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Young Digital Leaders 2019: From Safety to Citizenship Online

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1 Executive Summary

The Young Digital Leaders Programme

Young Digital Leaders (YDL) is an educational programme aiming to empower young people across Europe through digital citizenship, critical thinking and media literacy. The programme, developed by the Institute for Strategic Dialogue (ISD) and supported by Google.org, was created to equip young people with the knowledge and skills they need to be safe, effective and empowered online citizens in the 21st century. It also sought to upskill teachers and parents so they could more proactively support this process, with a better understanding of the challenges faced online. The second phase built on a 2018 YDL pilot, expanding its reach with a collaborative partnership model between these stakeholder groups and local civil society organisations in Bulgaria, Greece and Romania.

This report describes the programme's logic, content and the findings of our evaluation. It demonstrates its impact on participants, describes ideas to improve future programme delivery, and makes recommendations for policymakers who can positively influence the provision of digital citizenship education (DCE) throughout Europe.

The key aims of the second phase of the YDL programme were:

- to provide students aged 11–16 with inspiring and informative DCE
- to empower teachers to deliver digital citizenship education independently DCE in their schools
- to equip parents and carers with the requisite knowledge to support their children as digital users, leading to safer and more positive experiences online.

In order to achieve this, ISD worked in partnership with three local organisations:

- **Youth and Civil Initiatives in the Rose Valley (YCIRV)**, a non-profit organisation based in Karlovo, Bulgaria, working on youth empowerment
- **Action Synergy**, a non-governmental organisation (NGO) based in Athens developing, implementing and promoting innovative approaches to education in Greece
- **Group of the European Youth for Change (GEYC)**, a Romanian youth organisation based in Bucharest that empowers young people to create positive change in their communities.

ISD trained staff from all three organisations in the YDL curriculum, enabling them to deliver school workshops, teacher training and educational sessions for parents and carers in their respective countries. Through this delivery model, from March to November 2019 the programme reached an estimated:

- 10,000+ students (directly and indirectly)
- 516 teachers
- 232 parents.

The workshops, training and educational sessions were all subject to robust evaluation, including pre, post- and longitudinal surveys from:

- school workshop students
- trained teachers
- train-the-trainer (TTT) students – (those taught the YDL curriculum by the aforementioned trained teachers)
- parents and carers.

Local partners in each country conducted participant focus groups and individual interviews. An in-depth breakdown of our evaluation process can be found in the section 'Methodology' in Chapter 4.

Key Findings

We measured impact by:

- **assessing overall knowledge-confidence**, exploring the extent to which participants' confidence in their understanding of key digital citizenship concepts increased through the programme, via the percentage increase or decrease of the overall mean (average score) on a five-point Likert scale across the entire cohort, except for parents and carers where a seven-point Likert scale was used
- **assessing overall attitudinal change** around positive digital citizenship and general online conduct after participating in the programme using the same Likert scale as described above
- **assessing self-reported behavioural change**, reviewing the extent to which students believed their online behaviour had changed after participating in the programme using the same Likert scale as described above
- **testing knowledge gains** of participants through multiple choice or open-text questions.

The surveys also included process questions which asked participants to reflect on the workshop, training or session they attended and provide thoughts on the programme in general, including how important they see this type of education and whether they would recommend the programme to others.

The evaluation returned positive results across almost every group breakdown. Participants responded enthusiastically to receiving DCE, felt inspired to contribute positively to their online communities, and demonstrated knowledge gains in key areas. Areas of key learning also emerged, highlighting how YDL and DCE programming in general can be improved in future. Some of these findings are broken down by participant group below, drawn from the aggregated results from each country.

School Workshop Student Results

1 **Results were overwhelmingly positive, with statistically significant positive increases observed across all 18 measures** in post- and longitudinal survey, including:

- **a 79% increase** in students' confidence in their **understanding of echo chambers**
- **a 78% increase** in students' confidence in their **understanding of filter bubbles**
- **a 56% increase** in students' knowledge of **how to give and receive consent online**.

2 **Students left the workshops feeling they had learned about how to be good digital citizens, and stated that their behaviour would change** as a result:

- **94%** of students felt the workshop taught **new knowledge and skills**.
- **77%** felt they **would behave** differently online having learned how to be more positive online through the workshop sessions.

Nobody had explained to us why it's so important to be responsible in the online environment... I understood that we have to stop believing everything we see online and that we need to be more informed, even though we are young.

YDL Student, Romania

3 **The impact of the programme was smaller in attitudinal and behavioural change measures than in knowledge gains**, suggesting that embedding this content into the school curriculum and delivering the programme over a longer period of time than allowed in this study would lead to improved learning. Significant knowledge gains were observed across all measures, though these were generally smaller than the gains made by the TTT students. There was:

- **an 18% increase** in students' feeling they would **watch their language to avoid being hurtful** when disagreeing with others online
- **a 12% increase** in the willingness of students **to listen and understand the opinions of others** online.

Teacher Training Results

1 **Teachers demonstrated a clear appetite to deliver DCE**, recognising its value within the school curriculum:

- **99% would like schools to receive more training** on how to teach digital citizenship.
- **98% thought the YDL programme is helpful for teachers** who want to teach digital citizenship.

The programme covers issues that aren't covered by the school curriculum but are very relevant to our students... I will try to implement the curriculum every year because I think digital citizenship is very important and must be taught as part of the citizenship education curriculum.

YDL Teacher, Greece

2 **Teachers made substantial gains in their knowledge of, and confidence to teach, key digital citizenship concepts**. Highlights included:

- **85%** of participants understanding what an echo chamber is after the training (up from 65% beforehand)
- **a 49% increase** in participants' confidence in understanding what filter bubbles are and how they operate online
- a **27% increase** in participants' confidence around what practical steps they can take to help students use the internet more positively.

3 **Teachers responded positively to the programme and its objectives, with 86% of all teachers saying it was likely they would deliver the curriculum to their students.** Some teachers expressed concerns about where digital citizenship could fit into the school curriculum. In Bulgaria, for example, only **63%** of teachers said they would go on to deliver the YDL curriculum to their students. One teacher spoke of how,

> *The school day is very intense and there is very little time we can allocate for additional lessons. I think it is very important to teach [digital citizenship] but maybe it is better for the sessions to be done outside of the core curriculum time.*
>
> YDL teacher, Bulgaria

TTT Students' Results

1 **Positive, statistically significant increases were observed across all measures except one.** There was:

- a **68% increase** in students' knowledge of how to flag hate speech, and a comparable gain in their knowledge of how to give and receive consent online
- a **40% increase** in students' knowledge of filter bubbles
- **no change** in participants' understanding of how to identify 'fake news' online, explained in part by an issue with the open-text question assessing this knowledge. The question asked respondents to list three ways to identify 'fake news'; answers were often incomplete or overly vague, leaving too much open to interpretation to demonstrate clear understanding, so it is difficult to determine learning gains (or lack thereof) on this particular measure.

2 **Students reported enjoying and gaining considerable new information from the YDL sessions.** They also saw the relevance of the material to their lives, and after participating in the programme:

- **90%** of students felt they learned new knowledge and skills
- **83%** felt they understood the subject matter
- **65%** thought they would behave differently.

Students enjoyed taking part in the lesson activities and observed how they fostered a collaborative approach to learning, as a YDL teacher-trained student in Fetesti, Romania, described:

My classmates and I learned a lot… [the sessions] were an opportunity for us to find out more things about the online environment… It was really fun working in teams and working with my friends to find solutions to problems we see online.

YDL student (teacher-trained), Romania

3 **In Greece and Romania, results were comparable to those of the school workshop students, while in Bulgaria results for the TTT students were far more disappointing.** From this we drew the following conclusions:

- It is important to deliver facilitator-led workshops in different schools from those where TTT students are taught the curriculum. The Bulgarian partner – YCIRV – noted that many of their TTT students felt resentful at being unable to participate in the workshops, which were perceived as more 'exciting' in an average school day. Such attitudes towards the programme may therefore have skewed survey results, or disrupted participants' engagement with content and activities.
- These results may also point to the need for increased and potentially improved teacher training, to ensure content is delivered in the most engaging way possible within lessons. Although the vast majority of the 147 Bulgarian teachers claimed to enjoy the programme, only 62% said they would go on to deliver the curriculum themselves. This may indicate that Bulgarian teachers were less confident leading DCE than teachers in other YDL countries, and would need additional support (including peer-to-peer) before entering the classroom.

Parents' and Carers' Results

1 **Parents and carers left the sessions feeling more confident** and better able to support their children to have positive experiences online:

- **95%** of parents and carers thought the content of the sessions was relevant to them.
- **97%** felt better able to help their children deal with online safety challenges having attended a session.
- **97%** felt they would be more likely to have a conversation with their children about online safety having attended a session.

Participants were particularly eager for support on how to engage their children around digital issues, including ways to broker discussion on online safety.

[I] have a wonderful impression of the Young Digital Leaders programme because young people nowadays are non-stop online; they are curious and naive... parents have to speak at home about the issues that Young Digital Leaders raises.

– YDL Parent, Bulgaria

2 **Participants also recognised the value of DCE and thought it should be extended to more parents and carers:**

- **97%** felt they would recommend a digital citizenship session to other parents/carers.
- **88%** felt they would behave differently online and had learned to be more positive as a result of the session.

Conclusions and Recommendations

The Future of Digital Citizenship Education Programming

Future DCE programming must allow enough time for each key topic or concept to be explored in depth, and there should be sufficient space between sessions for young people to apply their learning. While a 1- or 2-day workshop can appear to be engaging for students, especially when delivered by external speakers, it condenses learning to an extent where thorny issues or questions raised during sessions cannot be addressed in full. There is therefore a risk that the workshop will have a fleeting effect on students without changing attitudes and behaviours long term. Covering topics at a slower pace and with some time between training sessions would encourage students to test new concepts outside the classroom in the intervening period, and reinforce learning outcomes overall.

DCE teacher training models should be refined and formalised so they reach a greater number of students. Our findings suggest that trained teachers achieved better learning outcomes than facilitators, including students' knowledge of key topics after training. Effective programming would prioritise this workstream, creating a critical mass of teachers able to produce engaging and informative learning experiences on their own. This could be achieved at scale by partnering with initial teacher training providers (e.g. universities), which have extensive reach and credibility across the sector.

New ways of embedding DCE within the school curriculum should be trialled, including by developing content for subject-specific teachers. There is undoubtedly benefit in offering dedicated 'DCE' classes, most likely delivered through existing citizenship, information and communications technology (ICT), personal development or wellbeing curricula; however, this should not preclude opportunities presented by other lessons such as English, history, science and philosophy. Relevant activity could be incorporated across the school day and enhance general learning outcomes, rather than viewing DCE as a siloed or specialist topic. This dual approach would encourage students to view digital citizenship in relation to a host of subject areas, and ensure learning is not an isolated yearly occurrence.

More opportunities must be provided for young people to demonstrate and apply their digital citizenship beyond the classroom. While the curriculum has proven effective in building knowledge and prompting small shifts in attitude, true citizenship is demonstrated through actions. To determine the impact of programmes accurately, DCE curricula should culminate in activities such as student journalism, digital campaign creation, competitions and fact-finding missions, helping young people translate their learning into real-world content.

Policy Recommendations

The European Commission should adopt the Council of Europe's definition of digital citizenship and incorporate relevant activity into their Digital Education Action Plan.[1] In doing so, the Commission would join the dots between their framework and European Schoolnet – a network of European education ministries, which fosters collaboration and co-operation among schools – through which they fund several projects. Adopting this definition would create a consensus among numerous education stakeholders in their network and provide a more coherent strategy on how to incorporate DCE into their yearly teaching plans.

National governments across Europe should embed DCE within their school curricula and provide training for practitioners. There is a demonstrable appetite to learn about and teach digital citizenship, but many teachers are concerned that they lack the time and resources to deliver digital citizenship education adequately in an already crowded school day. Governments must therefore devise a strategy for how and where to embed content into their curricula, using all available points of entry; this includes more obvious vehicles such as citizenship and ICT, as well as smart alignment with subjects like history, English and philosophy. School leaders should ensure that adequate continuing professional development (CPD) is allocated for relevant teachers to develop expertise in DCE.

> *It is very difficult to work with teachers, because they have the feeling that they know everything, they are already trained and they are accustomed to provide information, not to receive it. They must be well prepared and also they should try to understand the needs of the children.*
>
> YDL Teacher, Greece

Cross-sectoral collaboration should ensure that DCE keeps up with digital trends and the potential consequences for young people online. Technology companies, policymakers, civil society organisations (CSOs) and educators must co-ordinate to improve this process and create stronger feedback loops: companies should provide insights into emerging trends, harms and phenomena online; governments must review their curricula periodically to update content and provide relevant resources to schools; educators, with the support of CSOs and training providers, must adapt rapidly on the frontline, understanding that key principles will remain but terms and headlines may shift.

There needs to be greater investment in non-formal DCE, including by upskilling parents and carers, and engaging influencers at all levels to be credible voices on the topic. Galvanising young people requires support from those in positions of power, responsibility and influence. Governments and technology companies should fund initiatives to enable parents and carers to 'provide effective support for the development of their children's competences'.[2] Such efforts would be enhanced by greater advocacy from online influencers and other public figures. Technology companies that hold contracts or sponsorship models with these individuals should support this engagement, encouraging them to champion DCE topics, raise awareness and inspire positive change in their young audiences.

European actors should establish and adopt common evaluation frameworks that assess the impact of DCE from both attitudinal and behavioural change perspectives, as well as gains in knowledge

and skills. Future DCE programmers should explore innovative ways to measure how and where young people evidence digital citizenship in their everyday lives. Those creating evaluation frameworks should incorporate both traditional (e.g. multiple choice or essay questions) and alternative (e.g. group projects) methods to assess learning, but they must also look beyond the classroom, for example by examining where students have demonstrated civic participation to improve their online communities.

2 DIGITAL CITIZENSHIP ACROSS EUROPE: *WHERE WE ARE, AND WHERE WE NEED TO BE*

As today's digital natives, young people experience their social, cultural and political lives online first and foremost. Eurostat reports that 91% of young Europeans make daily use of the internet,[3] while 1 in 3 internet users are younger than 18 years old.[4] These groups are already harnessing the internet for everything from commerce and content creation to political activism and protest. While young people often show impressive dexterity in their use of the internet, this is not necessarily matched by an awareness of online harms, in particular the way digital platforms are designed to segment, funnel, reinforce or otherwise shape our worldview. In the UK alone, 82% of digital users have never heard of the term 'filter bubble',[5] while nearly a third of children aged 11–17 have reported seeing hateful speech online – it is unclear whether they are equipped to respond, or aware of tools available to help.[6]

These issues are gaining traction at the pan-European level, although progress has been slow: in 2018 the European Commission published its Digital Education Action Plan, a core component of which aims to 'increase awareness of the risks faced when being online and to support capacity building of educators in online safety'.[7] The regional network of safer internet centres supports youth and teachers to explore online safety and introduce them to relevant resources. That said, the primary focus still lies on protection from online harms, rather than fostering open-minded and engaged citizens.

Young people need technical expertise, but also inspiration to create pluralistic and respectful digital communities. To achieve this, teachers of DCE must go beyond explaining how information and communication technologies work (often referred to as 'digital literacy'), and show young people how positive, proactive behaviour in the real world can be mirrored online. Citizenship education now sits within national curricula in all EU countries and many national authorities are increasing the number of teaching hours, as well as providing guidance to support effective teaching.[8] Unfortunately provision is often sporadic, uneven or ill-defined, and rarely draws the link to citizenship in the digital realm. If we have achieved broad consensus on the need for 'digital skills' (everything from coding and internet searches to common software like Excel), we must now turn our attention to 'digital citizenship', exploring the impact of online platforms on civic life.

There are clear constraints to introducing DCE in this form – curricula are already overcrowded, and governments have struggled to encompass the various 'new' topics emerging in the field (wellbeing, challenge-based learning, emotional intelligence, communication and so on). Those advocating for digital citizenship education should be savvy about how and where to align it within existing frameworks. Trade-offs could be minimised by viewing digital citizenship through the lens of other subjects, for example developing relevant skills via English, history, science or philosophy lessons (to name just a few). As with most changes in policy, the battle to generate buy-in will depend on messaging – how can we demonstrate the importance of DCE, not only to individual wellbeing and social cohesion, but also broader learning outcomes? How do the components of digital citizenship – whether critical thinking, effective communication or upholding rights and responsibilities – enhance students' prospects across the board, and how can we pitch DCE as an opportunity rather than a burden?

3 YOUNG DIGITAL LEADERS IN 2019

Our Theory of Change

In 2019 the second phase of YDL was rolled out in Bulgaria and Greece, and scaled in Romania. The programme sought to build on the successes of the previous year, by engaging with parents and through direct delivery in schools. We identified several key areas for improvement, above all the necessity for a TTT model that would allow teachers to deliver content independently. This was incorporated as a distinct workstream for 2019 and supports our broader ambition for system change; it enabled teachers to extend learning beyond a 1- or 2-day workshop and incorporate DCE into the existing curriculum. Besides proving more cost-effective long term, this approach should help create a critical mass of interest in the teaching community.

Evaluation from Phase 1 revealed a risk if DCE focuses exclusively on online harms or 'digital literacy' (e.g. basic knowledge of how the internet works). Our data indicated that while this can impact overall knowledge-confidence, it does little to inspire attitudinal or behavioural change. If our intention is to foster more proactive and empathetic engagement online, the curriculum must reflect that goal. In other words, the onus cannot be placed on students to translate their new knowledge or skills into behavioural change, at least in the initial stages, without guidance on what this looks like and how it might be achieved. We therefore adopted the Council of Europe definition of digital citizenship to underpin our theory of change for 2019:

> *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.*[9]

From this definition we established three key learning outcomes to underpin the YDL curriculum:

1 **Young people are more critical in their consumption of information.**
2 **Young people are more effective in their online communications.**
3 **Young people champion their and others' rights, responsibilities and opportunities online.**

These outcomes were translated into a range of knowledge, skills, attitudes and behaviours that the programme sought to teach, and would ultimately assess in YDL participants (Table 1). Our aim was not merely to embed technical skills, but also to support participants in becoming more active citizens online. Beyond improving safety, the end result is for young people to take responsibility for themselves and their peers, and play a positive role as digital leaders in the online space.

Table 1 YDL learning objectives 2019

	Outcome 1: Critical Consumers	**Outcome 2: Effective Communicators**	**Outcome 3: Online Advocates**
Knowledge and skills	• Students can identify fake news, echo chambers and filter bubbles. • Students can recognise prejudiced content that discriminates against groups in society.	• Students understand how communication differs depending on whether it takes place online or offline. • Students understand the impact of language used online (e.g. making others more or less inclined to agree with you; increasing or blocking the possibility for constructive dialogue).	• Students understand how to exercise their right to free speech online. • Students understand what harassment is and their right to be protected from abuse online.
Behaviour	• Students fact check information. • Students consume media from diverse, reliable sources to develop well-informed opinions. • Students share credible information (well researched and fact-based) and positive role models with others online.	• Students consider their audience when posting online. • Students communicate in a respectful tone online. • Students consider the feelings of others when posting online.	• Students actively give consent online. • Students respond effectively to negative online content. • Students protect their and others' wellbeing online. • Students use digital tools for online civic engagement.
Attitudes	• Students recognise why it is important to challenge stereotypes.	• Students are willing to listen to other worldviews online and actively seek to understand ideas and opinions different from theirs.	• Students feel a responsibility to promote positive change online.

Delivery Model

Given the wide geographic scope of YDL, the programme has developed a flexible delivery model which adapts activity for the local context. This relies heavily on local partnership, operating via staff in NGOs who can advise and amend content as needed. Our approach in each country is shown below.

Table 2 The activities and outputs for the four phases of the YDL programme

Phase	**Activity**	**Outputs**
1	**Train-the-trainer** – ISD-led workshop for local NGOs, supporting them to deliver the curriculum independently in each country.	15 expert facilitators trained (5 per country)
2	**Direct delivery in schools** – three 1- or 2-day workshops for children aged 12–15, hosted by public schools and led by local NGOs. The choice of schools was based on socio-economic markers and existing networks, in an effort to reach more underserved areas.	1,310 students engaged directly
3	**Teacher training** – four 1- or 2-day workshops in each country, upskilling teachers to deliver content independently of YDL. One teacher selected per workshop to deliver the curriculum to one of their classes.	518 teachers trained, an estimated 8,700 students reached through trained teachers 249 students engaged indirectly by selected teachers
4	**Parent engagement sessions** – three 2-hour sessions delivered in each country, arming adults with key concepts, tools and advice.	237 parents and carers engaged

Monitoring and evaluation for all activity was conducted through a mixture of quantitative and qualitative methods, which are described in the following chapter.

The Young Digital Leaders Curriculum:

The programme curriculum consists of five 1-hour lessons, covering a range of topics such as:

- 'fake news'
- echo chambers
- stereotyping and prejudice
- hate speech and free speech.

This content was customised with national examples and translated into the local language, helping generate buy-in from teachers, students and the broader education system.

The student curriculum, alongside a digital deck and guidance for facilitators, provides all the information needed for educators to deliver the YDL lessons, including:

- an **overview of the activities** and timing for each lesson; the learning objectives and outcome, and a description of any additional required learning materials
- **key concepts and glossary** of main terms to help facilitators prepare for lesson delivery
- detailed **step-by-step guidance** on how to facilitate each lesson.

Five Steps to Digital Leadership

The five core modules of YDL are outlined in Table 3. Throughout the learning journey, key questions were posed to encourage reflection on an issue of personal importance (e.g. being unfairly labelled, sexism or climate change). This culminated in the final lesson, during which students created a digital campaign for their chosen topic.

Table 3 Overview and outcomes of the five core modules of the YDL programme

Session 1: Critical Consumers	Overview: Explores the contemporary challenges associated with consumption of media content and discussions online. This includes understanding the concepts of '**fake news**', **echo chambers** and **filter bubbles**. Outcomes: Students can: • explain what fake news, echo chambers and filter bubbles are • fact check information • understand why and how to consume diverse media source • balance media consumption with digital wellbeing • be proactive role models for their online community by sharing positive and credible content.
Session 2: Resilient Citizens	Overview: Analysing what **stereotypes** are, how they come to exist and their impact on individuals and wider society. Outcomes: Students can: • explain stereotyping and its consequences • explain how prejudiced content can influence and manipulate people online • challenge online stereotyping and prejudice • share positive role models with others online.

Session 3: Effective Communicators	Overview: Outlining how to **communicate facts, opinions and messages** on digital platforms, and how this sort of communication differs from that practised in an offline context. To do this, students draw on inspirational examples of where people have conveyed important messages to online audiences successfully. Outcomes: Students can: • recognise the difference between online and offline communication • understand the importance of language and audience when posting online • contribute respectfully and constructively to online discussion • consider the feelings of others when interacting online • demonstrate a willingness to listen to other worldviews online.
Session 4: Rights Experts	Overview: Understanding various **rights and responsibilities in the digital world**, including how to give and receive consent online, and how to deal effectively with online abuse. Outcomes: Students can: • demonstrate an understanding of their right to consent and how to uphold these rights • articulate their right to be free from abuse online • identify the difference between free and hate speech • demonstrate effective responses to hate speech and abusive content online.
Session 5: Digital Leaders	Overview: Defining how young people can **play a positive role and contribute to civic activity online**. Outcomes: Students can: • exercise their right to free speech online effectively • express their responsibility to promote positive change online • protect their and others' wellbeing online • use digital tools and platforms for civic engagement.

Parents' and Carers' Guide

Alongside the main curriculum, a guide for parents and carers was created to complement their engagement sessions, outlining key outcomes and advice. It provides the same key definitions of online harms and challenges that are used in the curriculum, and suggests practical, session-specific tips to support their children as digital users.

Teachers' Guide

Finally, a teacher guide was created for practitioners to use in conjunction with the curriculum manual. This guide offered a range of practical tips on how best to maximise students' engagement in activities.

4 Evaluation of the Young Digital Leaders Programme in 2019

Methodology

A robust monitoring and evaluation process was designed to measure the programme's success in achieving its three intended outcomes (Table 4). This framework drew on quantitative and qualitative methods across all programme participants:

- **school workshop students**: students aged 11–16 who had the curriculum directly delivered to them by our local partners during a 1- or 2-day school workshop
- **trained teachers**: teachers who attended one of three training sessions that took place in each participating country, delivered by local partners
- **TTT students**: students aged 12–16 who were taught the five-lesson curriculum over several weeks by teachers (trained by our partners as described above)
- **parents or carers**: adults who attended a YDL educational session delivered by local partners in sessions that took place in three locations per country, typically in schools that had hosted a student workshop (see above).

Table 4 The monitoring and evaluation methodology of the YDL programme

Participant group	Timescale of monitoring and evaluation	Type of questions	Sample size and group	Qualitative data*
School workshop students	Pre-, post- and longitudinal (1 month after workshop) surveys for participating students and a control group	Knowledge-confidence Tested knowledge Attitudinal Behavioural change Process	1,078 participants	3 focus groups of 8 students 3 interviews with observing teachers 3 reports from facilitators
Trained teachers	Pre- and post-training surveys	Attitudinal Knowledge-confidence Tested knowledge Process	516 teachers	4 interviews with trained teachers 3 reports from facilitators who led trainings
TTT students	Pre- and post-curriculum surveys	Knowledge-confidence Tested knowledge Attitudinal Behavioural change Process	249 students	4 interviews with students 4 interviews with teachers
Parents	Pre- and post-session surveys	Attitudinal Knowledge-confidence Process	232 parents	3 focus groups with 8 parents 3 reports from facilitators who delivered sessions

* (all focus groups and interviews lasted c. 60 mins and conducted by local partners).

As outlined above, the direct student model included a comparison group to be surveyed alongside participants (pre- and post-survey, and longitudinally). There was statistically significant variation between the intervention and comparison groups in the pre-survey, indicating that the comparison groups would not serve as a reliable benchmark against which to compare results. Therefore, they were discounted in all three countries. Statistical analysis was conducted solely on the intervention group, comparing matched-pair results before, a week after and 1 month following the participants' involvement in the YDL programme. In future programming, we will ensure that the comparison groups are methodically selected from specific age groups and different schools from those involved in delivery, to gain comparable baseline data and provide even more robust evaluations.

Example questions that appeared in all participant group surveys can be found in Annex 1.

Equality Monitoring

Demographic details of students, teachers, parents and carers who participated in the programme were collected through the pre-surveys. This data is critical to ensure that programme delivery addressed and worked effectively for groups, regardless of gender, age or country of origin. It will also be valuable for any future iterations of the programme, allowing us to adapt and refine the content to ensure equality of outcomes.

This data can be found in the technical appendix of this report, downloadable from ISD's website.

Overall Impact Analysis

These results are based on aggregated data from Bulgaria, Greece and Romania. They are broken down by delivery model and grouped thematically by category:

- school workshop students
- TTT students
- trained teachers
- parents and carers.

School workshop student and TTT student results reflect key learning outcomes from the theory of change. Students become:

- critical consumers of information
- effective communicators online
- champions of their and others' rights, responsibilities and opportunities online.

Teachers and parent results are presented by attitudes, knowledge-confidence, tested knowledge (for teachers only) and process.

Thematic Analysis 1: School Workshop Students

Results pre- and post-delivery indicated varying levels of impact across measures. There were positive changes, shifts which were not considered statistically significant, and in some cases decreases. They are explained below.

Critical Consumers of Information

Our first learning outcome focused on assessing online information, including news articles, videos or written posts. It sought to promote critical analysis, as opposed to blind acceptance or rejection of content. Students were taught to consider a range of contextual factors, including the origin and author(s) of content and their potential motivations, before forming an opinion on its credibility. To support this process students were exposed to knowledge areas such as echo chambers and filter bubbles, digital phenomena that have the potential to influence how people receive and process information, for better or worse.

Key Results

***Note* Pre- and Post- figures written with decimal places (e.g. 2.31) show participants' average scores on a 1-5 Likert scale. Where Pre- and Post- figures are written as percentages (e.g. 65%), this indicates the overall percentage of participants who answered a tested-knowledge question correctly. This rule applies for all following infographics.**

- a 79% increase in students' confidence in their understanding of echo chambers (Pre: 2.31, Post: 4.12)
- a 78% increase in students' confidence in their understanding of filter bubbles (Pre: 2.26, Post: 4.02)
- 36% increase in tested knowledge of echo chamber (Pre: 55%, Post: 74%)
- 33% increase in tested knowledge of filter bubble (Pre: 49%, Post: 65%)

Key Strengths

Students finished the workshops feeling, on average, significantly more confident in their understanding of key digital citizenship concepts, particularly with regards to how echo chambers and filter bubbles operate online. This is critical learning, given how little education young people receive (and therefore how little awareness exists) on the ways online experiences are tailored to their existing interests, beliefs and biases. The parallel increase in tested knowledge demonstrates that this confidence is not misplaced, since the majority of students finished the day with a clear definition of such terms:

> *It's important that we know the definitions of filter bubbles and echo chambers because we see these things online without actually knowing what they are called or how they really work… I found out I am in an echo chamber online and this affects how I learn about new ideas and information.*
>
> YDL student, Romania

It was encouraging to see increases sustained when the students were surveyed a month later. As well as demonstrating the long-term impact potential of workshops, such data could provide avenues for peer-to-peer provision of DCE in future. If knowledge gains are maintained over time, YDL participants could raise awareness of these topics across their school community and lead discussions with younger students who have less experience of the online world. Our wider research suggests that peer-led models are often well received, and solidify young people's role as digital leaders.

Students were particularly enthusiastic about media literacy elements of the curriculum. In focus groups, participants recognised the importance of approaching digital media with a critical eye, as well as identifying fake news and fact-checking in their everyday life. Between students completing the pre-survey and longitudinal survey 1 month later, there was a 60% decrease in those reporting that they 'never or rarely' fact check following the workshop, coupled with a 53% increase in those who do so 'occasionally, frequently or always'. This suggests that despite a reticence to engage with the survey questions, as outlined in the following section, students felt that their behaviour had changed for the better and they were enthusiastic to explore the topic further.

> *It's very, very easy to believe everything you hear or see, but we should be more careful with the information we pass on, because we can spread fake news very easily.*
>
> **YDL student, Romania**

> *Fake news will become more and more present in our lives, and if influential people misinform, this will reach a lot of people... I have learned that it is important not to judge something before you are well informed about that topic.*
>
> **YDL student, Bulgaria**

Key Learning

Survey questions must be phrased to maximise engagement from respondents. While there were significant positive increases across all measures, the results highlighted areas for improvement. For example, participants only showed minor gains when outlining ways to identify 'fake news', with a small total number of correct answers (only 32%). An analysis of the survey offers a partial explanation: this particular question required an open-text response, and many respondents did not answer the question, while others only gave one- or two-word answers that were open to interpretation and therefore could not be marked correctly. In interviews, several teachers noted that some students rushed to complete the surveys, and complained about the high number of questions.

Future impact surveys will seek to reduce the total number of questions, outline what a good answer entails, and favour challenging multiple choice questions over those with open-text responses – for example, presenting students with a mixture of 'fake news' and real news images, then asking them to categorise each and explain the rationale behind their choice.

Effective Communicators

With the second learning outcome we sought to embed values of effective, positive communication online. The corresponding session enabled students to reflect on how different mediums affect the content and tone of what we say to others. It explored what the key features of effective communication are, and how they help to facilitate constructive and positive interactions online.

Pre-, post- and longitudinal survey questions asked students to consider their attitudes towards digital communication and the benefits of using the internet as a space for positive engagement with others.

Key Results

- a 18% increase in students' belief that they would watch their language so it didn't come across as hurtful, when communicating with people they disagree with online (Pre: 3.36, Post: 3.96)
- a 12% increase in students' willingness to try and understand the opinions of others online (Pre: 3.65, Post: 4.10)
- 10% increase in students' belief that they communicate respectfully with others online (Pre: 3.58, Post: 3.94)
- a 12% increase in the extent to which students prefer respectful online spaces (Pre: 3.65, Post: 4.11).

Key Strengths

Despite the short timeframe, which makes it difficult to achieve sustained shifts in attitude, the workshops had a positive impact on students' attitudes to communicating positively with others online. It is unlikely that attitudes change drastically over a 1- or 2-day workshop when compared with increases in knowledge – perspectives and behaviours are often deeply ingrained, and transformed most effectively over a longer period of time. Nonetheless, there were significant improvements across all six attitudinal measures, and such gains were preserved at the 1-month mark. This demonstrates that YDL workshops were successful in promoting reflection on key themes, and fostering more positive engagement online. Albeit a first step, it suggests there is a growing recognition that the internet is a place for respectful exchange of ideas, where young people can learn to appreciate different worldviews.

It is widely recognised that anonymity facilitates the spread of abuse and harassment online. Our analysis of the school workshop students who took part in the YDL programme shows that when given the right set of skills and language, students are motivated to communicate with others in an empathetic and respectful manner:

> *Our pupils actively participated in all activities and expressed their views on what actions they would take in the future, including using the internet to show respect to others and communicate their opinions on issues proactively, by running their own online campaigns.*
>
> Principal observing YDL workshop, Greece

Key Learning

Teaching students how to communicate effectively is best delivered across the curriculum and throughout the school year. Success should be measured by opportunities to present and demonstrate those skills in practice. Participants' pre-survey results in this area were typically high – all but one measure had an average score of over 3.5 out of 5 – which may account for the smaller percentage increases over the course of surveying. The smaller gains may also suggest that attitudinal shift is greater when you embed learning over an extended period. In other words, students may need more opportunities to reflect on what positive communication should look like online, whether they interact respectfully with others, and how they might listen to and engage constructively with viewpoints that differ from theirs.

This point appears even more salient when workshop participant results are compared with the TTT students. The local partner in Romania was able to collect longitudinal data from the latter group, as they delivered teacher trainings earlier in the year; we could therefore compare results with the aggregated long-term data for school workshops. In all but one measure, both the average confidence and increases in attitudinal scores were higher for the TTT students, suggesting that a slower pace model is marginally more effective than a faster-paced one to embed outcomes. There were fewer participants in the workshops than in the TTT training sessions, and results suggest that the compressed and rapid approach of school workshops is not optimal for instilling positive values in young people in the long term.

Champions of Rights, Responsibilities and Opportunities Online

Results for the final learning outcome were equally positive, **with significant change across all behaviour and knowledge measures**. These indicators reveal the extent to which participants had **recognised their agency online, made positive contributions and become engaged digital citizens**. Results on the self-reported behaviours were taken from pre- and longitudinal surveys, allowing a month for students to demonstrate their actions in practice.

Key Results

- 24% increase in students who felt they had used the internet to improve their school or town in some way; (Pre: 2.74, Post: 3.37)
- the number reporting that they occasionally, frequently or always flag hate speech increased by 130% (Pre: 20%, Post: 46%)
- a 56% increase in students understanding how to give and receive consent online, (Pre: 25%, Longitudinal: 39%)
- 30% increase in knowing when to flag hate speech (Pre: 47%, Longitudinal: 62%)

Key Strengths

The final session was most popular with students, who relished the opportunity to be creative and enact digital citizenship in the 'real world'. Positive survey results were supplemented by excellent outputs from the session itself, in which students were tasked with planning digital campaigns on an issue of personal importance (e.g. cyberbullying or climate change).

> *The young people felt incredibly inspired by this session, and the campaign plans were fantastic. One group of students produced an online video in which they encouraged other young people to shed labels that were applied to them, and choose their own identities.*
>
> YDL workshop facilitator, Bulgaria

Teachers and local partners in every country felt this session resonated most with students, who were eager to think creatively and channel their digital skills into something tangible. As reflected above, there was marked growth in young people's willingness to enact their digital citizenship knowledge in proactive and pro-social ways.

Significant gains were observed in key areas, including when to flag hate speech and understanding around online consent. Activities relating to providing online consent included real cases where images of young people had been shared without permission, which proved powerful for participants:

> *I presumed it was fine for me to share pictures of other people because this is what everyone does on social media. Now that I have thought about it, I wouldn't want people doing the same with pictures of me, so why should I expect them to be ok with it.*
>
> YDL student, Bulgaria

Positive knowledge gains around when to flag hate speech were complemented by a 130% increase in those reporting that they 'occasionally, very frequently or always' take this action online. Beyond gaining a better awareness of hate speech (and how it differs from freedom of expression), students had begun to fulfil their potential as digital citizens and advocate for a more inclusive online space:

> *We had heard the term hate speech many times but did not know exactly what it is... now we know how to react to such acts adequately and defend our friends from such behaviour.*
>
> YDL student, Greece

However, within the same sample, over twice as many students said they only 'occasionally' call out hate speech compared with the combined number who 'very frequently' or 'always' do so, revealing persistent barriers to action. In future the programme should question why a young person might see such language, identify it as potentially harmful and still choose inaction. We could then respond accordingly, updating the curriculum to analyse and address participants' concerns about possible repercussions.

Key Learning

As with Learning Outcome 2, it seems difficult to foster or assess behavioural change in such a short timeframe, even considering the longitudinal survey. The programme either requires follow-on activity, extending the final session and using the quality of outputs as evidence of success, or it should leave a larger gap before re-surveying participants. While there were significant increases across the self-reported behaviour measures, some were still relatively small. For example, longitudinal data showed a mere 8% increase in students' belief they had used the internet to share something positive, including the campaigns they began to plan during the workshop. This may suggest that young people are more inclined to call out hate or abuse using the tools available (e.g. the 'report' function on social media), rather than posting something positive themselves, or are wary of appearing 'uncool' if their output is not entertaining or light-hearted. Several students commented that 1 hour was insufficient to plan their campaigns in detail, making it harder to pursue them independently after the workshop. The workshops were not long enough to empower students, or help them enact positive change online. This issue could easily be fixed by spreading the final workshop over multiple sessions, the latter of which would be led by teachers or introduced as an extracurricular activity.

Similarly, despite a large long-term increase in understanding how to give and receive consent online, the overall number of correct answers was still low at 39%. A majority of students did not understand the various ways to control consent online, so this area of the curriculum will need to be revised. Currently only half of one session is dedicated to this topic, with a brief exploration of the legal or other consequences of not providing or receiving consent online. While a greater number of students (62%) demonstrated an understanding of when to flag hate speech, that still leaves roughly 40% who ostensibly lacked this knowledge and run the risk of becoming bystanders to online abuse. DCE could test students' knowledge in creative ways, for example by presenting them with genuine cases of online hate speech versus offensive free speech, then asking which they would report and which they may address through different means.

Thematic Analysis 2: TTT Student Results

A sample of four teachers from each country – 12 in total – delivered the curriculum directly to their students, administering surveys before and after the sessions. In total, survey data was collected from 249 students. Since teacher-led delivery is the most effective model for scale-up, it was important to ascertain whether or not the TTT model was impactful, and if not where it could be improved.

As with Thematic Analysis 1 (school workshop students), these results have been segmented by the three learning outcomes that underpinned our curriculum. To avoid repetition, we have commented purely on areas of comparison, either positive or negative. All measures were achieved to a greater or lesser extent, as outlined below, but our main interest lay in the impact, if any, of using a different delivery model. Full survey results are available in the country breakdowns (Annexes 1–3, available for download on ISD's website).

Critical Consumers of Information

Key Results

- 71% increase in knowledge-confidence on echo chambers (Pre: 2.40, Post: 4.10)
- 59% increase in knowledge-confidence on filter bubbles (Pre: 2.53, Post, 4.02)
- 29% increase in knowledge of echo chambers (Pre: 70%, Post: 90%)
- 40% increase in knowledge of filter bubbles (Pre: 63%, Post: 89%)

Key Strengths

Young people who were taught the curriculum by their teachers recognised the importance of media literacy in particular:

> *I thought that the part related to fake news was very interesting. We see so much of this online and it is important to know how to distinguish fake news from biased news and from real news. I think that all the students left the session with new knowledge on this that is applicable to our real life situations.*
>
> YDL student, Greece

As with their school workshop peers, the most notable increases in knowledge-confidence centred on understanding of echo chambers and filter bubbles. These gains were supported by strong results in tested knowledge; overall 9 in 10 students could correctly define both terms after the sessions. This is a higher overall total than results for the school workshops, suggesting that teachers were more effective at embedding these concepts than YDL facilitators. This could be due to their broad pedagogical expertise and existing rapport with students, or purely because of the length and spacing of activities.

> *I liked that I learnt some new names for situations I often encounter online, such as echo chambers. Actually knowing what these are and that they exist makes it much easier to make more of an effort to step out of my echo chamber and explore new parts of the internet.*
>
> YDL Student, Romania

Key Learning

Poor understanding of 'fake news' among trained teachers seems to be reflected in their student outcomes. As previously mentioned, disappointing results in this area may relate to the survey question itself, which was open text rather than multiple choice. However, given that only 50% of teachers listed ways to identify 'fake news' correctly, it is also possible that those teachers gave ineffective lessons because of their weak understanding of the concept.

Future iterations of the programme must identify better ways to teach and evaluate this topic. For example, students should be shown contemporary examples of online content that they recognise from their own lives, including recent developments in 'deep fake' video technology. They could also be given fact-finding missions to determine the validity of a piece of news, thereby putting their media literacy skills into practice, and offering teachers an engaging way of assessing learning beyond basic questioning.

Effective Communicators

Key Results

- 22% increase in students' belief that they would watch their language so as not to be hurtful when disagreeing with someone online (Pre: 3.13, Post: 3.82)
- a 17% increase in students' feeling that they prefer online spaces where people behave respectfully towards each other (Pre: 3.65, Post: 4.26)
- 11% increase in students' belief that they make sure the thing they say online will not be something they regret later (Pre: 3.31, Post: 3.67)

This section of the curriculum was successful in demonstrating that the internet can be a place for positive interactions and exchange of ideas:

> *Now I understand that many people consider internet communication different from face to face communication, when in reality it is not. You should always show kindness and respect to someone, no matter how you speak to them.*
>
> YDL student, Bulgaria

Key Learning

Overall, teachers were more effective conduits of communication skills than workshop facilitators. This is probably because teachers delivered the training over a longer period than workshop facilitators, so there was more time to embed learning. Given a longer period of delivery, teachers could reiterate and promote the value of key themes. There were greater increases in understanding across most indicators among participants trained by teachers than those who attended workshops. Teachers build trust and respect with their students, potentially making them more credible messengers than someone visiting for 1 or 2 days. That said, external speakers can serve a vital role in generating enthusiasm and orienting a topic in the 'real world':

> *The class really engaged with the sessions and I think their attitudes have changed as a result of the sessions. Even during the activities, they showed more respect to each other when discussing than they usually do.*
>
> YDL teacher, Bulgaria

> *Undoubtedly, the students have developed attitudes that they are often not given the opportunity to do within the narrow limits of our educational timetable… The activities of the curriculum often generated interesting discussions between the students who participated much more actively than usual because the curriculum touched on issues that they meet in their everyday lives.*
>
> YDL teacher, Greece

Champions of Rights, Responsibilities and Opportunities Online

Key Results

- 68% increases in students understanding when to flag hate speech (Pre: 44%m Post: 73%)
- 68% increase in students understanding how to give and receive consent online (Pre: 29%, Post: 49%)
- 21% increase in students reporting that they had used the internet to share something positive (Pre: 3.30, Post: 4.00)

Key Strengths

The programme was successful in encouraging students to report malign content and use their digital skills to promote inclusivity online. Participating students told us in interviews that they enjoyed the sessions championing rights, responsibilities and opportunities online the most. Students showed an enthusiasm to learn about how to exercise their rights online and to make a meaningful contribution to their online communities by supporting their peers. This was demonstrated in the substantial knowledge gains they made with regard to flagging hate speech appropriately and controlling consent online, and in their relishing the opportunity to use their creative skills to develop campaigns to promote inclusivity. Reflecting this, one Greek student told us,

> *I know for a fact that [a classmate] is attacked frequently because he is a Muslim. Even if we, as his friends, try to protect him, it is very important to know collectively what we can do online in order to protect him efficiently. This is why me and my friends have designed a campaign on peace on earth in order to promote all the people to coexist peacefully… [The sessions] showed us how we can act in a systematic way in order to bring positive change through the internet. I know that none or very few of my classmates considered their power to use the internet for this reason before.*
>
> YDL student, Greece

Key Learning

DCE should include the goal of inspiring sustained, positive behaviours by young people. Measures in this area may be the most accurate, since they require an account of specific behaviours rather than self-assessed knowledge. It is therefore interesting to note that overall average scores were slightly lower than for the other two learning outcomes. Even with the slower-paced model, it seems behavioural change could only reach a certain threshold; clearly more work is needed to promote the internet as a home for social activism. Activities could take the form of online student journalism, digital campaign design, or fact-checking and research competitions. Any assessment of behavioural change should take place over a longer period of time than was allowed in this programme, ensuring that results measure a fundamental change in digital use as opposed to one or two incidents of positive action.

Thematic Analysis 3: Trained Teachers

A combined total of roughly 520 teachers across Bulgaria, Greece and Romania were invited to attend a training session; attendees' pre-existing knowledge of, and exposure to, digital citizenship topics were greatly varied, but all were upskilled to deliver the curriculum independently to their classes.

Participants acknowledged they had gained new knowledge and skills, with one Bulgarian attendee commenting:

> *I thought about [the programme] a lot. What I learned is that we as teachers have to improve the media literacy of our students and teach them to be aware of the social norms of online behaviour.*
>
> YDL teacher trainee, Bulgaria

The Importance of Teaching Digital Citizenship

Key Results

- 99% of teachers agreed that it was important to teach DCE.
- 99% of teachers said that they would like schools to receive more training on how to teach digital citizenship.
- 99% of teachers noted that the YDL curriculum is relevant to their students.
- 98% noted that the programme in general is very helpful for teachers who want to teach digital citizenship.
- A further 86% of teachers said it was likely that they would go onto deliver the curriculum to their students following the training.

Pre-survey data established that the overwhelming majority (87%) of participating teachers had never taught digital citizenship before, while 9% said they had taught it, and 4% didn't know whether they had or not. Moreover, 70% of teachers noted that digital citizenship is not currently taught in their schools; 12% said it is taught, and 18% said they didn't know.

The above statistics highlight a concern that there is insufficient provision of DCE in their respective school systems, and a desire for this to be rectified. Teachers showed an overwhelming appetite to be upskilled in the subject area, with participants from Greece and Bulgaria stating,

> *It is important to spread the programme within our school and other schools. It will be delivered in a much more efficient and thorough way if more teachers are trained and become interested in teaching this subject.*
>
> YDL teacher trainee, Greece

Digital Citizenship Knowledge

Key Results

- a 49% increase in teachers' confidence in understanding what filter bubbles are (Pre: 3.00, Post: 4.46)
- a 35% increase in their confidence in understanding of echo chambers (Pre: 3.36, Post: 4.54)

- a 27% increase in teachers' confidence in knowing how to help their students use the internet positively (Pre: 3.46, Post: 4.38)
- 24% increase in teachers' confidence in knowing what to say to their students when asked about online challenges (Pre: 3.46, Post: 4.30)

Key Strengths

Significant positive increases were observed across all 12 knowledge-confidence and confidence measures, with teachers leaving the training well- equipped to deliver DCE content to their students. The largest gains were observed in how confident teachers felt explaining filter bubbles and echo chambers; these two measures had the lowest baseline scores, so the progress was a testament to the quality of the YDL facilitators and resources provided. Critically, teachers felt better equipped to deliver content on their own. This includes practical steps they can offer students to enhance their positive experiences of the internet and mitigate potential risks. Their confidence was undergirded by increases in knowledge-confidence, and demonstrates why the vast majority – 83% – said it was likely they would deliver YDL sessions to their students.

Interestingly, baseline results were fairly high throughout, given that most participants had never taught digital citizenship before. This shows that teachers already have a solid awareness of many DCE concepts, and would be well placed to deliver content if space were made in the curriculum. It also demonstrates how the training served to consolidate and strengthen their understanding of these ideas.

Key Learning

As with school workshop students, the tested knowledge question on identifying 'fake news' returned less impressive results. Moreover, despite a 13% increase in the number of correct answers, only 44% were correct overall even after the training was complete. As with student responses to this question, many fields were left blank, while others were vague or consisted of one-word answers (e.g. 'check website' or 'context'). This demonstrated that participants had a basic understanding but their responses were too imprecise to be able to award marks. In order to clarify this ambiguity, future training must clearly outline how to give acceptable answers.

Training sessions were successful in highlighting the importance of 'fake news' and hate speech as key online harms for young people. In both the pre- and post- surveys, teachers were asked to name the two most significant challenges they believe young people face today – 21 unique challenges were named, as shown in figures 1 and 2. Before YDL training, the most frequent responses were 'fake news', 'internet addiction' and 'contact with unknown people'. After training, 'fake news' and 'hate speech/abusive comments' ranked highest, while the largest single increase was for 'a lack of understanding of rights and responsibilities'. These three challenges are focus areas of YDL, demonstrating the programme's success in emphasising the salience and importance of online harms.

> *The fact that the curriculum had also a part related with hate speech is very important. In our region unfortunately we have a lot of hate speech and stereotyping. Also, when I see such incidents I tell them 'I will not tolerate such behaviour in this school'… It is*

important that our students take responsibility for their peers online, and stick up for them as they should in real life.

YDL teacher, Greece

Figure 1: Teacher perceptions (pre-survey)

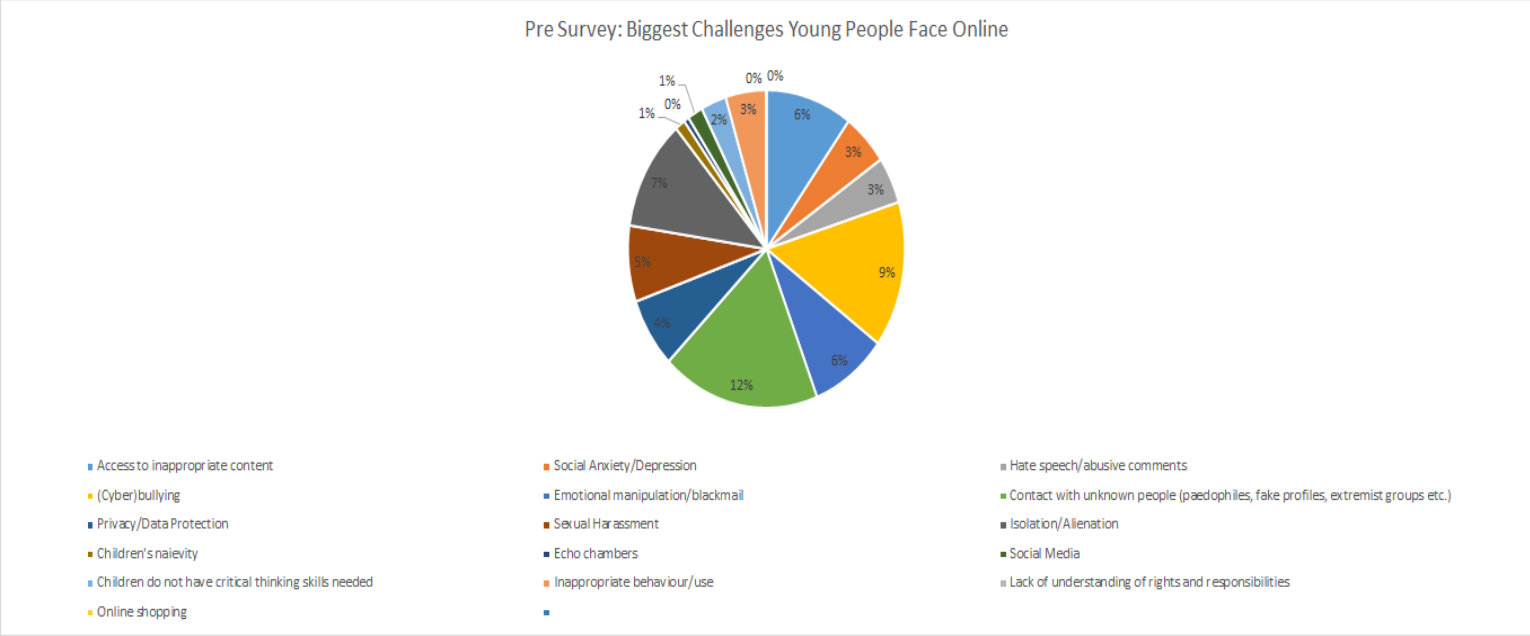
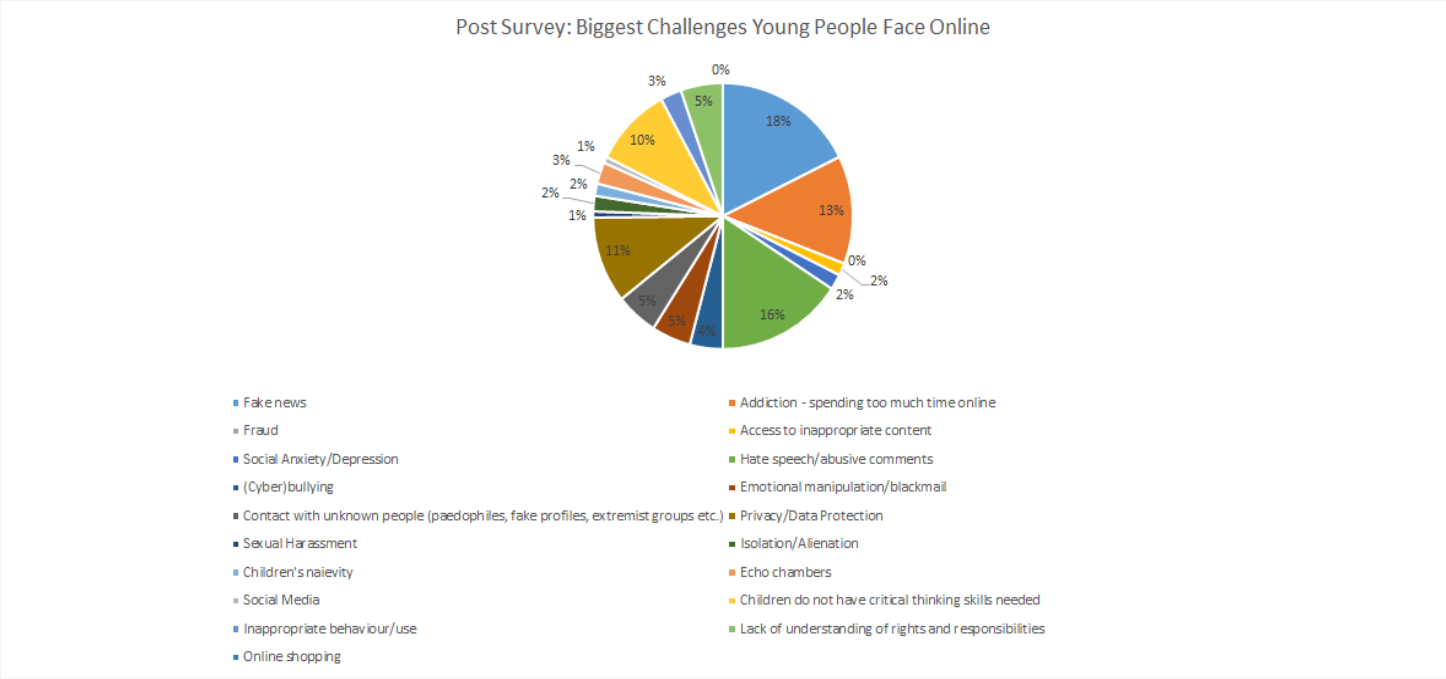


Figure 2: Teacher Perceptions (post-survey)



Thematic Analysis 4: Parents and Carers

Our evaluation is based on a sample of 232 parents and carers. Participants completed pre- and post-surveys on the day of training, covering a range of attitudinal, knowledge-confidence and process-focused questions.

There were significant positive changes in the responses given in the two surveys, which are hugely encouraging and demonstrate the value of digital citizenship education for parents as well as students and teachers.

Key Results

- a 20% increase in the extent to which participants feel responsible for the wellbeing of people they are connected to on social media (Pre: 4.23, Post; 5.08)
- a 16% increase in session participants' belief that they would be able to identify 'fake news' online (Pre: 5.16, Post: 5.97)
- 97% of participants felt better able to support their children with online safety challenges
- 97% reported they were more likely to discuss online safety with their children as a result of the session

Key Strengths

Participants overwhelmingly enjoyed the sessions, recognised the benefits of attending, and left feeling better equipped to support their children online. Post-surveys sought to gauge parents' and carers' views on the experience of participating in training, the relevance of YDL resources, and the impact of the training session on their ability to reinforce online safety messages at home. The positive results are a credit to both the parents and carers, who attended voluntarily and were open to learning, and the facilitators, who provided an engaging and informative session.

Almost all participants reported that as a result of participating in the session they were more likely to discuss online safety with their children, and would be able to respond effectively if asked about online harms. The findings reflect a core objective of YDL: to ensure that online safety and digital citizenship are discussed beyond the classroom, and that important messages are reinforced confidently at home.

Participants left with an increased sense of their own citizenship duties. There was marked growth in the extent to which parents felt responsible for the wellbeing of those connected to them online after participating in the training session; baseline results for this measure were lower than any other, so the 20% increase is worth noting. It demonstrates that sessions helped participants to recognise their role in the online ecosystem and how they can be forces for good within it. This was reflected in the small but significant increase in participants recognising the importance of challenging online prejudice, and their consideration of the feelings of others when posting online:

> *[I] never realised how many things [I] didn't know about [my] kid's life online… [I will now] be more careful checking news sources and generally being responsible when [I] use the internet.*
>
> YDL parent, Romania

Despite high baseline scores across these measures, there were small but significant increases in knowledge-confidence. The largest of these was observed in participants' confidence to identify 'fake news', alongside a small increase in participants' belief they would fact check stories that seemed suspicious. Combined, these findings demonstrate that parents and carers felt better equipped to identify disinformation and misinformation online, and the importance of outlining the YDL curriculum in detail during sessions.

> *[Session participants] will be more aware now about the things we heard of today... We will be better able to identify fake news and address a different types of online content in a more critical way.*
>
> YDL parent, Greece

Key Learning

It is more challenging to influence adults' willingness to engage other worldviews than other attitudinal traits. While the results were positive, some findings demonstrate the need for programme adjustments in future. For example, there was only a very small increase in participants' belief they would listen happily to different opinions and perspectives online. While the average score for this measure was still high (5.75 out of 7), it was slightly lower than many others. In some ways this is to be expected: adults have developed and embedded their viewpoints over many years, compared with young people who may still be formulating their beliefs. On the other hand, the programme's adult education and democratic principles focus, in part, on encouraging a willingness to understand (or at least tolerate) the viewpoints of others. This underwhelming increase, therefore, points to the need for a revised approach in making parents and carers more amenable to recognising this important pillar of DCE.

In the pre- and post-surveys participants displayed high levels of knowledge-confidence on the difference between hate speech and free speech. Given the role participants play in teaching young people what is and is not acceptable online, the next iteration of the programme should include greater testing on this distinction. Such an approach would ensure that high levels of self-confidence are supported by robust data, proving that participants truly understand the difference and can thus be effective anti-hate messengers in their own right.

5 Conclusions and Recommendations: *The Path Ahead*

Key Outcomes

The programme developed young people's understanding of key digital citizenship concepts successfully. This was especially clear within the school workshop cohorts, where significant positive increases in knowledge-confidence and tested knowledge were observed across every single measure, and found to be sustained when students were surveyed a month later. There were large increases in students' confidence in understanding key digital citizenship skills, including how to identify online 'fake news', and of concepts such as echo chambers and filter bubbles. This was complemented by 94% of students believing that they had gained new knowledge and skills from the workshops.

The programme was successful in showing that, given the right guidance and encouragement, young people are enthusiastic about using the internet as compassionate citizens and demonstrating positive behaviour online. This was evidenced throughout workshops and curriculum delivery, as well as in focus groups and interviews, where the majority of young people noted that their favourite session was Digital Leaders. During this session, students planned a digital campaign around an issue of importance to them, such as bullying, mental health or climate change.

Young people in the three delivery countries recognised that digital citizenship is an important aspect of their lives, given how much time they spend online. This sentiment was expressed consistently in interviews and focus groups – many participants showed a mature, candid understanding of the harms they face online, and were keen to harness the positive aspects of digital use while responding safely and responsibly to possible risks.

> *The fact is that we spend too much time online and that there are risks and dangers that we need to overcome with this kind of education. What we learnt [through this programme] is more applicable to our real life than 99% of what we learn in school.*
>
> YDL Student, Greece

Teachers were eager to deliver digital citizenship content to their students, but are concerned about how best to incorporate it into busy teaching schedules. As previously mentioned, 97% of participating teachers said they think DCE is either very important or important, and 99% would like to receive further training in the future. This shows there is a genuine appetite to improve provision of DCE, despite the different contexts and structures for education in each country. At the same time, we should not assume there is broad consensus in this area – these teachers signed up to attend YDL sessions willingly, and they may therefore represent an 'already converted' group who were ripe for intervention. The real challenge lies in establishing a critical mass of teachers across European schools who are committed to DCE. In our evaluation only 12% of teachers said that DCE is currently taught in their schools, and many attributed the absence to an already overcrowded curriculum.

> *Teachers are overloaded with lessons and materials to teach and study; these are very important topics about things we encounter in our daily lives, but there is a lack of time to teach them.*
>
> YDL teacher, Bulgaria

In order to build and harness the enthusiasm of the wider European teaching community, a broader campaign to raise interest in the subject is needed. Our thinking on this is examined in the following section.

Parents and carers readily admit they lack awareness about their children's online behaviour and habits, and are keen to learn more about the internet themselves. In each of the three countries, participants expressed concern about how much time their children spend online, the types of interactions and content they may be exposed to, and their inability or sense of impotence to deal with such issues.

> *We have a lot to learn as parents, as there are important online issues that we don't know about. We can also be easily manipulated online and fall victim to the challenges the highlighted today. That is why training like this is so important for us if we are to help our children.*
>
> YDL parent, Bulgaria

> *Before coming [to the session] lots of us hadn't heard of the term digital citizenship and at the beginning the concept seemed difficult. However, after the end of the session we have understood that this is a concept that is very connected with everything we are doing online and it is very important in the same way that our children receive citizenship education, they receive digital citizenship education.*
>
> YDL parent, Romania

This type of positive response was matched by survey data, which showed that 97% of participants felt better able to support their children with online safety challenges having attended a session.

The Future of Digital Citizenship Education Programming

Future digital citizenship education programming should allow enough time for each topic or concept to be explored in depth. Equally, there should be sufficient space between sessions to give young people opportunities to apply their learning. At a bare minimum, 1 hour – which includes introductory discussions, engaging activities and plenary recaps to assess learning – should be allocated to each key concept, e.g. an hour to discuss the difference between hate speech and free speech, an hour on how to identify different types of 'fake news', and at least an hour to plan digital campaigns. Without this, digital citizenship education risks having a fleeting effect on students without changing attitudes and behaviour long term. While a 1- or 2-day workshop can appear more engaging, especially when delivered by external speakers, it condenses learning to an extent where thorny issues or questions raised during sessions cannot be addressed in full. Covering topics at a slower pace would encourage students to apply or test new concepts outside the classroom in the intervening period, and is likely to reinforce learning outcomes overall.

Digital citizenship education teacher training models should be refined and formalised to impact a greater number of students. Increases in tested knowledge were typically higher for the TTT students than their workshop peers. After training there was a 68% rise among TTT students in giving correct answers on how and when to flag hate speech and how to give or seek consent when posting online. This suggests that trained teachers are better than facilitators in embedding a solid understanding of these topics in students. If space can be found on the curriculum for digital citizenship, these practitioners can offer sustained and thorough teaching of the subject.

Programme co-ordinators need to focus on upskilling teachers so they can create engaging and informative learning experiences for their students, independently and within the constraints of their school community. This could be achieved by partnering with initial teacher training providers, such as higher education faculties, which have extensive reach and whose staff could deliver DCE trainings at scale. If DCE were incorporated into initial teacher training provision, even briefly, it may help create a critical mass of expertise in emerging cohorts of teachers. This would this support the formation of communities of practice, and spread knowledge across the public sector and to more deprived or underserved school districts (depending on how newly qualified teachers are distributed). These trainees may be well placed to champion DCE to existing teachers – their typically lower age bracket increases the likelihood of them having been exposed to relevant technology or being 'digital natives' in their own right. Engaging teachers at the training stage is not an overall fix, but could create ambassadors who can support their colleagues and generate enthusiasm for the topic at a sector level.

New ways of embedding DCE within the school curriculum should be trialled, including by developing content for subject-specific teachers. There is undoubtedly benefit in providing dedicated 'DCE classes, most likely delivered through existing citizenship, ICT, personal development or wellbeing curricula; however, this should not preclude opportunities to discuss digital citizenship during other lessons such as English, history, science and philosophy. Many components of digital citizenship education relate to the construction and analysis of 'knowledge' – objectivity vs. opinion, author intent, credibility, format and so on – which have evident links across the curriculum. While not explicitly badged as digital citizenship education, relevant activity could be incorporated across the school day and enhance learning outcomes in general, rather than being viewed as a siloed or specialist topic. If this dual approach is practised it would encourage students to view digital citizenship in relation to a host of subject areas, and ensure learning is not an isolated yearly occurrence. It would also lessen the risk of alienating teachers who view themselves as 'non-expert', and allow them to build on their existing knowledge, strengths and priorities, e.g. helping English students to question the role of a narrator in a given text, unpacking the scientific method in a biology class, or assessing how a historical event has been framed and re-framed depending on the source.

More opportunities must be provided for young people to demonstrate and apply their digital citizenship beyond the classroom. While the curriculum has proven effective in building knowledge and prompting small shifts in attitude, true citizenship is demonstrated through attitudes and actions. Participants showed a real desire to create purposeful, compassionate online content, but felt the curriculum allowed them minimal time or support to execute their ideas fully. To determine the impact of programmes accurately, digital citizenship education curricula should culminate in activities such as student journalism, digital campaign creation, competitions and fact-finding missions to help

young people translate their learning into real-world content. This may mitigate the danger that students become 'news avoiders', who are either sceptical of information writ large or resigned to toxicity online; having been exposed to the darker side of internet platforms, it is vital they have channels to respond proactively and take agency as digital leaders. Creative partnerships could be developed with local media outlets, technology companies and political actors to drive this agenda forward, enhancing the salience of digital citizenship education to everyday life.

Policy Recommendations

The European Commission should adopt the Council of Europe's definition of digital citizenship and amend their Digital Education Action Plan accordingly.[10] A digital citizenship education component could be incorporated into the existing Action 7 ('Cybersecurity in Education'), which aims to raise young people's awareness of cyber threats and train educators to teach cybersecurity in school. Alternatively, given digital citizenship's wider importance and academic remit, it may warrant a dedicated action that goes beyond online safety. Additional language could highlight a different but equally important set of domains including media and information literacy, active participation, and rights and responsibilities online.[11]

By incorporating the Council of Europe's work in this field, the Commission would connect the dots between its *Digital Education Action Plan* and European Schoolnet, through which it funds several projects. The latter has previously funded or delivered various digital citizenship schemes, although they are typically rolled out in isolation from each other, rather than contributing to a cohesive whole.[12] In future European Schoolnet could adopt Council of Europe measures for digital citizenship, creating consensus among the numerous stakeholders in the network. This would help build a movement across the region, and provide a more coherent strategy on how to incorporate digital citizenship education into yearly teaching plans. As detailed previously, the Council of Europe could also lead efforts to establish and promote communities of practice across the region, helping practitioners gain confidence in this new (and potentially intimidating) area of study.

National governments across Europe should embed digital citizenship education within their school curricula and provide training for practitioners. As this report has shown, there is a demonstrable appetite among young people, teachers and parents to learn about and teach digital citizenship. Despite this, many teachers are concerned that they lack the time and resources to deliver digital citizenship education adequately in an already crowded school day. Governments must therefore devise a strategy for how and where to embed digital citizenship into their curricula; our extensive consultations during Phases 1 and 2 of YDL suggest that a dual approach seems best. Under such a model, core topics would be taught through the most relevant classes, such as citizenship, ICT, or personal development and wellbeing, and supplemented by teaching via other subjects such as English or history, as outlined above. In addition, school leaders (or other education leads, depending on the governance structure) should ensure that adequate CPD is allocated for relevant teachers to be upskilled and develop their expertise in this subject. Those providing this training must avoid making assumptions about participants' knowledge of digital citizenship education concepts, while demonstrating how key competences (e.g. critical thinking, communication, analysis) align with learning objectives in the existing curriculum. The training should respond to, and be grounded in, research into potential teacher biases.

> *It is very difficult to work with teachers, because they have the feeling that they know everything, they are already trained and they are accustomed to provide information, not to receive it. They must be well prepared and also they should try to understand the needs of the children.*
>
> YDL Teacher, Athens, Greece

At the same time, third-party bodies could still visit schools to introduce digital citizenship education and galvanise students around key themes – as external speakers, they may well be considered more relevant or relatable than teachers. This dual model would leverage the best of both worlds, especially if facilitators are younger (or even school age themselves). There should be an initial push to excite students, followed by a sustained and in-depth learning journey.

Cross-sectoral collaboration should ensure that digital citizenship education keeps up with digital trends and the potential consequences for young people online. The digital world evolves at a rapid pace, frustrating efforts to deliver relevant, impactful or engaging digital citizenship education in the classroom. This is critical given that young people are often early adopters of new technologies, and may therefore be receiving education that misses the most potent risks or opportunities to engage online. Technology companies, policymakers, CSOs and educators must co-ordinate to improve this process and create stronger feedback loops: companies should provide insights into emerging trends, harms and phenomena online; governments must review their curricula periodically to update content and provide relevant resources to schools; educators must adapt rapidly on the frontline, understanding that key principles will remain but the names and headlines may shift. On this latter point, national or international communities of practice could be established in parallel – if teachers are expected to stay up to date and amend their activities, peer-to-peer support will play a vital role. Platforms to share tips, exercises and guidance, as well as troubleshoot issues encountered in the classroom, are an effective way to increase confidence and spread best practice across an education sector.

Education policy reform is essential, but it is usually a slow process and hampered by various political, bureaucratic and fiscal constraints. Without mandatory changes in curricula, a significant amount of support will be required from the third sector to ensure schools have the rights tools and buy-in to respond. CSOs and teacher training providers can play a valuable role in enhancing provision and reducing the burden on school leadership, the former by ensuring the latest research is incorporated into programmes of study, the latter by working to upskill teachers in line with these changes, and in line with existing school CPD schedules. Having formal accreditation for digital citizenship education curricula is a top priority in this regard, as many countries only recognise or reward 'credit' for CPD workshops listed by their Ministry of Education.

There needs to be greater investment in non-formal digital citizenship education, including upskilling parents and carers, and engaging influencers at all levels (local, national, international) to be credible voices on key concepts. As our findings show, programmes like YDL can deliver significant knowledge gains for young people, but inspiring them to become active digital citizens, engaged in upholding civic responsibilities, is a more challenging task. To galvanise young people requires a

broader social campaign, with visible support from those in positions of power, responsibility and influence. European Commission research shows that parents' and carers' attitudes and abilities are highly important 'in determining whether they can provide effective support for the development of their children's digital competences'.[13] However, there has been limited policy action in this area, with only a small handful of European countries providing digital citizenship education initiatives for such groups. The Flemish community of Belgium offers a strong model to emulate. The Education Department provides a minimum of 150 school sessions annually to inform and train parents on a range of online safety issues.[14]

As described above, ownership could be shared across multiple sectors – governments can ring-fence a certain amount of funding, within education budgets or other relevant areas (e.g. ministries of social wellbeing, family and child affairs, information and technology), or at least foster a national debate on such issues among the adult population. Technology companies could offer co-financing as part of their corporate social responsibility and outreach activity, and provide clear and transparent information about emerging trends. Schools and CSOs could then work together to produce and host effective training models, in a similar vein to YDL's adult educational sessions.

Such efforts would be enhanced by greater advocacy from online influencers and other public figures. In 2016, a study by Google showed that 7 in 10 teenagers who subscribe to YouTube relate to YouTube creators more than to traditional celebrities, while 4 in 10 say their favourite YouTubers understand them better than their friends.[15] There is huge potential for these influencers to shape how young people recognise their agency as positive online citizens, or engage with such topics long term. Technology companies that hold contracts or sponsorship models with these individuals should support this engagement, encouraging them to champion DCE topics, raise awareness and inspire positive change in their young audiences.

European actors should establish and adopt common evaluation frameworks that assess the impact of digital citizenship education from both attitudinal and behavioural change perspectives, as well as knowledge and skill gains. As with any type of education, robust evaluation criteria are required to monitor the degree to which learning has taken place and make necessary changes. Our analysis demonstrates the merits of self-reported and tested knowledge measures in establishing useful baseline data from participants, especially with regard to their understanding of key DCE concepts. We recognise that digital citizenship is shown through broader attitudes and behaviours, not merely gains in knowledge and confidence, so future programming should incorporate innovative ways to measure how and where young people demonstrate digital citizenship actively in their everyday lives. Current methods used to assess students in existing citizenship curricula across Europe offer a useful starting point. For example, some countries combine traditional assessment, such as multiple choice questions and essays to measure knowledge and skills, with more interactive methods such as group projects and role play exercises.[16] DCE evaluators should adopt these methods, but also look beyond the classroom, to activities which guide and encourage engagement in the 'real world'.

Research shows that European students' relationships with their wider communities is the least evaluated aspect of citizenship education, yet given that it offers highly authentic examples of civic participation, this study is arguably one of the most revealing.[17] To truly establish whether young

people are becoming good digital citizens, digital citizenship education across Europe should be bolstered by standardised longitudinal studies into their behavioural change. This evaluation should examine the extent to which young people apply their newly developed digital citizenship competences within their online communities, and how far these competences inspire them to affect positive change offline. Through this evaluation mechanism, young people would not only answer questions on their willingness to engage in productive online interactions, but where possible describe tangible examples of where they have engaged in civic participation to improve their communities.

ANNEX 1

Sample questions appearing across participant surveys (non-exhaustive list).

Questions referred to most frequently in the analysis section have been included below.

Key:

S = Students were asked these questions;
T = Teachers were asked these questions;
P/C = Parents and carers were asked these questions.

1. Name three ways you can tell an online article is 'fake news.' If you can't name three, name as many as you can. (S, T)

    1. _____

    2. _____

    3. _____

2. What is the definition of a 'filter bubble'? Please tick the one definition you think is the most accurate. (S,T)

☐ Filter bubbles occur online when users are suggested content based on their previous internet use.
☐ Filter bubbles describe the circle of friends that a user has online.
☐ Filter bubbles are the list of web pages that a user has searched for online.
☐ Filter bubbles are made up of the content suggested to users based on the people they have blocked on social media.

3. What is the definition of an 'echo chamber'? Please tick the one definition you think is the most accurate. (S,T)

☐ Echo chambers are social spaces where people discuss their hobbies.
☐ Echo chambers are social spaces in which ideas, opinions and beliefs are reinforced by repetition within a closed group.
☐ Echo chambers are the advertisements that users are exposed to, based on their previous internet use.
☐ Echo chambers describe the circle of friends that a user has online.

4. Please tell us how much you **agree** with the following statements. There are **five options**, from 1 which is most 'Strongly Disagree' to 5, which is most 'Strongly Agree.' Tick only one box in each line. (S, T)

	Strongly Disagree 1	Disagree 2	Neither Agree nor Disagree 3	Agree 4	Strongly Agree 5
I understand what echo chambers are.					
I understand what the 'filter bubble' is.					
I am able to identify 'fake news.'					
I understand what prejudiced content is.					

5. Please tell us how well the following statements describe you. There are five options, from 1 which is 'not like me' to 5, which is 'most like me.' Tick only one box in each line. (S, T, P/C)

	Not like me 1	A little like me 2	Neither like or unlike me 3	Like me 4	Most like me 5
If I disagree with people online, I watch my language so it doesn't come across as mean.					
I am careful to make sure that the pictures I post or send of other people will not embarrass or upset them.					
My favourite places to be online are where people are respectful toward each other.					

I think about making sure that things I say and post online will not be something I regret later.					
I listen and try to understand the opinions of others online.					
I communicate respectfully with others online.					
I have used the internet to improve my school or my town in some way.					
I have used the internet to help a friend or help other kids in general.					
I have used the internet to share something positive.					

6. When should you flag/report a post or comment on social media as hate speech? Please tick the <u>one</u> definition you think is the most accurate. (S)

☐ When somebody physically threatens you in the comments section on a post that you wrote online about a musician that you like.

☐ When someone is rude to you online.

☐ When someone says something that harasses, threatens or intimidates you or a friend because of your race, religion, ethnic origin, sexual orientation or disability.

☐. When someone from a different background to you makes a post saying something that you don't like.

7. Which of the following options are ways of controlling consent online. Please tick <u>one</u> answer only. (S)

☐ Providing written consent.

☐ Withdrawing your permission for a social media platform or a digital app to use and share your information

☐ Asking permission of others before posting content that involves them.

☐ Flagging or reporting content that you have not given permission to use.

☐ All of the above.

8. Did you enjoy the training? (S, T, P/C)

☐ I liked it a lot
☐ I liked it
☐ I neither liked it nor disliked it
☐ I disliked it
☐ I disliked it a lot

9. Do you feel like you learned new skills and knowledge as a result of the training? (S, T, P/C)

☐ Yes, lots

☐ Yes

☐ No

☐ No not at all

☐ I don't know

10. Do you feel more or less able to help your child/children deal with online safety challenges? (P/C)

☐ Much more able

☐ More able

☐ Less able

☐ Much less able

☐ I don't know

11. Are you more or less likely to have a conversation with your child/children about online safety as a result of this session? (P/C)

☐ Much more likely

☐ More likely

☐ Less likely

☐ Much less likely

☐ I don't know

Endnotes

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[13] European Commission, *Digital Education at School in Europe*, 2019*,* p. 97.
[14] Ibid, p. 97.
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[17] Ibid, p. 123.