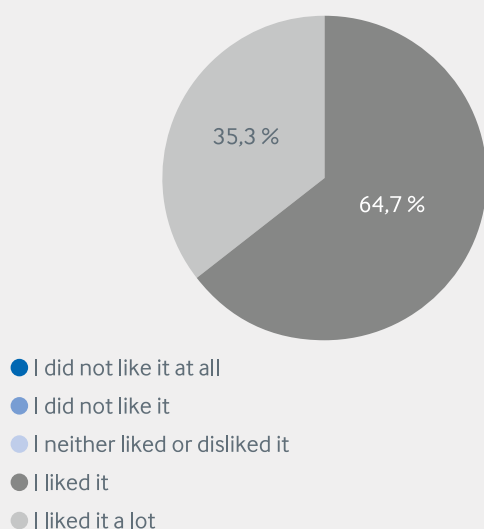
5.5 Satisfaction, structure and format

Finally, the follow-up survey asked pupils a few questions on their satisfaction with the programme, its structure and format, and how they planned to adapt their behaviour after completing it.

It is encouraging to note that all the participating pupils liked the programme (Figure 11).

Figure 11 The extent to which pupils liked participating in the programme (n=18)

Did you like the Sens critique programme?



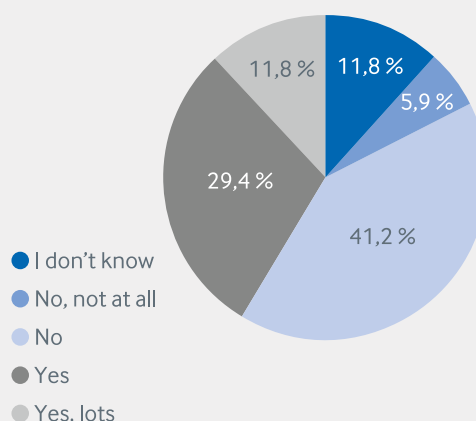
The girls were more satisfied than the boys, with more responding “*I really liked it*” than their male classmates (see appendix).

One pupil remarked: “*The part about the fight against hate and disinformation was very interesting, and I particularly liked the format. It would be good to do more workshops like this.*”

Figure 12 shows a less positive result: only 41% of pupils consider behaving differently online following the programme, while 47% do not plan to change their behaviour. This could be linked to the fact that pupils were not confident about expressing themselves online, discussed above. When the programme emphasises online risks, it may be worth going into more detail regarding the measures that pupils can take, in order to increase their self-confidence, and encourage a positive change in their online behaviour.

Figure 12 The extent to which pupils thought they would behave differently online after participating in the programme (n=18)

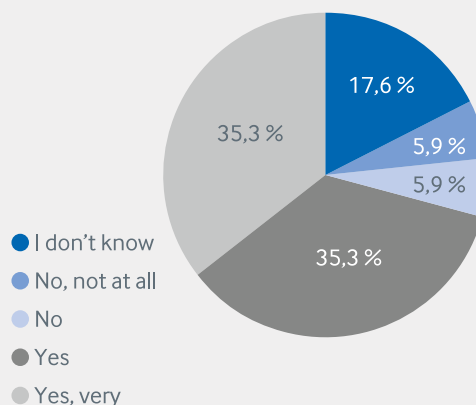
After this programme, do you believe you will behave differently online?



The vast majority, 71%, believe that the teachings of the programme are useful in daily life (Figure 13). On the other hand, 18% were unsure, which suggests the programme should include more information on the practical, everyday use of the subjects covered, so all pupils understand their utility and application to their daily life.

Figure 13 The extent to which pupils thought the teachings of the programme would be useful to their lives (n=18)

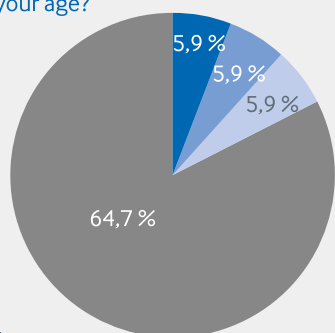
Do you believe the teachings of this programme are useful to your life?



Finally, almost all the pupils (82%) believed that the programme was appropriate for their age (Figure 14).

Figure 14 The extent to which participants thought the programme was appropriate for their age (n=18)

Do you believe this programme was appropriate for your age?



● I don't know

● No, I think it would be more appropriate for an older audience

● No, I think it would be more appropriate for a younger audience

● Yes, it was appropriate for my age

The responses to the questions show that, overall, pupils were satisfied with the programme: they felt they had acquired new skills and found it interesting and relevant. At the same time, they told us they thought that a few points of the programme could be improved, in particular to address areas where the programme had limited effect in changing participants' behaviour.



We are completely overwhelmed by all this, we were never prepared for it. Children are better prepared but at the same time they are children, so they are exposed to it without having the necessary perspective. I really feel it's very important. ”

(Parent of pupil)

5.6 Parent feedback

We interviewed five parents of participating pupils. Two key topics emerged from these interviews:

- The first was the clear need to include parents in this type of education. This programme had no session dedicated to or giving resources for parents, which could have helped them to support their children better, and reinforce the lessons of the programme.

One parent remarked: *"It would also be good for adults. We are completely overwhelmed by all this, we were never prepared for it. Children are better prepared but at the same time they are children, so they are exposed to it without having the necessary perspective. I really feel it's very important."*

- The second was a lack of resources for this type of education, both for parents and for schools. Many parents interviewed did not feel confident engaging their children around these topics, and were concerned schools were not necessarily filling this role. Most parents were therefore in favour of including this type of education as a mandatory component of the school curriculum.

In general, the parents were very satisfied with their children's participation, and felt that the topics covered were very important for their lives. *"Seeing the children struggling with it [this topic] and what they can interpret as news with their child-like perspective. It will really help me with him, and even myself"*, said one parent.

6. Conclusion and recommendations

This programme evaluation has provided valuable insights not only for the improvement of this programme in particular, but also for a wide range of digital literacy education programmes. This programme proved to be particularly successful at helping students improve their confidence in identifying fake news and reliable sources of information online, key components of digital literacy. However, future iterations of the programme should ensure students are given the confidence to engage critically with information online – making them aware of the dangers of fake news, emotional manipulation and hate speech without compromising their propensity to engage online.

Other programmes aiming to educate students on these issues can also learn from the findings of this evaluation. Giving the students the opportunity to engage critically with real-world examples reinforces the lessons, which in turn increases students' confidence in identifying fake news and disinformation. The need for parent involvement is also important, as it could provide parents with the opportunity not only to learn from the intervention themselves, but also to reinforce the programme lessons at home.

The key learnings and takeaways for this programme and for digital literacy education at large are outlined below.

Prepare teachers with the right tools and strategies to confront conspiracy theories.

Teachers must have the right tools and strategies to show programme participants how to recognise conspiracy theories. This is not a question of providing a common framework to participants before the practical exercise focused on identifying fake news, which could be counterproductive.

For example, some pupils showed a tendency to doubt everything, identifying genuine news as fake news. This type of behaviour is symptomatic of a lack of teaching support and in certain cases could even increase pupils' credulity when faced with conspiracy theories. This programme benefitted from being associated with organisations like *Lumière sur l'Info*, which was able to bring in journalists to discuss journalistic rigour with the children and suggest further tactics on how to verify the reliability of certain sources.

However, the significance of the risk that pupils will doubt everything they read online should not be underestimated. Future iterations of this programme, and other digital education programmes like it, should focus on not only teaching students to be critical of stories they encounter online, but also building their confidence in reliable sources. Then they will be able to confront conspiracy theories another other fake news with confidence.

Strike the right balance between educational content and engaging, fun exercises.

The first experimental session was interesting, but it did not provide pupils with definitions or advice to allow them to identify fake news, or to fully understand the meaning and distinction between the key concepts of this teaching (fact and opinion, neutral or biased information, etc.). It is essential to explain these concepts and the methodology to distinguish between the different situations fully.

Speakers should therefore avoid assuming that all the children have this understanding by default, or that they all have the same understanding of these concepts. It is vital to ensure that, from the first workshop, they have specific definitions, and all have access to the same explanation regarding the challenges linked to these concepts and the different stages or different evidence to consider, and to give all participants the opportunity to express themselves confidently.

Provide written materials and resources.

Several pupils emphasised the quality of the presentations, but regretted not having access to educational documents summarising the teaching in writing. Although the speakers' intention was to adopt a different style from the classic school style, particularly by focusing on fun and interactive formats, it is also important to distribute materials to provide participants with specific definitions and advice to follow when consuming media, using social networks or creating videos. It is also essential to ensure the longevity of the teaching by providing educational resources that participants can take away and refer to after the workshops.

Ensure materials and resources are age-appropriate for the target audience.

It was also noted that the teaching and methods adopted to identify fake news were not particularly well adapted to an audience of this age, but better suited to a more informed audience, accustomed to consuming online news through Google searches or a Facebook newsfeed. Similarly, although the examples of videos chosen during the ISD workshop seem to have been particularly well received by participants, who often recalled them in their evaluations, the definition of objectives and the design of the teaching resources could be improved and better adapted to this specific audience.

Include research on media consumption and socio-cultural references for target audiences.

In the marketing sphere, a great amount of research has been done to understand how young people in this demographic consume online media and use social networks. Future iterations of this programme should incorporate this research into the development of the curriculum, in order to better target the workshops and their objectives. Teaching content should also be adapted to align with the popular socio-cultural references common to this group, making it more recognisable and attractive to this audience.

Establish cross-cutting objectives and ensure all partners use the same language and concepts.

The participation of different speakers with varied and complementary profiles and credibility was a real asset of this programme, enriching its content and the quality of the interactions with pupils by exposing them to several points of view and teaching styles. However, the different sections should be better connected by assembling them well in advance and thinking of them as a real common core teaching framework, where participants acquire complementary skills.

Several pupils highlighted the lack of co-ordination between the different partners. For example, the messages and communication strategy defined by pupils in the ISD workshop were not reiterated during

the preparation of the storyboard with the FJPI.

This missed opportunity highlights the need to design a common educational programme better, with a general, specified, cross-cutting objective (the development of critical thinking among Year 8 pupils to counteract the effects of the disinformation or social division strategies on them, and make them more resilient and prepared when faced with toxic or extremist discourse online and offline). There will be secondary objectives linked to the acquisition of specific skills for each workshop taught by different speakers.

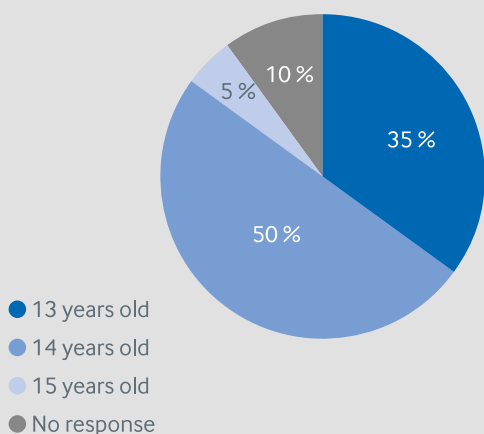
7. Appendix

7.1 Sample description

This pilot programme had 22 participants, of whom 18 completed the pre-survey and 17 completed the post-survey. After matching the surveys, we were able to analyse the responses of 15 pupils.

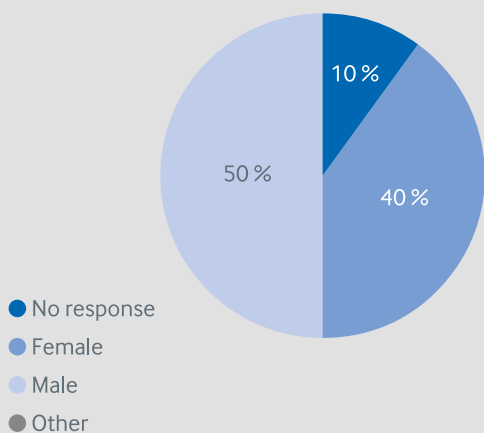
Half of the pupils were 14 years old and a large number were 13 years old. There was only one 15-year-old pupil. Two pupils did not give their age (Figure 15).

Figure 15 The age of participants in the programme (n=20)



In this sample, 50% were boys and 40% girls (Figure 16). The sample was therefore fairly well balanced even though, again, two pupils did not give their gender.

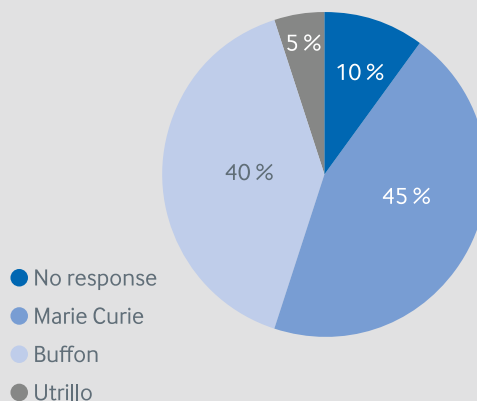
Figure 16 The gender of participants in the programme (n=20)



This programme had participants from three public schools in the Paris region (Figure 17):

- Marie Curie secondary school (45%) in Paris' 18th arrondissement, classified as a priority education network (réseau d'éducation prioritaire; REP)
- Buffon school (40%) in Paris' 15th arrondissement – comprising a secondary school, sixth-form and preparatory scientific classes and occupying 554th place in the national ranking of French high schools, with a 97% success rate in the baccalaureate in 2017
- Maurice Utrillo school (5%) – comprising a secondary school and sixth-form with general and professional streams, classified as a top priority education network (REP+) and occupying 2,734th place in the national ranking of French high schools, with an 82% success rate in the baccalaureate in 2017
- school not specified (10%)..

Figure 17 The secondary schools where participants in the programme studied (n=20)



This mix of pupils from different secondary schools allowed us to evaluate the potential impact of this programme on pupils with varied socio-economic profiles.

The analysis will allow us to verify if there is a significant difference between participants from different socio-economic backgrounds so we can make recommendations for potential future versions of this programme.

7.2 Statistical analysis

Data collected in pre- and post-surveys were 19 Likert-scale questions assessing the confidence of participants regarding different themes and skills the programme addressed.

Students were asked to agree or disagree with statements, with 1 being strongly disagree and 7 being strongly agree. These questions are listed below.

- | | |
|---|--|
| Q1. I would be capable of identifying hate speech online | Q14. I am confident in my ability to promote my point of view online using social networks |
| Q2. I would be capable of identifying fake news online | Q15. I know how to evaluate the performance of a video online |
| Q3. I would be capable of identifying disinformation online | Q16. I know how to respond to comments under the content I share on social networks |
| Q4. I would be capable of identifying conspiracy theories online | Q17. I believe I can play a role in the fight against disinformation online |
| Q5. I would be capable of knowing whether something I see online is reliable | Q18. I am likely to get involved in campaigns to fight against disinformation online |
| Q6. I know how to distinguish between fact and opinion | Q19. I think disinformation can contribute to online hate |
| Q7. I know how to find reliable sources online | |
| Q8. I am aware of the different reasons why some stories might be told | |
| Q9. I know how to define an objective for an online campaign | |
| Q10. I know how to define a target audience for an online campaign | |
| Q11. I know how to design a campaign message for an online audience | |
| Q12. I understand how stories can be designed for different audiences | |
| Q13. I am familiar with the different stages of writing a script to produce a video | |
-

The means and medians of pre- and post-survey responses to the 19 questions and differences between them are presented in Table 2.

Table 2 The means and medians of pre- and post-survey responses to the 19 questions and differences between them.

	Pre-survey		Post-survey		Difference	
	Mean	Median	Mean	Median	Mean	Median
Q1	5.333333	6	5.6	6	0.266667	0
Q2	4.857143	5	5.357143	5.5	0.5	0.5
Q3	4.133333	4	5.133333	5	1	1
Q4	4.307692	4	4.846154	5	0.538462	1
Q5	4.066667	4	5.666667	6	1.6	2
Q6	5.357143	6	5.785714	6	0.428571	0
Q7	4.571429	5	5.5	6	0.928571	1
Q8	5.6	6	5.6	6	0	0
Q9	4.857143	5	4.285714	4	-0.57143	-1
Q10	3.933333	5	4.666667	4	0.733333	-1
Q11	3.142857	3	4.357143	4	1.214286	1
Q12	4	4	5.071429	5	1.071429	1
Q13	4.266667	4	5.2	5	0.933333	1
Q14	4.6	4.5	5	5	0.4	0.5
Q15	4.571429	5	5.214286	5.5	0.642857	0.5
Q16	5.785714	6	5.928571	6.5	0.142857	0.5
Q17	4.642857	5	3.785714	4	-0.85714	-1
Q18	4.571429	5	3.642857	4	-0.92857	-1
Q19	4.928571	5	5.571429	6	0.642857	1

As Likert-scale data is non-parametric in nature, the Wilcoxon signed rank test was used to assess the statistical significance in differences between the pre- and post-surveys. The effect size (R^2) was calculated according to the following formula:

$$R^2 = \frac{Z}{\sqrt{N}}$$

Results of this exercise are presented in Table 3.

Table 3 Results of statistical analysis of responses to the 19 questions using the Wilcoxon signed rank test

	N	Z	P	R2
Q1	15	-0.54	0.589	-0.13943
Q2	14	-1.384	0.166	-0.36989
Q3	15	-2.204	0.027*	-0.56907
Q4	13	-1.141	0.254	-0.31646
Q5	15	-2.363	0.018*	-0.61012
Q6	14	-1.155	0.248	-0.30869
Q7	14	-2.356	0.018*	-0.62967
Q8	15	-0.035	0.972	-0.00904
Q9	14	-0.87	0.384	-0.23252
Q10	15	-1.209	0.227	-0.31216
Q11	14	-1.8	0.072†	-0.48107
Q12	14	-1.685	0.092†	-0.45034
Q13	15	-1.463	0.143	-0.37774
Q14	15	-1.149	0.25	-0.29667
Q15	14	-0.976	0.329	-0.26085
Q16	14	-0.52	0.603	-0.13898
Q17	14	-1.393	0.164	-0.37229
Q18	14	-1.615	0.106	-0.43163
Q19	14	-1.778	0.075†	-0.47519

*significant at $p < .01$ †significant at $p < .1$

Responses to statements were also analysed for statistical differences between schools and genders. For this analysis, results from participants at Marie Curie and Utrillo schools were grouped together, since the schools are fairly similar from a socio-economic perspective and there was only one student from Utrillo in the sample.

There were no statistical differences in results by gender or between schools, and no changes in results between pre- and post-surveys. These results are therefore not reproduced here.

However, in the baseline measures (pre-survey) the responses to only one question were statistically different between schools. Full results of this analysis are presented in Table 4.

Table 4 Comparison of baseline scores for the 19 questions by school group

Pre-survey	Mean: Buffon	Mean: Marie Curie and Utrillo	Pearson's chi-square	P-value
Q1	5.26	5	4.70	0.453
Q2	5.38	4.11	4.36	0.360
Q3	4.25	4	3.02	0.807
Q4	4.25	4	7.50	0.277
Q5	4.88	3.3	8.21	0.223
Q6	5.63	5.13	5.33	0.255
Q7	5.75	3.56	13.79	0.017*
Q8	5.5	5.9	4.70	0.195
Q9	5.38	4.5	4.37	0.498
Q10	3.38	3.8	7.07	0.315
Q11	2.25	3.56	4.96	0.421
Q12	3.75	3.8	1.13	0.980
Q13	3.63	4	6.53	0.367
Q14	4.875	4.7	1.53	0.910
Q15	4.25	4.6	2.48	0.780
Q16	5.875	5.9	5.31	0.150
Q17	4	5.3	6.20	0.288
Q18	4.875	4.7	3.15	0.677
Q19	5.25	4.8	3.69	0.595

7.3 Process questions

Responses to process questions were analysed by gender and school using Pearson's chi-square test. there were no statistical differences in results between schools. Questions where there was a statistically significant difference in responses given by male and female participants are marked with an asterisk ($p < .05$) (Table 5).

Table 5 Responses to process questions comparison by gender

Did you like the Sens Critique programme?*			After this programme, do you believe you will behave differently online?		
	M	F		M	F
I really disliked it	0	0	I don't know	1	1
I disliked it	0	0	No, not at all	1	0
I neither liked nor disliked it	0	0	No	4	2
I liked it	8	2	Yes	2	2
I really liked it	1	4	Yes, really differently	1	1
After this programme, do you feel that you understood the topics covered?*			After this programme, do you feel more confident when consuming information online?		
	M	F		M	F
I don't know	0	0	I don't know	1	1
I didn't understand anything	0	0	No, not at all	1	0
I understood a bit	5	0	No	0	0
I understood a fair bit	4	6	Yes	7	4
I understood everything	0	0	Yes, a lot more	0	1
Do you believe you have acquired new skills?			After this programme, do you feel more confident expressing your ideas in front of an audience?*		
	M	F		M	F
I don't know	3	0	I don't know	0	2
No, not at all	0	0	No, not at all	0	0
No	0	0	No	0	2
Yes	6	4	Yes	7	2
Yes, a lot	0	2	Yes, a lot more	2	0
Do you believe you have acquired new knowledge?			After this programme, do you feel more confident expressing your ideas creatively?		
	M	F		M	F
I don't know	2	0	I don't know	1	1
No, not at all	0	0	No, not at all	0	0
No	0	1	No	2	1
Yes	4	2	Yes	6	4
Yes, a lot	3	3	Yes, a lot more	0	0

**Do you believe the teachings
of the programme are useful
to your life?**

	M	F
I don't know	2	0
No, not at all	1	0
No	0	1
Yes	3	3
Yes, very useful	3	2

**Do you believe the programme
was appropriate for your age?**

	M	F
I don't know	1	0
No, I believe it would be more appropriate for an older audience	1	0
No, I believe it would be more appropriate for a younger audience	0	1
Yes, it was appropriate for my age	7	5
Oui, beaucoup	3	3

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