A National Literacy Trust research report

Insights into young people's literacy, critical digital literacy, online communication and wellbeing

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April 2022

Concern about the negative impact of the digital world on young people has increased in recent years (see, e.g., Department for Digital, Culture, Media and Sport [DCMS], 2021; United Nations, 2021). A growing body of research explores aspects of young people's online lives and mental wellbeing (see, e.g., Kandola et al., 2021, Kelly et al., 2018, Orben & Przybylski, 2019). To date, however, fewer studies have examined the relationship between literacy and critical digital literacy engagement and wellbeing.

This report presents findings from a survey exploring young people's attitudes and behaviours when navigating online environments. The survey's design was informed by a review of the literature, focus group discussions with young people, and interviews with academic and industry experts, and it reached 7,494 young people aged 11 to 16 in late 2021. Findings indicate that high literacy engagement is associated with better critical digital literacy attitudes and behaviours. In turn, compared with young people with low critical digital literacy engagement, nearly three times as many young people with high critical digital literacy had high mental wellbeing (11.6% vs 30.2%).

Such findings suggest that young people with low literacy engagement are at risk of missing out in the digital age, and that supporting young people to develop confident, critical approaches to reading, writing and communicating both on and offline may have the potential to support wellbeing. This is likely to be of growing importance as our dependence on digital forms of communication increases. We would like to thank The Sir Halley Stewart Trust for their support for this project, which we believe is particularly timely in helping support effective digital engagement alongside the changes in regulation anticipated in the Online Safety Bill.

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Key findings

Many young people are motivated to read online as content matches their interests, but online reading also inspires wider reading. Although the percentage of young people writing fiction is relatively equal on paper and on screen, few feel confident about posting their writing online.

- Most of the 11- to 16-year-olds responding to the survey used digital devices regularly, most often for entertainment (such as playing video games). **8 in 10** (80.7%) said they used devices for this at least daily, and **7 in 10** (69.9%) used image, video or text-based social media.
- **More than half** (54.2%) of respondents said they found more things to read that related to their interests online. However, online activities could also inspire wider reading, with **3 in 5** (59.3%) young people saying that they found inspiration for things they would like to read online.
- Around **1 in 5** young people said they write short stories or fiction outside school daily, whether in print (21.4%) or on screen (19.0%). However, fewer than **3 in 10** (28.6%) young people said they felt confident posting something they had written online, and just 5.7% posted blogs or stories online in a typical day.

Most young people feel they know how to check online information, but only half take time to consider news stories. However, many feel that reading online can help inform and expand their thinking.

- **2 in 3** (66.6%) young people are confident that they know how to check if information they find online is true. However, while **3 in 5** (59.2%) young people said they would not share a news story if they weren't sure it was true, only **1 in 2** (52.5%) would take the time to think about whether news stories were true or not.
- **3 in 5** (59.0%) young people agreed that seeing other people's points of view online helped them to form their own opinion on different topics, and **more than half** (52.1%) said they used the internet to talk to people from places or backgrounds different from their own.

Most young people are considerate of other people's feelings when communicating online and many feel empowered by their use of social media.

- **4 in 5** (79.5%) believe it is as important to be polite online as it is face to face, and more than **3 in 5** (62.5%) think about the different ways people might interpret something before they post. In addition, **just under half** (46.2%) feel being online helps them learn how others are feeling.
- More than **2 in 5** (42.2%) say that their online life opens up lots of possibilities for them, and **1 in 4** (26.9%) that social media makes them feel like they can make a change in the world.

More boys than girls feel that chatting while playing video games helps them communicate better with friends. More young people who prefer to describe their gender another way say that writing on social media helps them express themselves.

- Almost **three times** as many boys as girls said they used a games console daily (65.5% of boys vs. 22.5% of girls), and almost **twice as many** boys as girls said chatting while playing video games helped them communicate better with friends (62.5% vs. 35.7%).
- Around **3 in 10** boys and girls agreed that writing on social media helped them to express themselves (30.7% boys, 34.0% girls). However, this increased to **nearly half** (47.3%) of young people who described their gender another way, suggesting that online formats may be an important source of self-expression for this group of young people.
- Significantly more boys than girls feel that their online life opens up possibilities for them. Indeed, there is a ten-percentage-point difference in the percentage of boys and girls who believe this (46.1% vs. 36.0%).

Compared with peers from higher-income backgrounds, fewer young people from lower-income homes say they know how to check if online information is true. However, more feel confident posting something they have written online and say using social media makes them feel like they can make a change in the world.

- Slightly fewer young people who receive free school meals (FSMs) said they know how to check if the information they find online is true (61.0% vs. 67.3% nFSM) and slightly more believe social media provides more genuine information about news than standard news channels (20.2% FSM vs. 15.4% nFSM).
- At the same time, more young people receiving FSMs said that writing on social media helps them express themselves (38.2% vs. 32.3%), more feel confident about posting something they have written online (35.4.% vs. 27.8%) and more said that using social media makes them feel like they can make a change in the world, with nearly **1 in 3** (32.4%) saying this compared with **1 in 4** (26.3%) of those not receiving FSMs.

Literacy engagement is associated with confidence in interacting online, critical approaches to online reading and the perceived benefits of online communication.

- While just **1 in 5** (22.0%) young people with low literacy engagement feel confident about posting their own writing online, this increases to almost **2 in 5** (38.8%) of those with high literacy engagement, emphasising the links between offline and online literacy.
- Many more young people with high literacy engagement said that they take time to think about whether news stories are true or not. **7 in 10** (71.0%) of this group said they did this compared with **2 in 5** (40.5%) of young people with low literacy engagement (a difference of almost 30 percentage points [pp]).
- Similarly, more of those with high literacy engagement said they know how to check if the information they find online is true (**77.7% vs. 60.0%**) and how to check who has written something online and decide whether they can trust them (**71.6% vs. 51.3%**).

- Fewer young people with low levels of engagement with literacy perceive the benefits of digital engagement. While more than **1 in 3** (34.6%) young people with the highest literacy engagement say using social media makes them feel like they can make a change in the world, this decreases to fewer than **1 in 5** (19.1%) of those with the lowest literacy engagement.

More young people with low mental wellbeing have read things online that support their mental health and feel writing on social media helps them express themselves. However, more young people with high mental wellbeing feel confident about critical reading online.

- More young people with the lowest mental wellbeing say they have read things online that have supported their mental health (50.3%, compared with 42.9% of those with high wellbeing). In addition, more young people with low mental wellbeing say that writing on social media helps them express themselves (39.9% vs. 29.4%).
- However, while **1 in 5** (22.1%) young people with the lowest wellbeing feel confident posting their own writing online, this doubles to **2 in 5** (40.0%) of those with high wellbeing.
- While more than **3 in 4** (76.2%) young people with high mental wellbeing say they know how to check if the information they find online is true, this decreases to **3 in 5** (60.4%) of those with the lowest mental wellbeing. Similarly, more of those with high mental wellbeing say they know how to check who has written something online and decide if they can be trusted (68.0% vs. 52.8% of those with low wellbeing).

Nearly three times as many young people with high critical digital literacy scores have high mental wellbeing.

- Finally, we constructed a variable based on responses to questions about critical literacy and digital engagement to allow us to explore any differences between young people with low and high critical digital literacy engagement.
- High literacy engagement was associated with better critical digital literacy attitudes and behaviours, suggesting that young people with low literacy engagement are at risk of missing out in the digital age.
- Young people with high levels of critical digital literacy also had the highest mental wellbeing. Indeed, compared with young people with low critical digital literacy engagement, **nearly three times as many** young people with the highest critical digital literacy engagement scores have high levels of mental wellbeing (11.6% vs. 30.2%).

More young people learn about trusting online information from parents than teachers.

- Parents and teachers were the most-cited sources of advice for young people in relation to learning how to decide if online information can be trusted. Half (50.6%) of young people said that parents had been sources of guidance for them in this area, while **2 in 5** (38.8%) said that teachers had provided online advice. However, almost half (48.3%) of young people said they learned how to communicate effectively online by themselves.

Introduction

This study aimed to explore young people's online communication, literacy and wellbeing in 2021. Three questions guided the overall research, including the literature review and the qualitative and quantitative phases:

1) What are the perceived benefits and drawbacks of digital platforms for young people's literacy, self-expression, relationships and wellbeing?
2) How do demographic factors, particularly gender and socio-economic background, influence digital attitudes, behaviours and outcomes?
3) What are young people's attitudes and behaviours when reading, writing and posting content online, and to what extent do they employ critical literacy strategies when navigating the digital environment?

Starting with a review of existing research relating to literacy, critical digital literacy and young people's attitudes and behaviours when reading, writing and communicating online, the study then explored themes emerging from this review through focus groups with young people and in informal interviews with educational, industry and academic experts. Findings from each of these phases were used to inform the design of a survey of young people aged 11 to 16 in schools across the UK.

Literacy in the digital age

Online environments are an integral part of the lives of many young people. Surveys indicate that almost half of 10- to 15-year-olds in England and Wales spend three or more hours online on a typical school day (Office for National Statistics [ONS], 2021). Popular online activities include social media and playing video games. In 2020, almost **9 in 10** (87%) 12- to 15-year-olds said they used social media sites, and the same proportion of this age group said they played video games for an average of 1 hour and 28 minutes at a time (Ofcom, 2021).

The digital revolution has influenced the nature and purpose of literacy, transforming both what it means to be literate and how literacy is enacted in everyday life. Over recent decades, literacy has increasingly become interwoven with digital practices, and online and offline literacies can be seen to inform each other (Alvermann, 2008; Darvin, 2019). Studies have shown that reading digitally can increase engagement with print reading (Picton and Clark, 2015) and that young people who are "extensively engaged" in online reading are "generally more proficient readers" (OECD, 2010). At the same time, reading in print can support digital reading skills, suggesting that in an increasingly digital future, young people who read print books will have an advantage across all formats (Støle & Schwippert, 2017).

The affordances of digital media also provide young people with a multitude of new ways to learn, share and connect with others. Reading and writing are "deeply implicated" in these changes (Burnett and Merchant, 2019) and literacy plays an essential part in realising the potential of these new modes of communication. Some studies suggest that some young people may spend more time interacting with friends online than face to face (Gomez-Baya et al., 2019) and more time writing on social media than in the classroom, with digital platforms presenting "more engaging and authentic" writing opportunities, allowing young

people free self-expression, social interaction and an appreciative audience (Galvin & Greenhow, 2020). While online communication platforms often require young people to employ traditional literacy skills, broader and more complex literacy skills, including critical digital literacy, are also important (Cope & Kalantzis, 2009; OECD, 2021).

Much of the previous research exploring the impact of technology on literacy has approached digital literacies through the lens of print literacies (Wohlwend and Lewis, 2011), focusing on issues such as differences in comprehension when reading in print or on screen (see, e.g., Plak et al., 2016; Delgado et al., 2018; Støle et al., 2020). Other studies have taken a more holistic view, emphasising the need to teach today's students both technology-based and 'deep' reading techniques (see, e.g., Wolf, as cited by Richardson, 2014), recognising that young people's reading, writing, speaking and listening interactions take place across an 'ecosystem' of print and digital texts. Indeed, academics have been proposing new frameworks of "connected reading" to conceptualise young people's literacy practices (Turner et al., 2020).

The influence of gender on literacy and digital engagement

Several studies have explored associations between literacy, digital literacy, and gender. For example, OECD Progress in International Student Assessment (PISA) studies have found that the gap between boys' and girls' reading performance narrows significantly when assessments take place on screen (OECD, 2015; Griffiths, 2019). Researchers suggested that boys' familiarity and comfort around screens, based mainly on increased time playing video games, may give them an advantage when navigating digital texts (OECD, 2015a). Conversely, findings from a Norwegian study suggest that the best-performing girl readers are disadvantaged by digital reading tests (Støle et al., 2020). At the same time, our own research has found that disengaged boy readers, older pupils and those eligible for free school meals are more likely read fiction on screen compared with their peers (Clark and Picton, 2019). Furthermore, half (49.9%) of boys who don't otherwise enjoy reading agree that "Reading on screen is cooler than reading a book" (Picton et al., 2020).

Gender has also been associated with device use and online communication preferences. More boys say that they use devices, such as games consoles, while more girls report using visual apps and platforms like TikTok and Snapchat (see, e.g., Katz & El Asam, 2019; Ofcom, 2021). Research has also found social media and video-game playing to have different effects on young people in relation to gender. For example, one study found that the magnitude of the association between greater hours of social media use and depressive symptoms is larger for girls than boys (Kelly et al., 2019). At the same time, another study using the same UK dataset found that boys who played video games most days experienced 24% fewer depressive symptoms compared with those who played less than once a month (Kandola et al., 2021), particularly among boys reporting lower levels of physical activity. Authors hypothesised that this group might derive enjoyment and social interaction from video-game playing.

The potential positive benefits of social media for wellbeing are highlighted by surveys showing, for example, that more than half (54%) of girls and 41% of boys use social media to send "supportive messages, comments or posts" to friends (Ofcom, 2021). However, the

highly visual nature of the current social media environment can also facilitate a focus on appearances and comparison, and the negative impact of this on young people, particularly girls and young women, has been explored in several studies (see, e.g., McLean et al., 2017; Milmo & Skopeliti, 2021; Orben et al., 2022, Royal Society for Public Health, 2017; Wells et al., 2021). Indeed, Orben et al., (2022) found "distinct developmental windows of sensitivity" to social media use in adolescence, when higher use predicted lower life satisfaction ratings particularly for females at ages 11 to 13 and 19, and males at 14 to 15 and 19.

Studies have also found that girls are less likely than boys to agree with the statement: "My online life opens up possibilities for me" (Katz & El Asam, 2019). While the authors suggest this may point to a need to encourage girls to "explore online spaces and opportunities more", evidence submitted to the UK Government's Online Harms White Paper suggested "… half of girls aware of sexist abuse on social media say this has restricted what they do or aspire to do in some way" (DCMS & Home Office, 2020). Research indicates that girls who feel unsafe in their local environment are at increased risk of poorer wellbeing and psychological distress (Crenna-Jennings, 2021), and this may also be relevant to online experiences. Indeed, while cyber-bullying and offensive content feature almost daily in news stories relating to online life, "most of these issues are not unique to the Internet, but rather are manifestations of offline problems" (Harrison, 2021). Studies also suggest that boys could also benefit from more support around social media use and wellbeing (Katz at El Asam, 2019, Law, 2019).

Socio-economic background and learning how to engage effectively online

Our research shows that fewer children and young people from lower-income homes have books of their own at home (Clark and Picton, 2021) and this also applies to digital resources. For example, the COVID-19 pandemic highlighted the 'digital divide', with significantly fewer children from lower-income households able to access the digital resources needed for effective remote learning (see, e.g., Teach First, 2020; Ofcom, 2021a). In addition, users need the "technical, social, critical, strategic and creative" skills to be able to take advantage of opportunities digital technology offers to improve their life chances (Ragnedda and Ruiu, 2017, see also Van Deursen & Helsper, 2015).

However, research shows that young people learn about digital practices in unequal ways that are influenced, and potentially limited, by the school and home environment. Academics argue that a focus on more passive entertainment-led activities at home and technical (rather than critical and creative) skills at school risks reproducing social inequality by marginalising young people (Darvin, 2019). Recent UK surveys have shown, for example, that children from the most financially vulnerable households are less likely to explore the online world, visit news sites or apps, or share or discuss news stories than those from more financially secure homes (Ofcom, 2021).

Many researchers have highlighted the essential role of school libraries as a 'third space' between the "first space of young people's immersion in media and the second space of education" (McDougall, n.d.). Librarians play a crucial role in equipping students with digital, critical and information literacy skills (Lance & Maniotes, 2020) and the Great School Libraries Campaign reminds us that libraries can "deliver and teach essential information/critical

literacy skills to combat fake news and engender independent learning" (Great School Libraries, 2018). These efforts to support young people with critical approaches to digital engagement and effective online communication are essential for providing all young people with the skills and confidence they need to thrive in the digital environment. Young people who don't have these skills may be disadvantaged both in terms of employment prospects and in their ability to use online communication to support positive and enriching relationships.

Literacy, digital engagement and wellbeing

The transition into adolescence is often accompanied by changes in emotional state and a decline in young people's sense of mental wellbeing (see, e.g., Department for Education [DfE], 2019; Katz & El Asam, 2019). Researchers have explored associations between poor mental and emotional health scores in adolescents and factors including literacy, family income, gender and social media use. For example, one study found that children who are the most engaged with literacy (who enjoy reading and read for pleasure frequently) are three times more likely to have higher levels of mental wellbeing than children who are least engaged (39.4% vs. 11.8%, Clark and Teravainen-Goff, 2018).

At the same time, several studies using the UK-wide Millennium Cohort Study (MCS) have found differences in wellbeing in relation to age, gender and socio-economic background. Some analyses have noted that "peer and family relationships, alongside their wider school and neighbourhood environment, have the strongest links to children and young people's wellbeing" (DfE, 2019), while others have noted that young people from lower-income homes are more likely to have worse mental and emotional health scores than their peers from more financially secure backgrounds (Crenna-Jennings, 2021).

A 2021 survey of more than half a million 9- to 17-year-olds found that children and young people list mental-health issues as their biggest concern, with girls and older children in deprived areas the most affected (Children's Commissioner, 2021). By contrast, and perhaps surprisingly, three-quarters (74%) of respondents report being 'happy' with their experiences online, a fifth (21%) consider them 'fine' and just 5% report being 'unhappy'. However, heavy social media use has been found to be associated with lower wellbeing, particularly in girls (Crenna-Jennings, 2021; Kelly et al., 2019; Internet Matters, 2022).

A feature of research in this area is the complex and sometimes contradictory nature of findings across different surveys. For example, another study using data from the UK MCS alongside other large-scale surveys, but employing different methodology, suggested that only 0.4% of wellbeing in adolescents could be associated with technology use (Orben & Przybylski, 2019; see also Schemer et al., 2021; Vuorre et al., 2021). Other studies have also found that "decreases in life satisfaction" predict subsequent increases in estimates social media use (Orben et al., 2022) and that young people believe social media can support their social and emotional wellbeing, such as by boosting confidence and alleviating anxiety, loneliness and depression (Greenhow and Robelia, 2009; Katz & El Asam, 2020; UNCRC, 2021).

The role of critical digital literacy

Concerns about the spread of misinformation online have seen renewed interest in supporting young people's critical literacy skills (see, e.g., Burnett and Merchant, 2011; Farrar & Stone, 2019; Payton and Hague, 2010; Picton and Teravainen, 2017). A key principle of critical literacy is its positioning of readers as active participants in the reading process, inviting them to move beyond "passively accepting the text's message to question, examine or dispute the power relations that exist between readers and authors" (Freire, as cited by McLaughlin and De Voogd, 2004). Critical literacy has also been described as lying on "a continuum of meaning", from "the ability to … interrogate issues of motivation and power in language" to "… the critical analysis of communication which motivates subsequent social or political action to redress inequalities and injustices" (Holmes-Henderson, 2014).

Critical literacy traditions have long informed approaches to supporting young people's interactions online, suggesting that approaches to critical reading of online texts may build successfully upon print approaches (see, e.g., Kellner, 2004). For example, Hinrichsen and Coombs (2014) advocate an expansion of Luke and Freebody's 'Four Resources' model of reading (1999), which described the "reader roles" of code breaking, text participation, text using and text analysing, and these roles provide important foundations from which to advance concepts of critical literacy for the digital age (see **Figure 1**). Adding the concept of 'persona' recognises that online reading, writing and communication affords students opportunities for identity development and exploration, including multiple presentations of the self (see e.g. Fullwood et al., 2016; Greenhow & Robelia, 2009a; Hull & Stornaiuolo, 2010; Pescott, 2020).

Figure 1: The five resources model of critical digital literacy

(Source: Hinrichsen and Coombs (2013). The model, its elements and diagrams are licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 2.0 UK: England & Wales License)

It is important to distinguish between the more 'functional' (practical skills and knowledge) and 'critical' components of digital literacy, such as the ability to evaluate online content in relation to bias and trustworthiness (see, e.g., Poore, 2011; Buckingham, 2015; Polizzi, 2017;

Helsper et al., 2021). Studies have found that, rather than technical skills, inequalities in critical literacy, social-communicative and content-creation skills lead to inequalities in outcomes, concluding that "training in more critical, digital literacy, [is] fundamental if we want to avoid larger inequalities in increasingly digital societies" (Helpser & Smirnova, 2019).

In addition, there is promising evidence of the impact of school-based resources and interventions designed to support critical digital literacy when using social media (see, e.g. McLean et al., 2017, Gordon et al., 2020).

To summarise, critical literacy traditions have informed new approaches to supporting young people's interactions online, encouraging a consideration of how language is used, meanings are represented and power operates in digital spaces. By also considering how technology can support empowerment and respond to diverse identities and perspectives, educators can support positive engagement with social media in a way that reframes these earlier critical traditions for the digital age.

Focus group discussions with young people

Following the review of literature, we commissioned a series of online focus groups with young people aged 13 to 15 in the summer and autumn of 2021. In total, these involved 16 young people from schools across the UK, with each group discussing literacy, online communication and wellbeing for approximately 60 minutes.

Young people's comments indicated that much of their online reading was driven by the relevance and relatability of online content, particularly non-fiction topics including mental health or current affairs. For example, one girl told us: "*Some of the things just don't get talked about much in person. But when you go online, it's everywhere, mental health … there's loads of different … help sites and different ways to help people or even yourself.*" Online content could inspire some to seek out longer-form texts if it caught their interest: "*I prefer to watch clips [but] I will read a full article from the beginning to the end, so I understand a bit better.*"

Most of the young people in the focus groups were thoughtful and sensitive about the potential benefits and drawbacks of online communication. As highlighted in other surveys, many reported using social media to curate positive, supportive friendship groups. Girls, in particular, shared how they considered how their own online communication might affect others: *"Usually before I send something to someone, I think … I'm thinking of it in a certain way, they might read it in a different way and I'm conscious of that."* More boys spoke about communication while playing video games*: "Online, I feel like it might be easier to express yourself, because some people find it easier just to talk to people without being face to face. Some people find it easier just to talk to them. And just hear them."* However, confidence in posting writing online was low for most, especially if writing for an audience beyond a friendship group. As one young person explained: "*If I'm on social media, I'm usually talking to people I know. It's rare I put out something for a large variety of people to see. But if I was, I would think more about it, because I can't do that.*"

Most young people said they were cautious about trusting the information they saw online: "*You have to make sure you have a reliable source to read from … if I want to find something*

out what's going on the world, [I look for something] trusted by many people." At the same time, others suggested that social media could be considered superior to traditional news sources: *"It's not like, one news station, where … they're always trying to put across the same message, because social media is so diverse."* This exposure to different points of view was valued by young people: *"It really helps you take your own side on it and see all the positives and negatives to everything."*

When asked to share how they learned how to communicate effectively on digital platforms, most young people struggled to respond, or suggested they'd learned through trial and error: *"If you post something, and then people take it the wrong way, you kind of learn what to post. I'm quite mindful of what I post and what I see."* When asked what they'd like to learn about the digital world, most struggled to suggest anything beyond online safety, privacy and screen time. However, when asked what advice they would have offered to their younger selves about online communication, comments were much broader in scope. These helpful reflections by young people informed survey design and will form the foundation for resource development.

The survey

Survey method: participants and procedure

The questionnaire consisted of 23 questions and four demographic questions (e.g. gender, age, eligibility for free school meals and ethnicity). Fourteen questions on literacy attitudes, behaviours, confidence and enjoyment were based on the National Literacy Trust (NLT)'s annual literacy survey (see e.g. Clark & Picton, 2021). Regarding digital access and use, we included one question from Version 2 of the Global Kids Online Survey (Global Kids Online, 2020) and one on use adapted from the Digital Reach survey (Helsper, 2015). These were supplemented by seven statements from the Presentation of Online Self Scale (Fullwood, 2016), six items on digital literacy adapted from the Youth Digital Skills Indicator (yDSI) survey (Helsper et al., 2021) and one from a media literacy scale (Powers et al., 2018). Two questions (with six items) on wellbeing were taken from the NLT's survey on mental wellbeing, reading and writing (Clark & Teravainen-Goff, 2018[1]).

Finally, a range of items on digital experiences, online reading and empowerment were inspired by the 2019 Cybersurvey (Katz & El Asam, 2019), the Girls' Attitudes Survey (Girl Guiding 2020, 2021) and the Youth Index survey (The Prince's Trust, 2019), along with research conducted by The Reading Agency and Ofcom in 2020. Remaining questions were based on findings from the literature review, expert consultations and statements taken from focus group discussions with young people.

[1] Adapted in this study from the resilience scale of New Philanthropy Capital's wellbeing measure

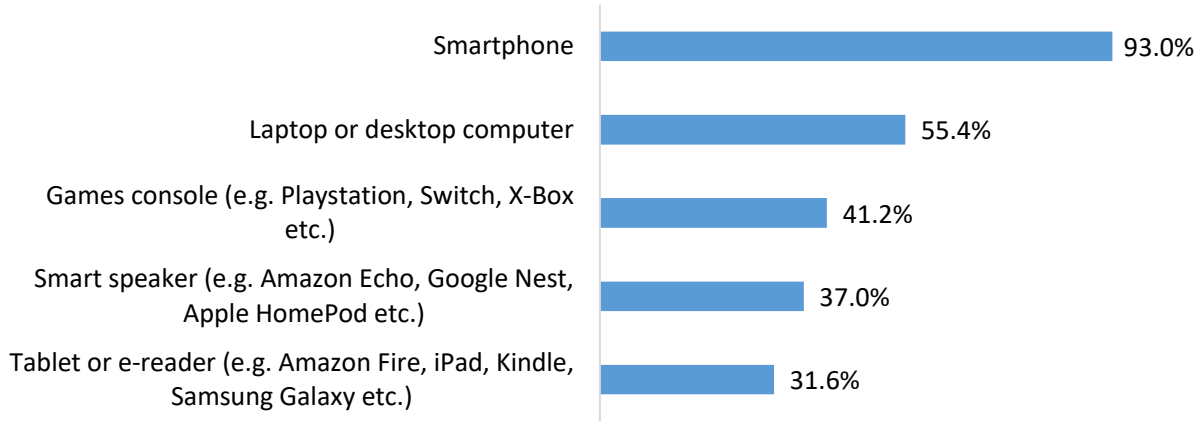
Sample characteristics

The survey ran in October and November 2021, receiving responses from 7,494[2] pupils aged 11 to 16[3] in schools across the UK. Slightly more boys than girls took part (boys n = 3,869 [51.6%]; girls n = 3,110 [41.5%]; I would rather not say n = 248 [3.3%]; I describe myself another way n = 267 [3.6%]). 10.3% (n = 767) of respondents received free school meals (FSMs), 81.9% (n = 6,109) did not receive FSMs, 6.3% (n = 470) didn't know and 1.5% (n = 111) would rather not say[4]. Further characteristics are given in the appendix.

Findings

Regarding access, most of the 11- to 16-year-olds responding to the survey had digital devices and used these to go online regularly (see **Figure 2**). Smartphones were the most popular device used to go online by the young people in our sample, with more than 9 in 10 using them to go online daily or more often. At the same time, more than half (55.4%) said they went online daily using a laptop and 2 in 5 (41.2%) using a games console. Tablets and e-readers were the least popular devices for accessing the internet, with just 1 in 3 (31.6%) using them. Indeed, more young people reported using a smart speaker than a tablet or e-reader daily (37.0%).

Figure 2: Going online or using the internet daily or more often by device



What literacy-related activities do young people participate in online?

Many young people are motivated to read online as content matches their interests, but online reading also inspires wider reading. Although the percentage of young people writing fiction is relatively equal on paper and on screen, few feel confident about posting their writing online.

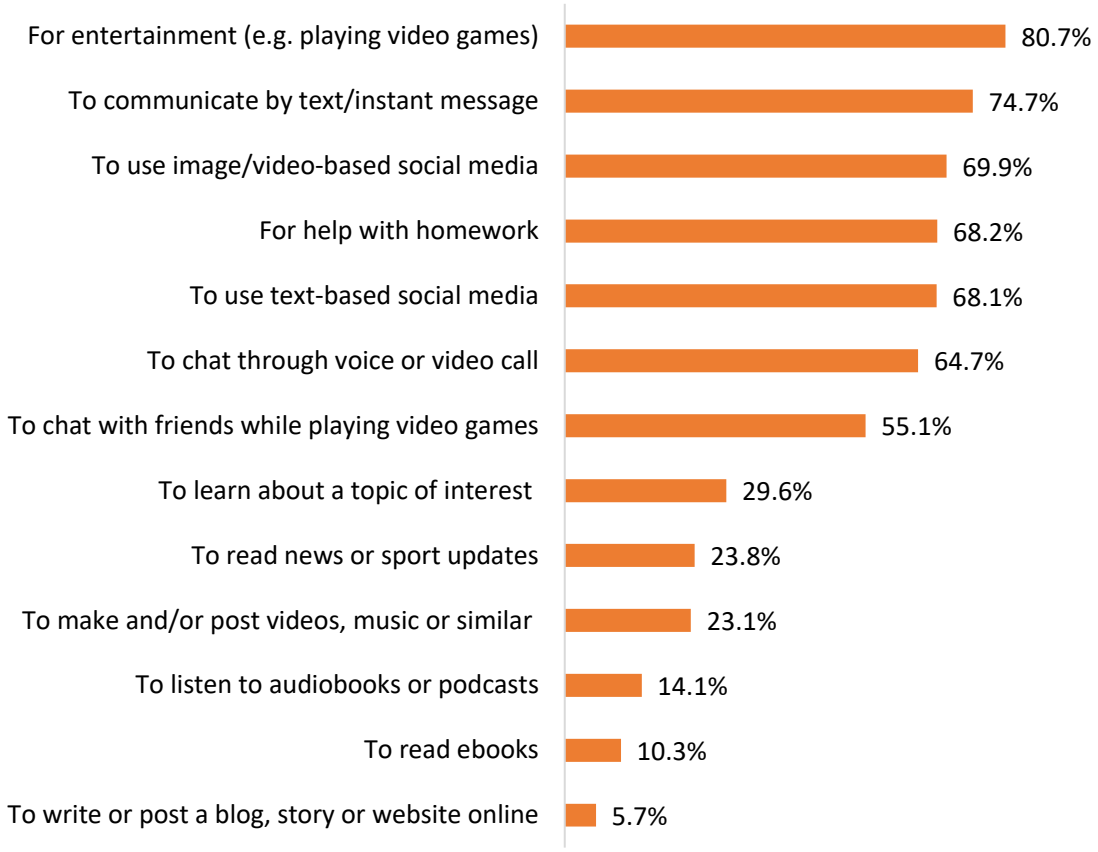
[2] Comprised of 7,135 full responses and 359 partial responses (more than two-thirds of the survey completed)

[3] Age groups: 10-11, n = 40 (0.5%); 11-12, n = 2451 (32.9%); 12-13, n = 1918 (25.8%); 13-14, n = 1315 (17.7%); 14-15, n = 855 (11.5%); 15-16, n = 866 (11.6%); [no response n = 49]

[4] [no response n = 37]

In a typical day, most young people used their digital devices for entertainment (such as playing video games; see **Figure 3**). However, around 3 in 4 (74.7%) said they went online to communicate with friends and family through text or instant messages, and a similar percentage (69.9% or 7 in 10) to use image-, video- or text-based social media, or for help with homework.

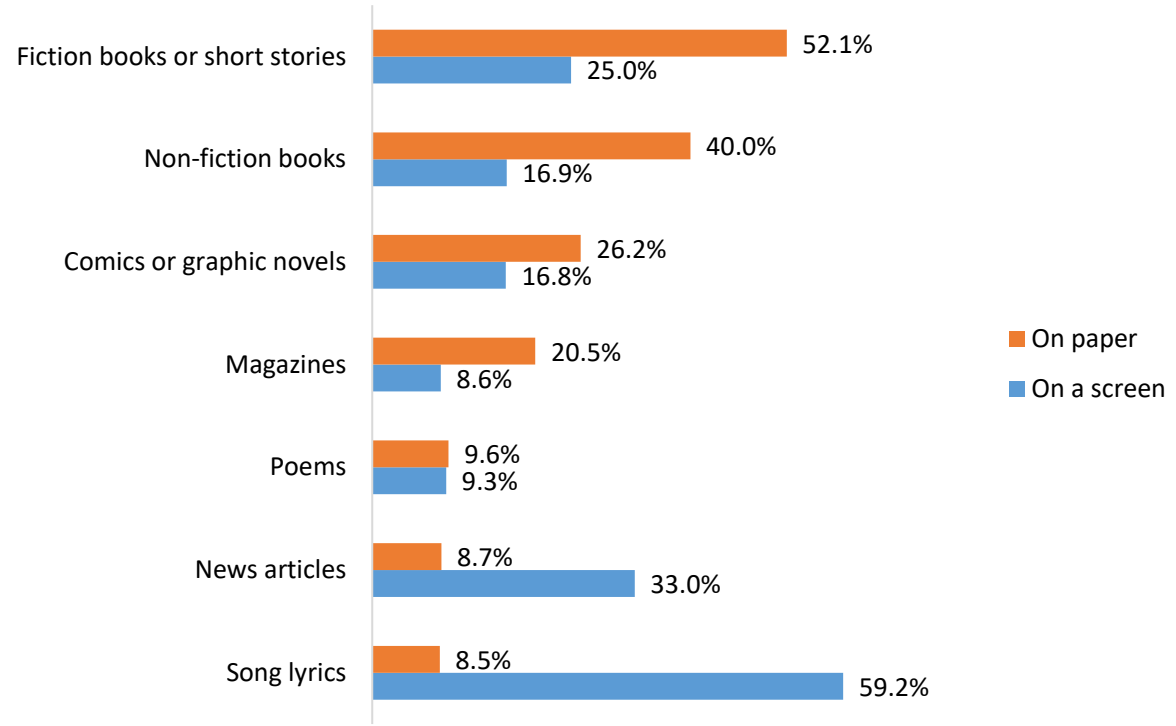
Figure 3: When you're using a device like a phone, laptop or games console, what are your main reasons for doing so in a typical day? (Please tick all that apply)



Chatting with friends is a typical daily device-related activity for more than half of young people, whether through voice or video calls (64.7%) or while playing video games (55.1%). Around 3 in 10 (29.6%) said they went online in a typical day to learn about a topic of interest, but very few young people report going online for creative reasons. Fewer than 1 in 4 (23.1%) said making or posting videos or music is something they do in a typical day, and only 1 in 20 (5.7%) said they write or post blogs or stories online.

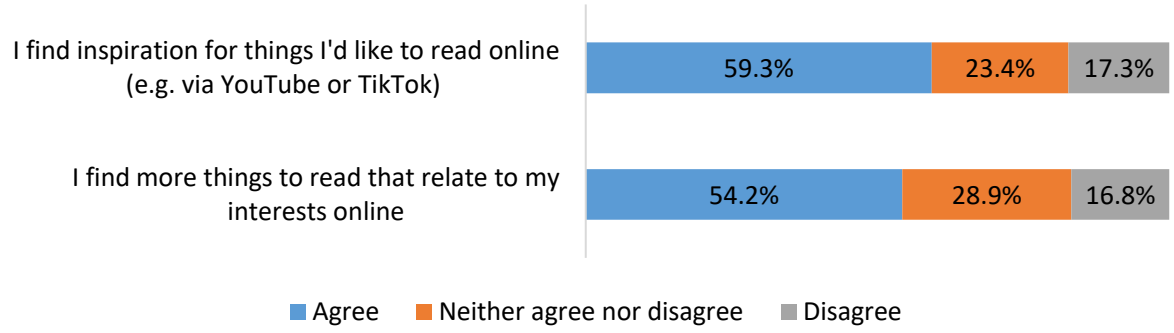
Reading fiction on paper is still the most favoured combination of material and format in this age group, with 52.1% reading fiction this way (see **Figure 4**). At the same time, echoing findings from our earlier research (Clark and Picton, 2019), 1 in 4 (25.0%) young people said they read fiction digitally, and equal percentages said they read poems in print (9.6%) and digital (9.3%) formats. Again, in common with some of our previous surveys, news articles and song lyrics are the only materials that more young people read on screen than on paper.

Figure 4: Do you read any of these in your free time at least once a month? (Please tick all that apply)



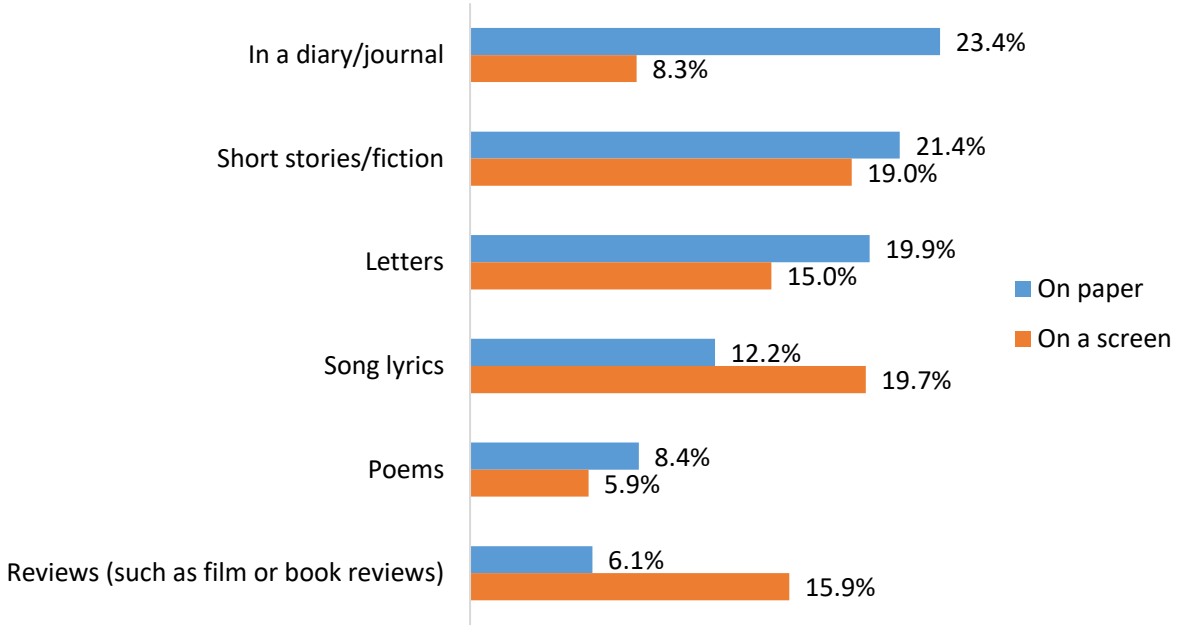
As with the young people we spoke with in the focus groups, more than half (54.2%) of respondents said they found more things to read that relate to their interests online (see **Figure 5**). Encouragingly, 3 in 5 (59.3%) also said they found inspiration for things they would like to read online, demonstrating how online and offline literacies can inform each other.

Figure 5: How much do you agree or disagree with these statements about reading?



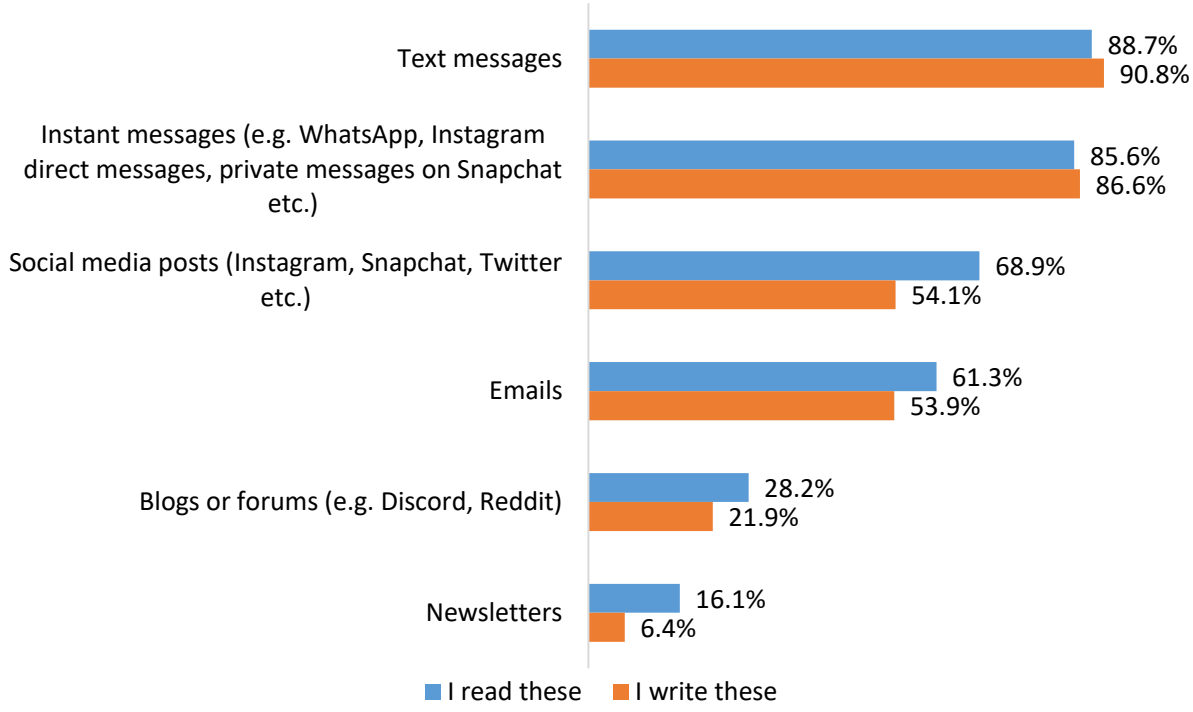
Turning now to writing, writing certain materials, particularly diaries or journals and letters, is more commonly done on paper than on a screen (see **Figure 6**). However, the percentage of people writing short stories or fiction is relatively equal in each format, with around 1 in 5 respondents writing them on paper (21.4%) or on screen (19.0%).

Figure 6: Do you write any of these in your free time at least once a month? (Select all that apply)



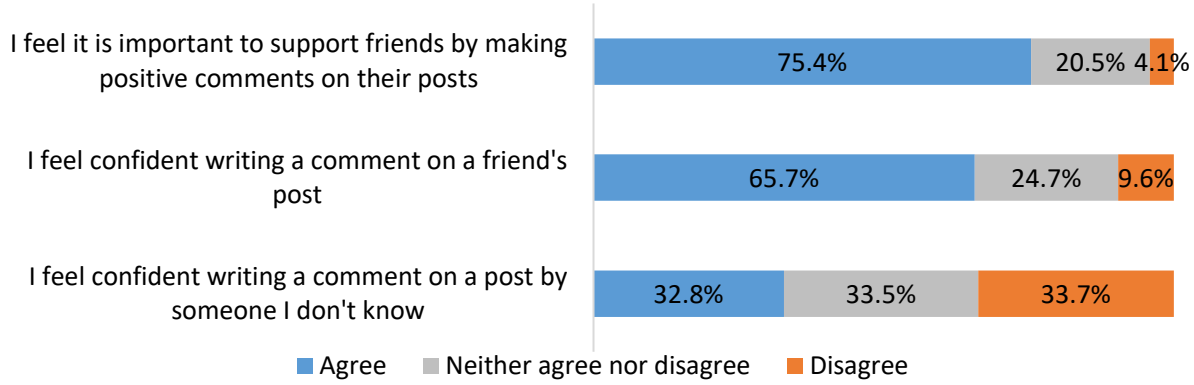
With regard to screen-based reading and writing, text and instant messages are most likely to be both read and written by most young people (see **Figure 7**). However, reflecting findings from focus group discussions, there were larger differences between reading and writing materials that may be more public, such as social media posts and blogs.

Figure 7: Do you write any of these at least once a month in your free time?



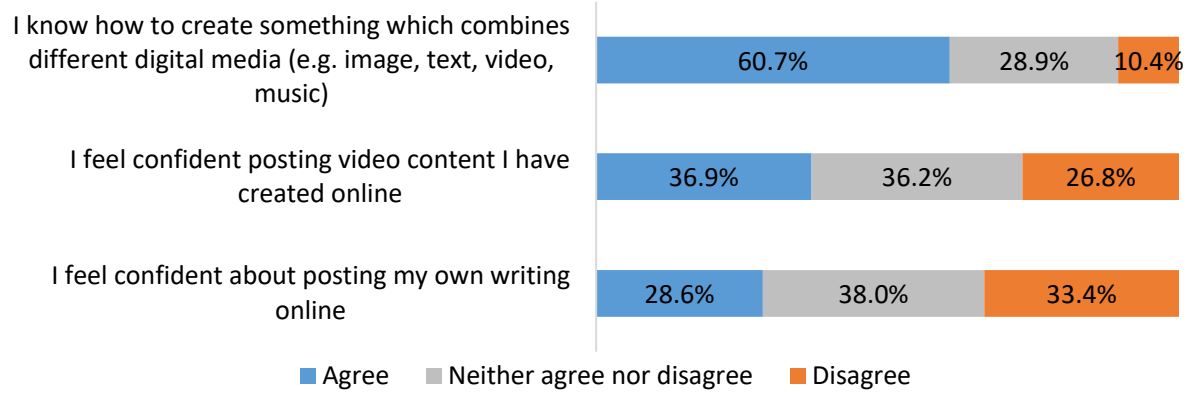
Looking at more interactive writing online, both the literature review and focus group discussions suggested that many young people support their friends by making positive comments on their posts. This was also the case with 3 in 4 (75.4%) young people in our survey (see **Figure 8**). At the same time, twice as many young people said they feel confident about writing a comment on a friend's post than on one by someone they don't know (65.7% vs. 32.8%). This suggests that many prefer to comment only within their existing social circles, reinforcing bonding rather than bridging social capital (see, e.g., Claridge, 2018; Hayes, 2020).

Figure 8. Agreement with statements about writing online



Similarly, when it comes to posting their own content online, while 3 in 5 young people said they know how to create something that combines different digital media (such as image, text, video and music), only 1 in 3 (36.9%) said they feel confident posting video content they have created online (see **Figure 9**). Notably, even fewer feel confident about posting something they have written online, with fewer than 3 in 10 (28.6%) agreeing with this statement.

Figure 9: Agreement with statements about creating and posting content online



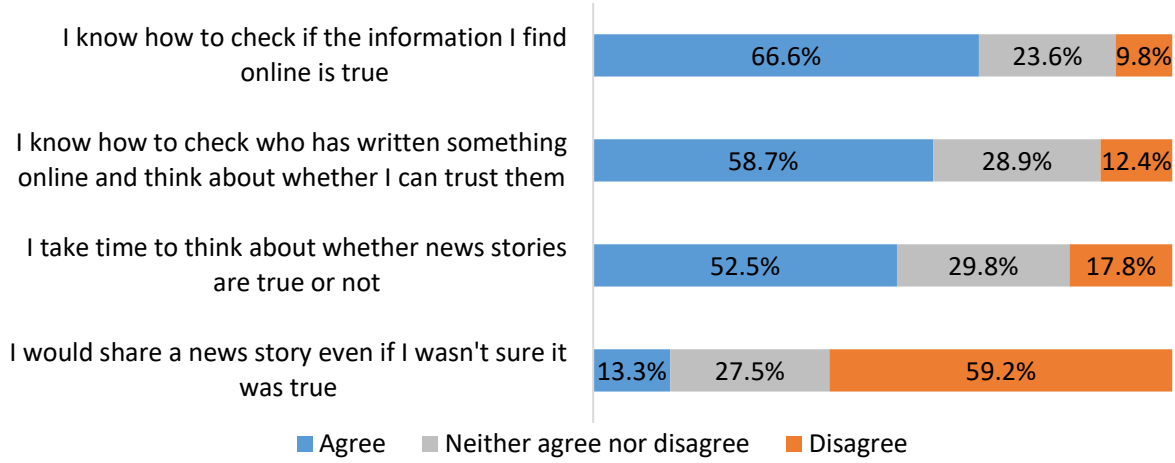
Interestingly, more of those from the younger end of this sample were confident about posting their own writing online. While 1 in 3 (32.6%) young people in Years 6 to 8 (aged 11 to 13) say this, this decreases to 1 in 5 (22.6%) of those in Years 9 to 11 (aged 13 to 16).

Critical approaches to online information and communication

Most young people feel they know how to check online information, but only half take the time to consider news stories. However, many feel that reading online can help inform and expand their thinking.

An important part of our research was to find out more about young people's critical literacy attitudes and behaviours, particularly how these might inform their digital engagement. We first asked young people to what extent they agreed with statements relating to evaluating the trustworthiness of news and information online. As can be seen in **Figure 10**, a relatively high percentage of young people believe they know how to check if information they find online is true, with 2 in 3 (66.6%) young people in this sample saying this and just 1 in 10 (9.8%) saying they do not. Marginally fewer (58.7%, or 3 in 5) said they know how to check the author of something written online and decide if they are trustworthy.

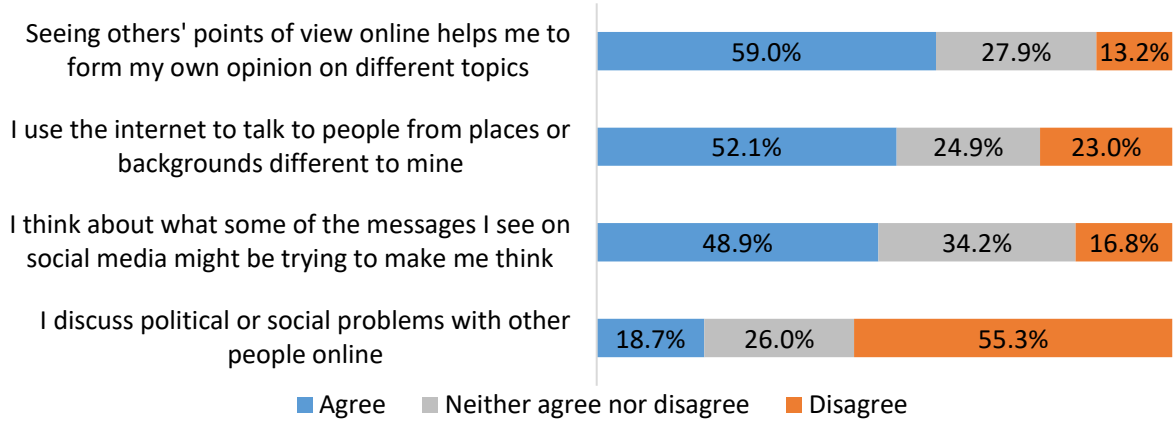
Figure 10: Agreement with information and news literacy statements



It is perhaps encouraging that 3 in 5 (59.2%) young people disagree with the statement that they would share a news story even if they weren't sure it was true. However, only half (52.5%) of young people said that they take time to think about whether news stories are true or not, and almost 1 in 5 (17.8%) said they do not. Notably, fewer of the younger end of the age group in our sample said they take time to think about whether news stories are true. Just under half (49.2%) of 11- to 13-year-olds said this, compared with almost 3 in 5 (57.0%) 13- to 16-year-olds.

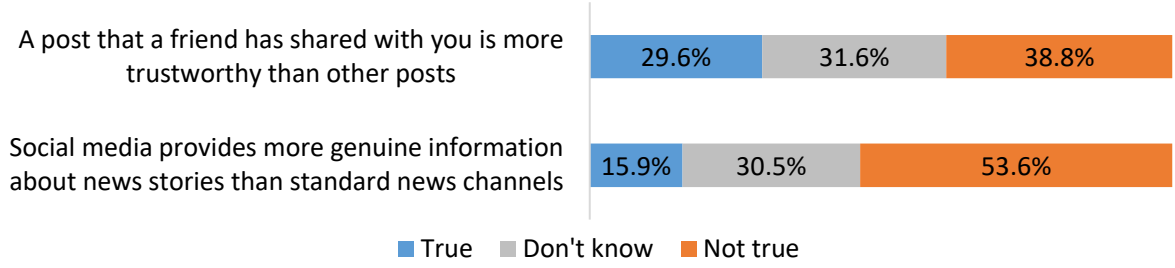
Based on focus group discussions, we were also keen to know whether seeing other people's points of view online helped young people form their own opinion on different topics. Three in 5 (59.0%) respondents agreed with this statement (see **Figure 11**) and more than half (52.1%) agreed that they use the internet to talk to people from places or backgrounds different from their own. In terms of some of the broader messages they might see on social media, just under 1 in 2 (48.9%) young people said they think about what these might be trying to make them think. However, most steer clear of discussing political or social problems online, with fewer than 1 in 5 (18.7%) saying they do this.

Figure 11: Agreement with statements about online reading and communication



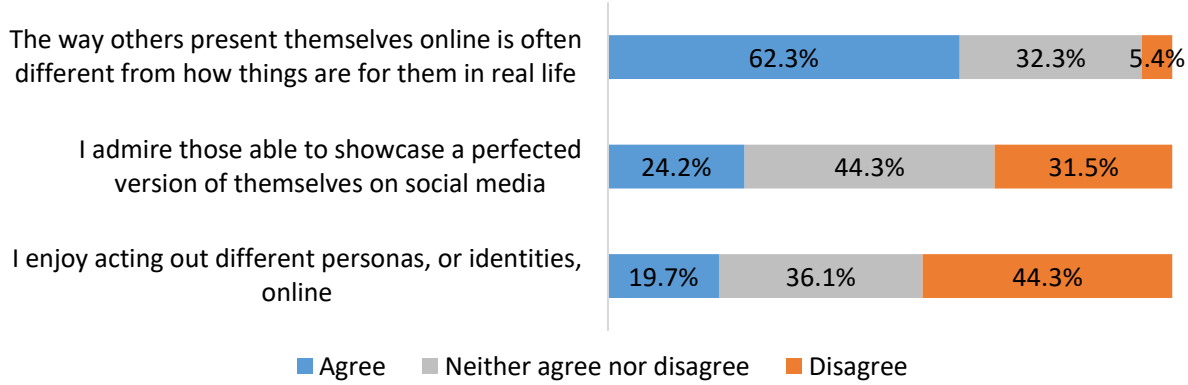
We were also interested to explore how sceptical young people might be about news on social media or posts shared by friends. Most of the young people in our sample were quite savvy in this area. For example, just 3 in 10 (29.6%) agreed that a post shared by a friend was more trustworthy than other posts, and fewer than 1 in 6 (15.9%) believed that social media provides more genuine information about news than standard news channels (see **Figure 12**).

Figure 12: Agreement with statements about trusting posts on social media



In addition, 3 in 5 (62.3%) agreed that the way others present themselves online is often different from how things are for them in real life (see **Figure 13**). While almost 1 in 4 (24.2%) say they admire those able to showcase a perfected version of themselves on social media, just 1 in 5 (19.7%) say they enjoy experimenting with different personas online.

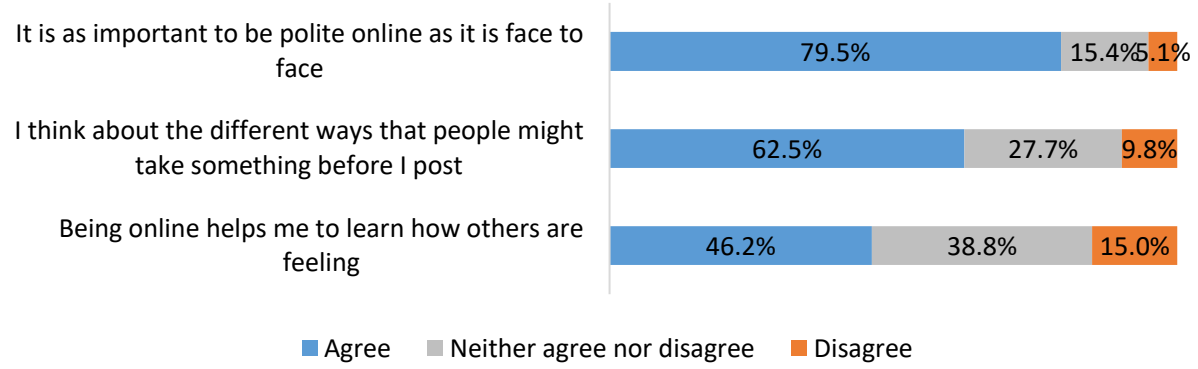
Figure 13: Agreement with statements about persona



Most young people are considerate of others' feelings when communicating online and many feel empowered by their use of social media.

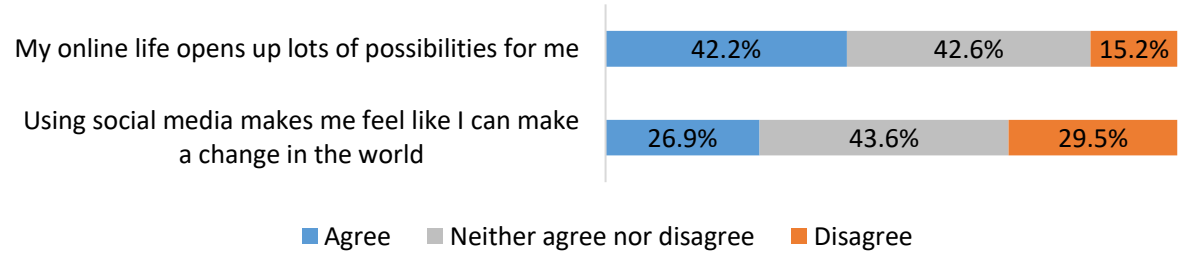
It is worth noting that the majority of young people say they are considerate of others' feelings when communicating online, with 8 in 10 (79.5%) agreeing that it is as important to be polite online as it is face to face and more than 3 in 5 (62.5%) saying they think about the different ways people might take something before they post (see **Figure 14**). In addition, just under half (46.2%) believed that being online helped them to learn how others are feeling.

Figure 14: Agreement with statements about digital civility and empathy



Surveys such as the Cybersurvey (Youthworks, n.d.) and Youth Index (The Prince's Trust, n.d.) have explored concepts around online communication, aspirations, empowerment and participation and we included questions inspired by these surveys in our questionnaire. Hearteningly, more than 2 in 5 (42.2%) of the young people aged 11 to 16 in our own sample agreed that their online life opens up lots of possibilities for them, while 1 in 4 (26.9%) agreed that social media makes them feel like they can make a change in the world (**Figure 15**).

Figure 15: Agreement with statements on aspirations and empowerment

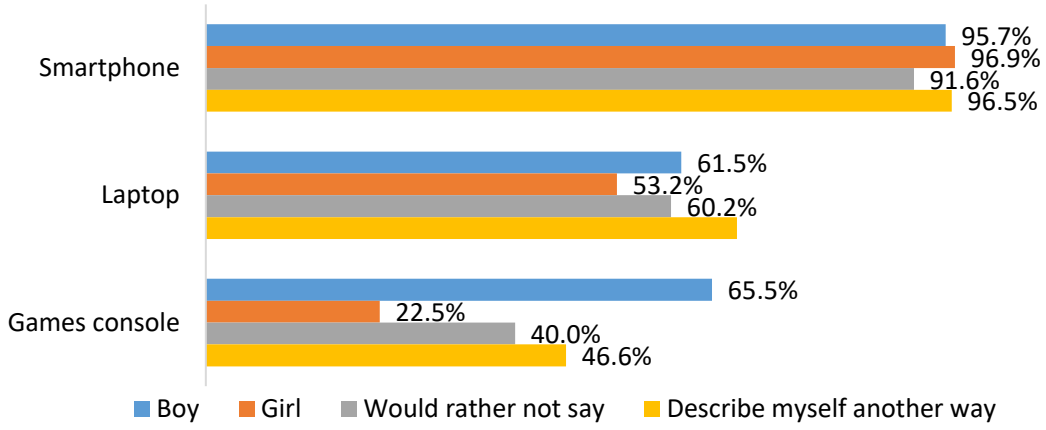


Gender, literacy and online communication

More boys than girls feel that chatting while playing video games helps them to communicate better with friends. More young people who prefer to describe their gender another way say that writing on social media helps them express themselves.

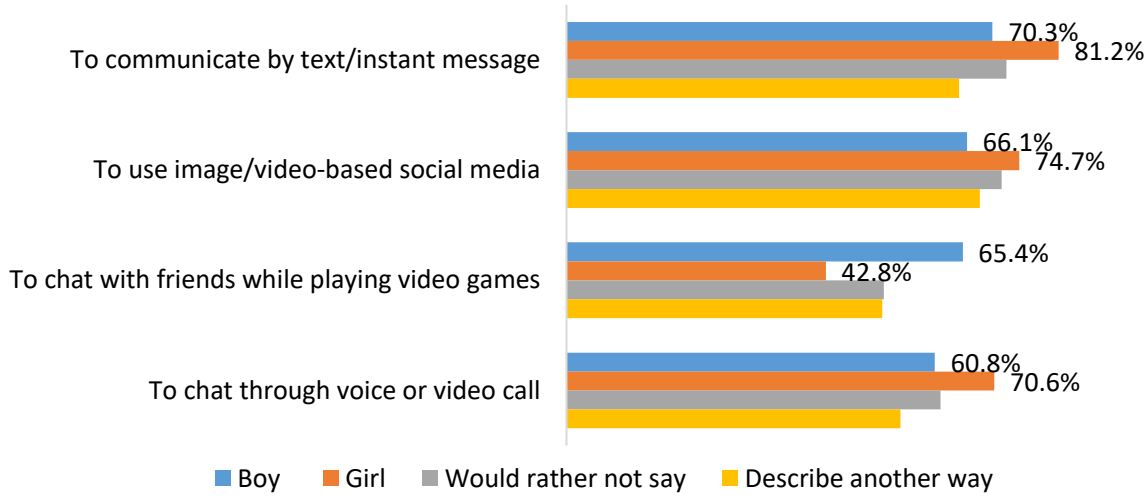
In our sample, as in much existing research, the main differences between genders[5] related to preference for video game- or social media-related communication, confidence in interacting online, using social media for self-expression and the perceived benefits of online communication. Regarding device use, almost three times more boys than girls said that they use a games console daily (65.5% vs. 22.5%, see **Figure 16**). By contrast, gender differences in daily use of smartphones and laptops were much smaller.

Figure 16. Device use (daily or several times a day) and gender



Reflecting device use, more boys said that their main reasons for using devices in a typical day included chatting with friends while playing video games (see **Figure 17**). Nevertheless, the percentage of girls using devices to chat while playing video games is perhaps higher than might have been expected. As in other research, a higher percentage of girls said that they use devices typically to communicate by texts or instant messages (81.2% vs. 70.3%), to use image-, video- and text-based social media (74.7% vs. 66.1%), or to chat through voice or video call (70.6% vs. 60.8%).

Figure 17: Main reasons for using devices in a typical day by gender

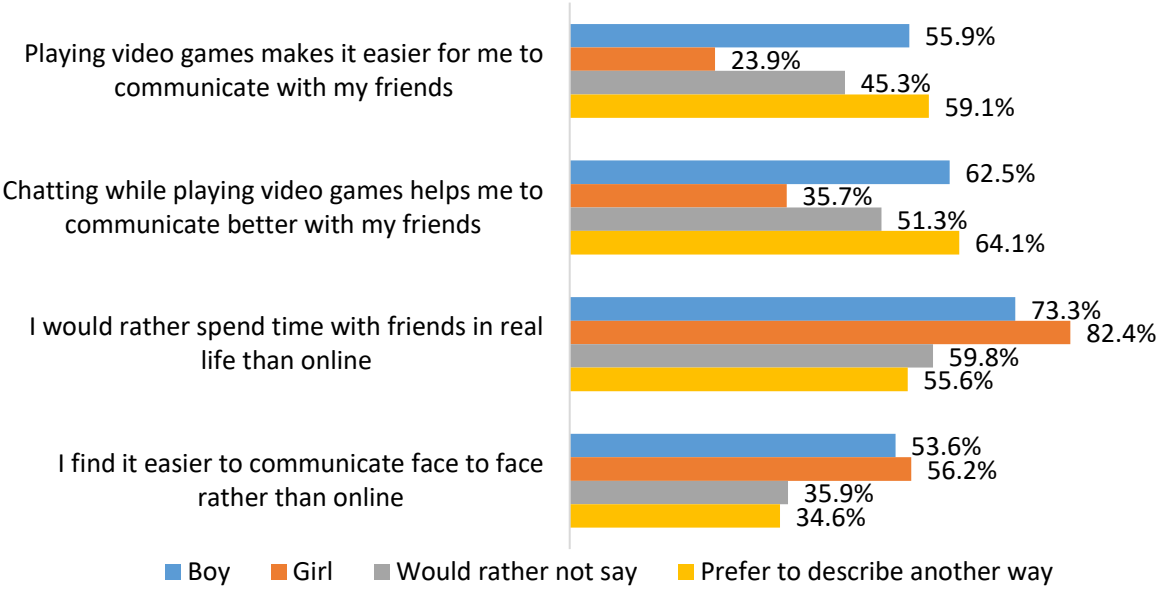


[5] Boys n = 3,869 [51.6%]; girls n = 3,110 [41.5%]; I would rather not say n = 248 [3.3%]; I describe myself another way n = 267 [3.6%].

Boys' preference for communicating with friends while playing video games may also be seen in the percentage agreeing with statements about whether this makes communication easier or better (see **Figure 18**). Almost twice as many boys as girls believed chatting while playing video games helps them communicate better (62.5% of boys vs. 35.7% of girls). While this may simply reflect that more boys play video games, some boys may equally play video games to facilitate socialising. In addition, more young people who describe their gender another way agree with both statements, indicating that this group in particular find it both easier and more effective to communicate with friends this way.

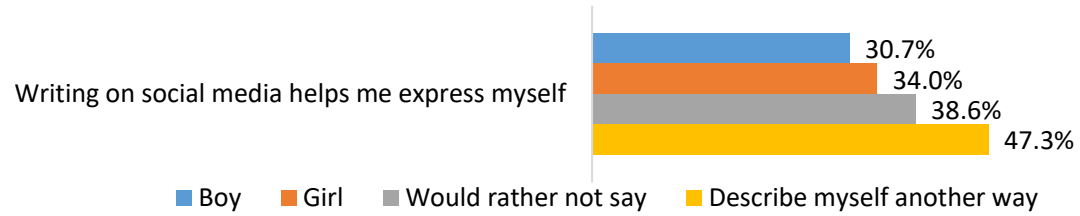
Similarly, when asked about preferences for face-to-face or online communication, more girls expressed a preference for spending time with friends 'in real life'. However, far fewer respondents who would rather not say their gender or prefer to describe their gender another way agreed with this statement, and even fewer said they find it easier to communicate face to face rather than online. Indeed, while more than half of boys (53.6%) and girls (56.2%) find it easier to communicate face to face, this decreases to 1 in 3 young people who would rather not say their gender (35.9%) or prefer to self-describe (34.6%).

Figure 18: Communicating online and gender



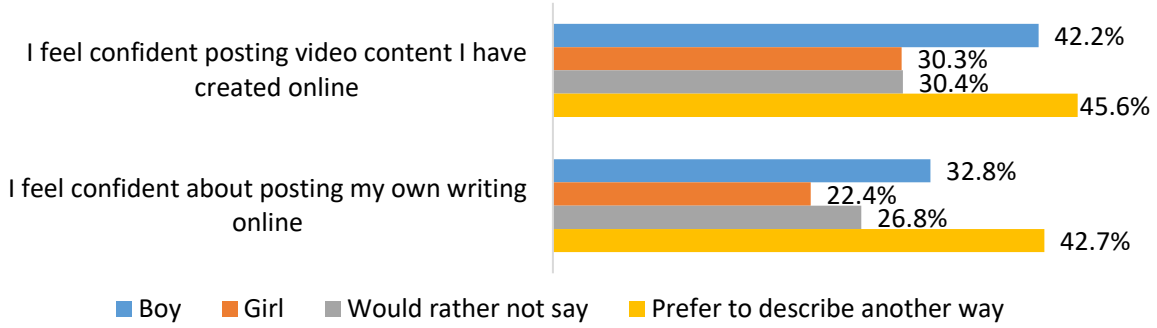
While around 3 in 10 boys and girls said writing on social media helped them express themselves, more of those who would rather not say their gender, particularly those who describe themselves another way, agreed (38.6% and 47.3% respectively, see **Figure 19**).

Figure 19: Agreement with statement about writing on social media and self-expression by gender



When it comes to posting their own content online, more boys than girls said they feel confident about posting content they have created online, whether in video (42.2% vs. 30.3%) or written format (32.8% vs. 22.4%, see **Figure 20**). However, young people who prefer to describe themselves another way were most likely to say that they feel confident about posting video and written content they have created online.

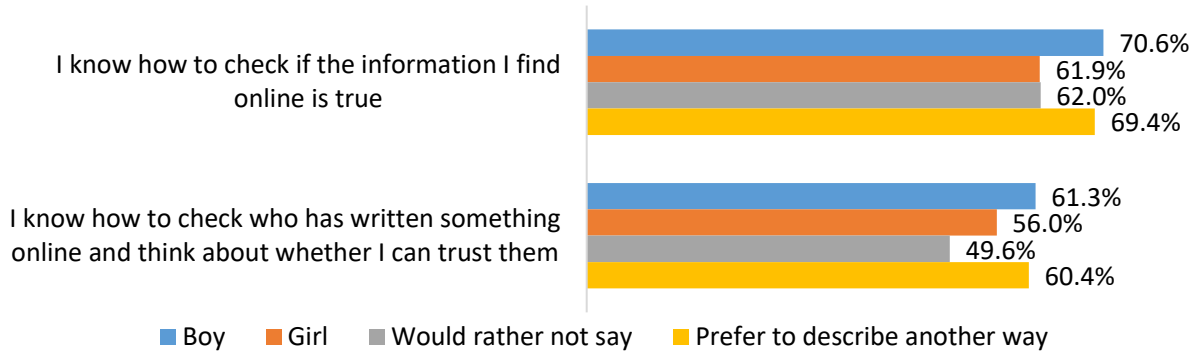
Figure 20: Agreement with statements on creating and posting content online by gender



In addition, compared with boys and girls, more than twice as many young people who prefer to self-describe their gender say they enjoy acting out different personas or identities online (45.4% vs. 18.5% of boys and 18.4% of girls). Taken together, these findings further suggest that online formats may be an important source of self-expression for these groups of young people.

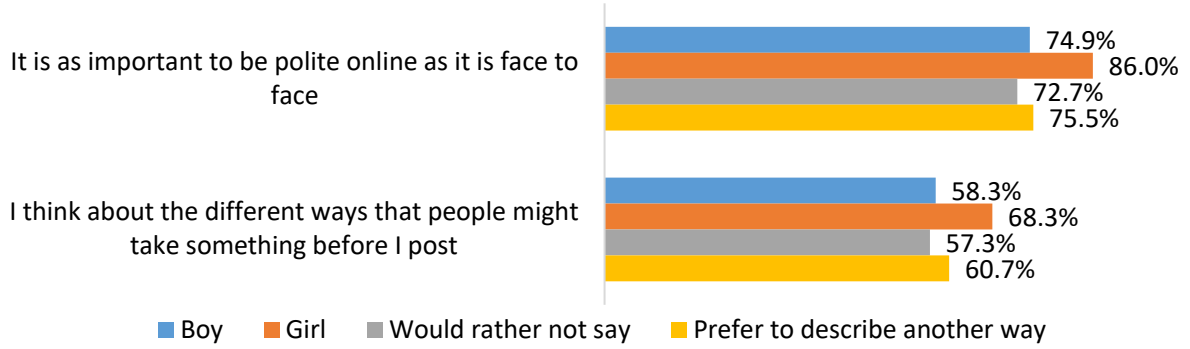
In terms of critical approaches to online news and information, more boys than girls said they feel confident about their ability to check if the information they find online is true (70.6% vs. 61.9%), and to check authorship and trustworthiness (61.3% vs. 56.0%, see **Figure 21**). However, there were no gender differences in whether young people said they took time to think if news stories were true or not.

Figure 21: Agreement with information and news literacy statements by gender



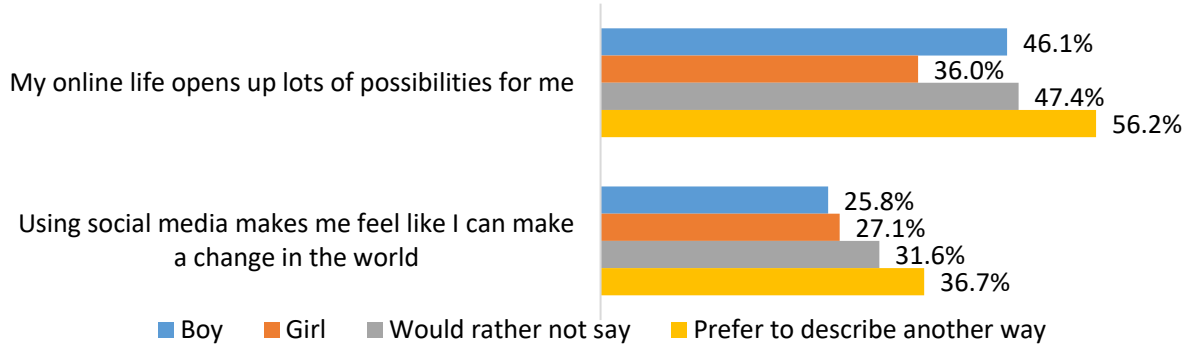
Interestingly, significantly more girls than any other gender believe it is as important to be polite online as it is face to face, with a more than 10-percentage-point (pp) gap between girls and any other gender (see **Figure 22**). Similarly, a higher percentage of girls said they think about the different ways people might interpret something before they post with, again, a 10pp gap between girls and boys who say this (68.3% vs. 58.3%).

Figure 22: Agreement with statements about civility by gender



Finally, our survey found that many more boys than girls feel that their online life opens up possibilities for them. Indeed there was a 10-percentage-point difference between boys and girls agreeing with this statement (46.1% vs. 36.0%, see **Figure 23**). However, more young people who would rather not say their gender, particularly those who prefer to describe their gender another way, agree with this statement (47.4% and 56.2% respectively). More of these groups also agree that using social media makes them feel like they can make a change in the world, suggesting that young people who prefer not to define their gender as 'boy' or 'girl' may benefit from the opportunities for identity exploration, self-expression and widening aspirations offered by online platforms.

Figure 23: Agree with statements on aspirations and empowerment by gender



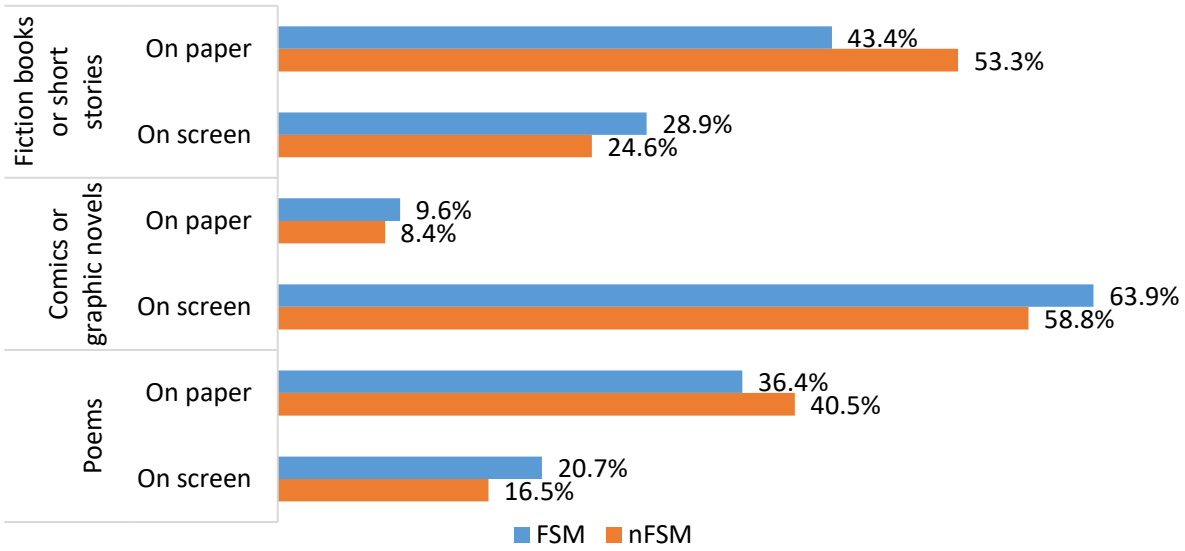
Socio-economic background, literacy and online communication

Compared with their peers from higher-income backgrounds, fewer young people from lower-income homes say they know how to check if online information is true. However, more feel confident posting something they have written online and say using social media makes them feel like they can make a change in the world.

Echoing findings from our earlier research into reading digitally (Clark & Picton, 2019), slightly more young people who receive free school meals (FSMs) than those who do not receive FSMs (nFSMs) said that they read fiction or short stories (28.9% vs. 24.6%), comics and graphic novels (63.9% vs. 58.8%) and poems (20.7% vs. 16.5%) on screen (see **Figure 24**). In addition,

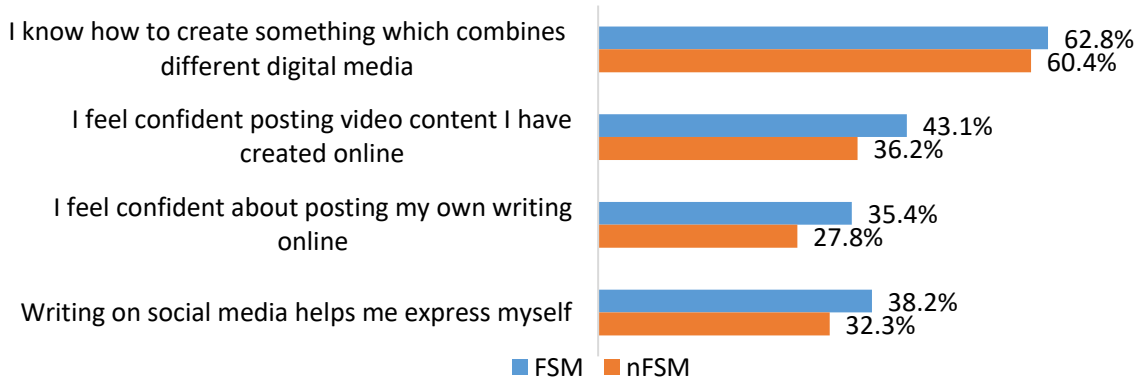
a significantly higher percentage of young people receiving FSMs said they find inspiration for things to read online (63.9% vs. 58.8%)[6].

Figure 24: Reading material and format by socio-economic background



In our sample, fewer young people receiving FSMs reported daily use of laptops compared with young people not receiving FSMs (49.0% vs. 56.1%). Differences were smaller for smartphones (89.9% FSM vs. 93.4%) and slightly more young people receiving FSMs use games consoles daily or more often (46.8% vs. 40.5%). Reasons for using devices in a typical day were broadly similar, however: a slightly higher percentage of young people receiving FSMs said they use digital devices for creative purposes, such as to create or post videos, music or similar content (27.2% vs. 22.7%). Further small differences were found in relation to creating and posting content online, and more young people receiving FSMs said that writing on social media helps them to express themselves (38.2% vs. 32.3%, see **Figure 25**).

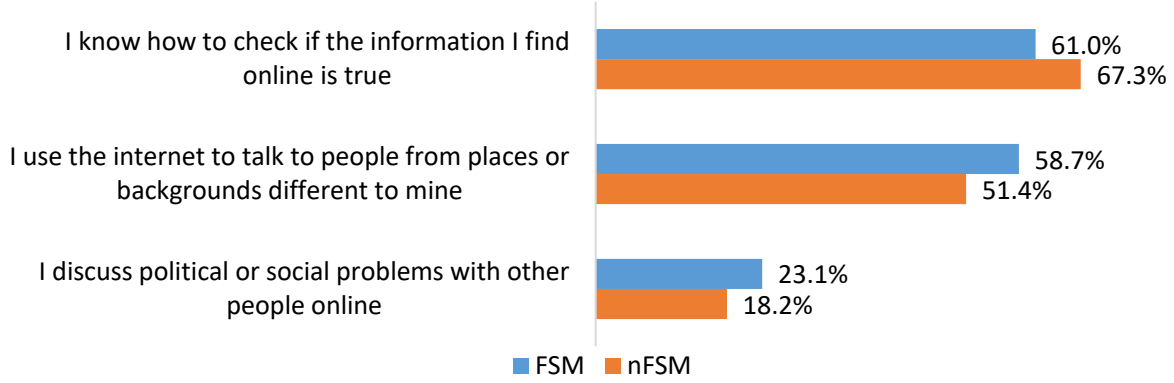
Figure 25: Creating and posting content by socio-economic background



[6] 10.3% (n = 767) of respondents receive free school meals (FSMs), 81.9% (n = 6,109) do not receive FSMs, 6.3% (n = 470) don't know and 1.5% (n = 111) would rather not say. Further characteristics are given in the appendix.

However, fewer young people receiving FSMs than not receiving FSMs agreed that they know how to check if the information they find online is true (61.0% FSM vs. 67.3% nFSM, see **Figure 26**). At the same time, more young people who receive FSMs said that they use the internet to talk to people from places or backgrounds different from their own (58.7% vs. 51.4%) and to discuss political and social issues (23.1% vs. 18.2%).

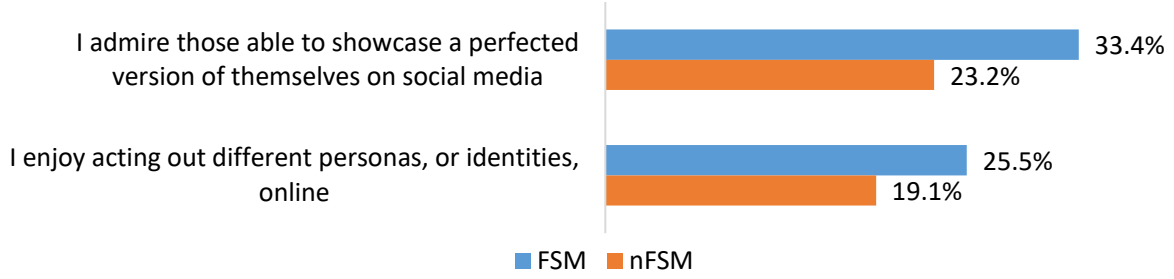
Figure 26: Agreement with statements about online reading and communication by socio-economic background



A slightly higher percentage also believed that social media provides more genuine information about news than standard channels (20.2% FSM vs. 15.4% nFSM).

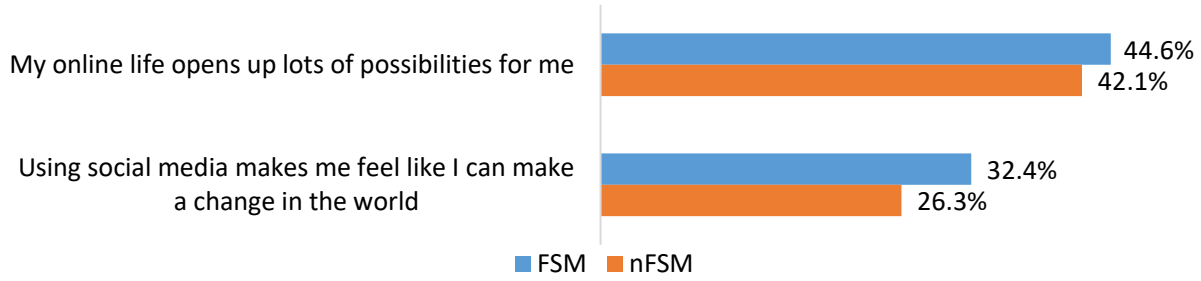
Larger differences were found in relation to persona, with more young people from less financially advantaged backgrounds saying both that they admire those able to showcase a perfected version of themselves on social media and that they enjoy trying out different identities online (25.5% FSM vs. 19.1% nFSM, see **Figure 27**). There was also a 10-percentage-point difference between young people receiving FSMs and those who do not in relation to admiring those able to showcase a perfected version of themselves (33.4% FSM vs. 23.2% nFSM).

Figure 27: Agreement with statements about persona by socio-economic background



When compared with peers not receiving FSMs, more young people receiving FSMs said that they feel their online life opens up lots of possibilities for them, but this difference is only very marginal (44.6% FSM vs. 42.1% nFSM, see **Figure 28**). There was a somewhat larger difference between young people who receive FSMs and those who do not in whether they feel using social media makes them feel like they can make a change in the world (32.4% FSM vs. 26.3% nFSM).

Figure 28: Agree with statements on aspirations and empowerment by socio-economic background



This suggests that young people from lower-income backgrounds may benefit from greater support around critical approaches to reading news and information online. At the same time, it is heartening to note many young people receiving FSMs say they feel confident about, and empowered by, their use of social media.

How does literacy engagement relate to online communication?

Literacy engagement is associated with confidence in interacting online, critical approaches to online reading, and the perceived benefits of online communication.

Conceptualising literacy engagement

One of the main purposes of this research is to explore associations between young people's levels of literacy engagement and their critical approaches to reading and writing online. We constructed a variable to compare responses for young people with high literacy engagement with young people with low literacy engagement. The variable summed responses across 15 literacy-related variables[7] including reading, writing and listening enjoyment, frequency, confidence and attitudes, with higher scores allocated to positive responses. The sample was divided into quartiles[8] to explore differences between those in the lower, or bottom, quartile (i.e. those with the lowest literacy engagement, n = 1,492) and those in the upper, or top, quartile (those with the highest literacy engagement, n = 1,224). When comparing young people with the lowest and highest literacy-engagement scores, the main differences related to critical approaches to reading online, digital civility, empowerment and mental wellbeing.

Comparing young people who score in the lower and upper literacy-engagement quartiles

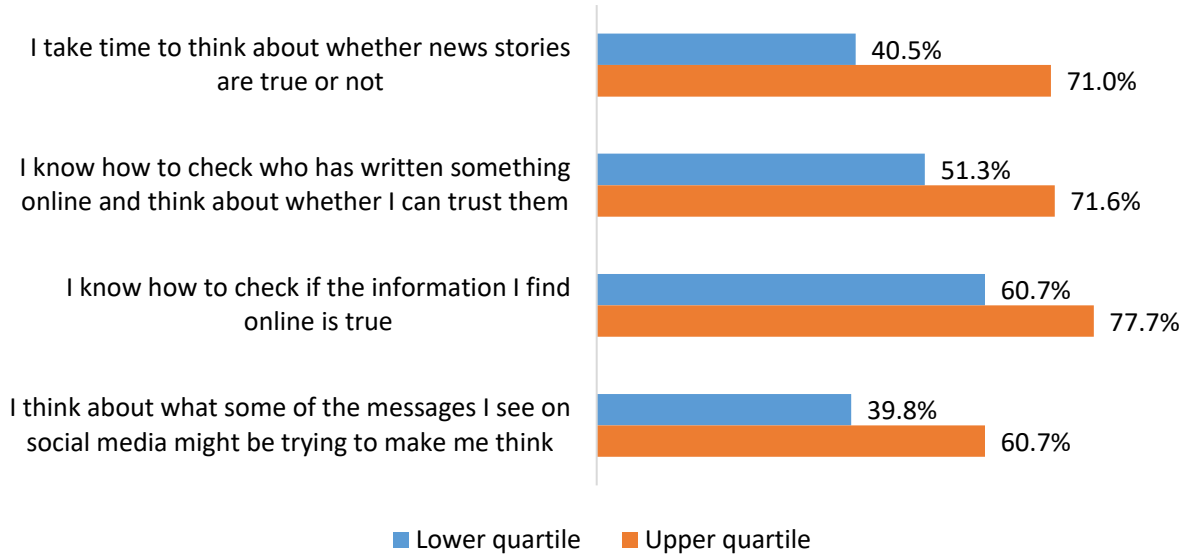
Some of the most significant differences between young people with low and high literacy engagement related to taking a critical approach to news and information online. For example, many more young people with the highest literacy engagement said they take time to think about whether news stories are true or not (see **Figure 29**).

[7] Cronbach's alpha = .843, M = 50.51, SD = 9.97, range = 17 to 77

[8] Quartiles look at the distribution of responses and divide those into four roughly equal parts. The first quartile (also called the lower quartile) is the number below which lies the bottom 25% of data. The second quartile (the median) divides the range in the middle and has 50% of the data below it. The third quartile (also called the upper quartile) has 75% of the data below it and the top 25% of the data above it. In this sample, the quartile scores were divided into the following four groups: bottom = 17-44; lower middle = 45-51; upper middle = 52-58; top = 59-77.

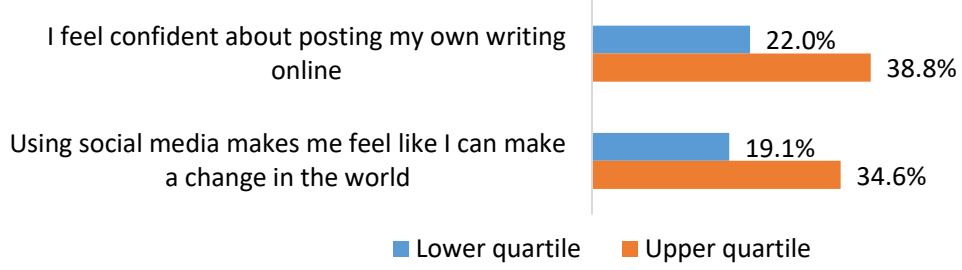
Indeed, 7 in 10 (71.0%) of this group said they did this compared with 2 in 5 (40.5%) young people with low literacy engagement (a difference of almost 30 percentage points [pp]). Similarly, fewer young people with the lowest literacy engagement said they know how to check who has written something online and decide whether they can trust them (51.3% vs. 71.6% of those with the highest literacy engagement), or to check if the information they find online is true (60.0% vs. 77.7%). In addition, while 3 in 5 (60.7%) young people with the highest literacy engagement said they think about what some of the messages they see on social media might be trying to make them think, this decreased to 2 in 5 (39.8%) of those with the lowest literacy engagement.

Figure 29: Percentage agreement with critical digital literacy statements by those who score in the lower or upper literacy-engagement quartiles



Findings also suggested that low literacy engagement has an impact on how well this group of young people feel able to engage in the digital world. Almost twice as many young people with high literacy engagement said they feel confident posting their own writing online (38.8% vs. 22.0% of those with low literacy engagement, see **Figure 30**). Perhaps linked to this, while more than 1 in 3 (34.6%) young people with the highest literacy engagement said that using social media makes them feel like they can make a change in the world, this decreases to fewer than 1 in 5 (19.1%) of those with the lowest engagement.

Figure 30: Percentage agreement with digital engagement and empowerment statements by those who score in the lower or upper literacy-engagement quartiles



To summarise, young people's literacy engagement is associated with online communication attitudes and behaviours, most prominently critical approaches to online news and information and posting online. More young people with high literacy engagement say they take time to consider how others might take something before they post, feel confident about posting their own writing online, and say using social media makes them feel like they can make a change in the world.

Such findings suggest that, in the digital age, young people with the lowest literacy engagement may be at risk of missing out in both the offline and online spheres, and greater support for literacy may also increase the benefits of digital engagement for this group of young people. As dependence on digital communication increases, it is important to support online safety, privacy and child-orientated design, as well as considering how best to help young people develop confident critical approaches to reading, writing and communicating both on and offline.

Literacy, online communication and mental wellbeing

More young people with low mental wellbeing have read things online that support their mental health and feel writing on social media helps them express themselves. However, more young people with high mental wellbeing feel confident about critical reading online.

Conceptualising mental wellbeing

Research conducted by the National Literacy Trust in 2018 found that children and young people most engaged with literacy are three times more likely to have higher levels of mental wellbeing than children who are the least engaged (39.4% vs. 11.8%, Clark and Teravainen-Goff, 2018). In this study, we were interested to look at how both literacy engagement levels and self-reported mental wellbeing might interact with online communication attitudes and behaviours.

Overall survey length limited the number of wellbeing items we could include, so we chose to focus on three aspects of mental wellbeing: life satisfaction, coping skills and self-belief[9]. A variable summing responses across life satisfaction, coping and self-belief was constructed[10], creating an overall wellbeing score with a range of 5 to 30, with a higher score indicating a higher level of mental wellbeing. The sample was then divided into quartiles to allow us to look at any differences in relation to young people in the lower (n = 1,895) and upper quartiles (n = 1,271)[11] or (in other words) how those with lower mental wellbeing vs. those with higher mental wellbeing differ in terms of their online literacy and communication attitudes and behaviours.

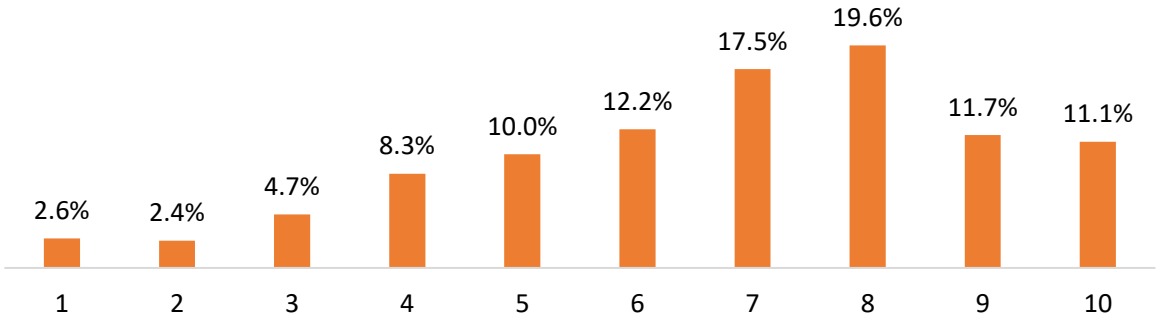
[9] Adapted from our 2018 study of literacy and wellbeing, which in turn adapted questions from the resilience scale of New Philanthropy Capital's wellbeing measure

[10] Cronbach's alpha = .813, M = 20.47, SD = 5.52, range = 5 to 30

[11] Quartile scores: lower = 6-20; lower middle =21-25; upper middle = 26-28; upper = 29-35

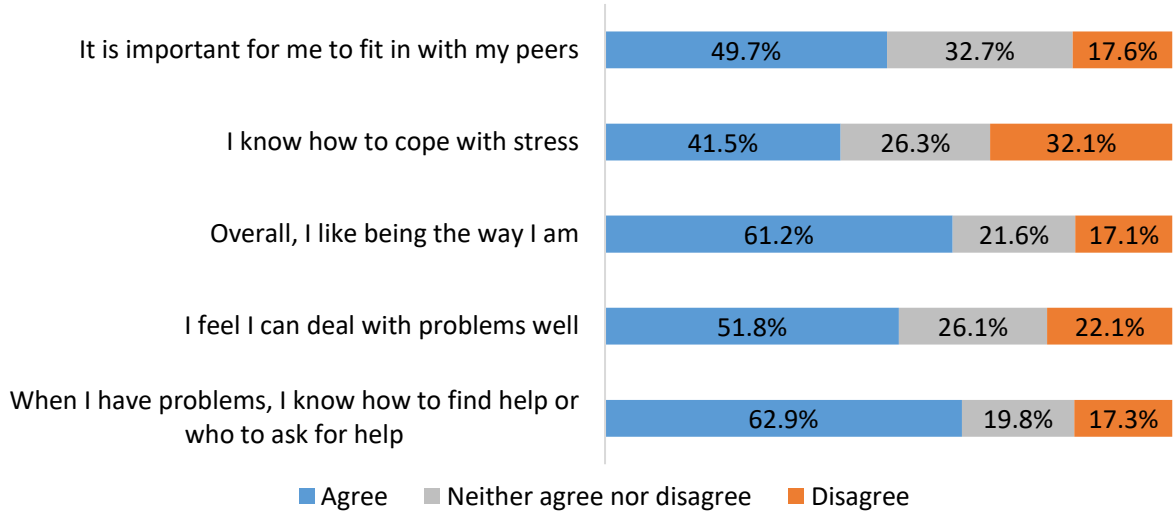
Most young people in this sample reported relatively high levels of wellbeing, with 1 in 5 (19.6%) rating their life as 8 (M = 6.73, Mdn = 7.00) on a scale of 1 to 10 (see **Figure 31**)[12].

Figure 31: If 1 is your worst possible life and 10 is your best possible life, how would you rate your life right now?



More than 3 in 5 of the young people in this sample have a positive view of themselves and feel confident that they know where to find help when they have problems (see **Figure 32**). However, only half (51.8%) feel they can deal with problems well, a similar percentage (49.7%) say it's important to fit in with their peers and just 2 in 5 (41.5%) say they feel able to handle stress. Indeed, almost 1 in 3 (32.1%) young people disagree that they know how to cope with stress.

Figure 32: How much do you agree or disagree with the following statements?



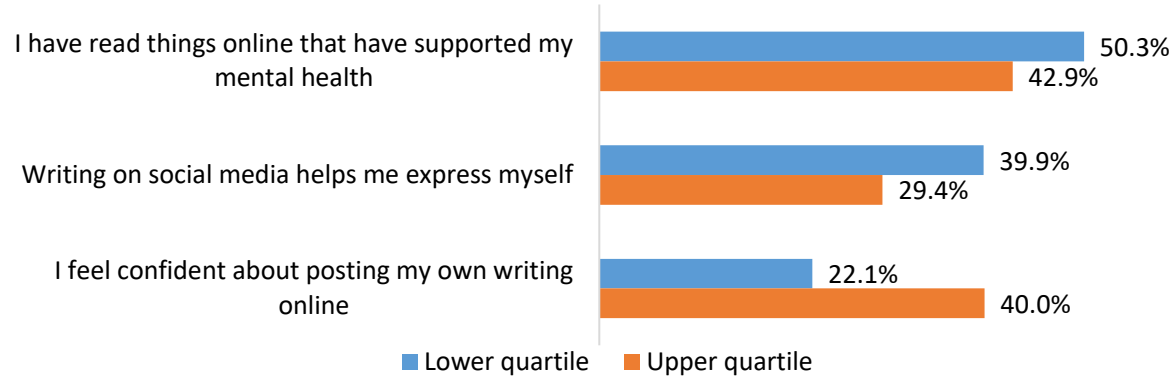
Comparing young people who score in the lower and upper mental-wellbeing quartiles

When comparing young people in the lower and upper mental-wellbeing quartiles, differences between groups were found in relation to aspects of reading and writing online, critical digital literacy attitudes and behaviours, and preferences for online communication.

[12] SD = 2.264

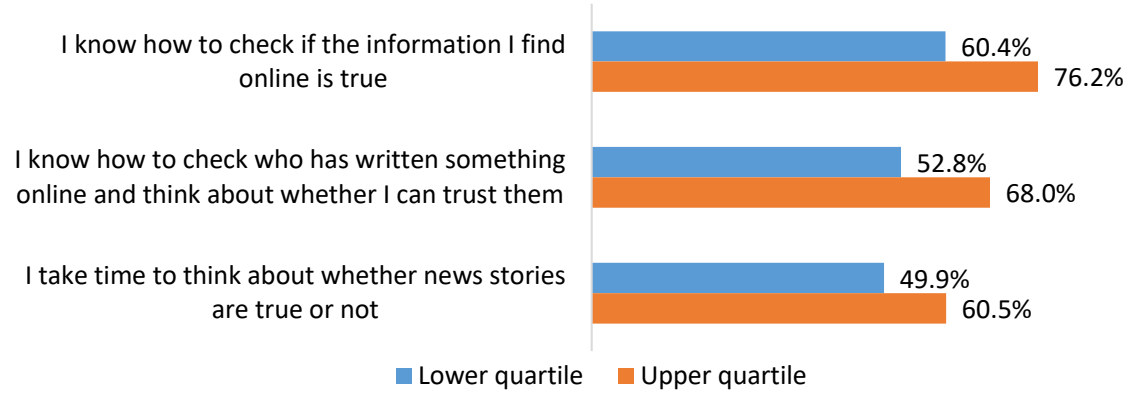
Encouragingly, more than half (50.3%) of young people with the lowest mental wellbeing said that they have read things online that have supported their mental health (compared with 42.9% of those with high wellbeing, see **Figure 33**). In addition, more young people with low mental wellbeing said that writing on social media helps them express themselves (39.9% vs. 29.4%). However, while 1 in 5 (22.1%) young people with the lowest wellbeing said they feel confident posting their own writing online, this doubled to 2 in 5 (40.0%) of those with high wellbeing.

Figure 33: Percentage agreement with online reading and writing statements by those who score in the lower or upper mental-wellbeing quartiles



In addition, significantly fewer young people with the lowest mental wellbeing said they know how to check if the information they find online is true (60.4% vs. 76.2% of those with the highest mental wellbeing) or how to check who has written something online and decide if they can be trusted (52.8% vs. 68.0%, see **Figure 34**). Similarly, while half (49.9%) of those with the lowest wellbeing said they take time to think about whether news stories are true or not, this increased to 3 in 5 (60.5%) of those with the highest wellbeing.

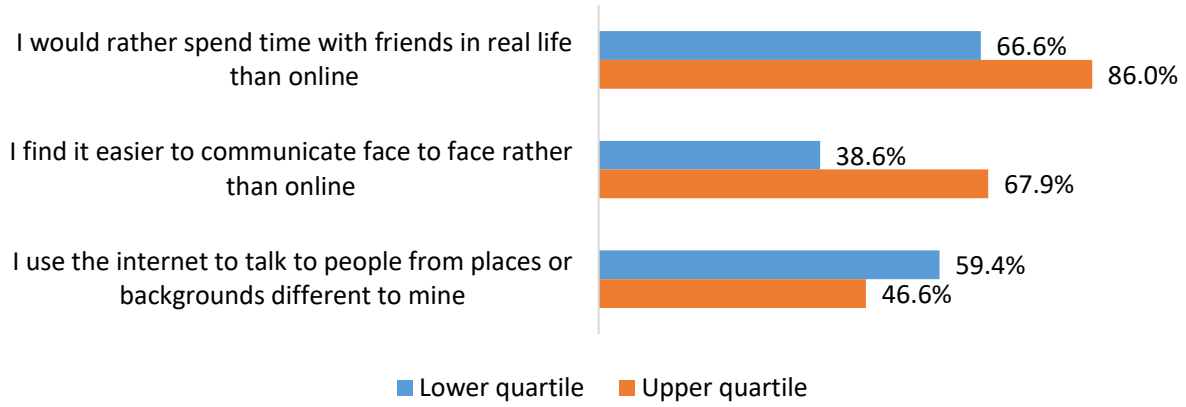
Figure 34: Percentage agreement with critical digital literacy statements by those who score in the lower or upper mental-wellbeing quartiles



More young people with the highest wellbeing agreed that they would rather spend time with friends in real life than online (86.0% vs. 66.6% of those with the lowest wellbeing) and, reflecting this, that they find it easier to communicate face to face rather than online (67.9% vs. 38.6%, see **Figure 35**). However, significantly more of those in the lowest wellbeing

quartile said they use the internet to talk to people from places or backgrounds different from their own (59.4% vs. 46.6%), suggesting that online communication may offer this group of young people valuable opportunities for socialising.

Figure 35: Percentage agreement with social, communication and self-expression statements by those who score in the lower or upper mental-wellbeing quartiles



To summarise, when comparing young people with low and high mental wellbeing, the biggest differences were found in relation to critical engagement with online information. However, there were also differences between young people with lower and higher wellbeing and preferences for face-to-face vs. online communication formats. Compared with those with high wellbeing, more young people with low mental wellbeing say they have read things online that have supported their mental health, feel writing on social media helps them express themselves, and that they use the internet to talk to people from places or backgrounds different from their own. This suggests that online platforms can offer valuable opportunities for self-expression for some young people with lower mental wellbeing.

Critical digital literacy attitudes and behaviours and self-reported mental wellbeing

Nearly three times as many young people with high critical digital literacy scores have high mental wellbeing.

Finally, as many of the survey questions related to critical digital literacy attitudes and behaviours, we were keen to explore any associations between these and self-reported mental wellbeing.

Conceptualising critical digital literacy engagement

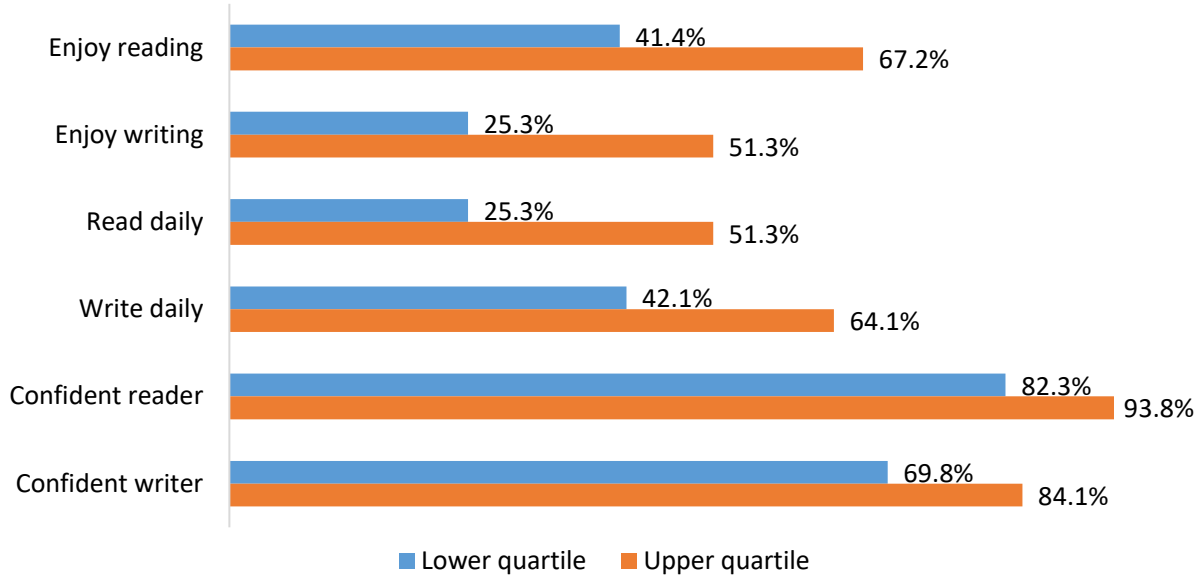
We constructed a 'critical digital literacy engagement' (CDLE) score based on summing responses to 10 questions relating to critical digital literacy (for example, "I know how to check who has written something online and think about whether I can trust them") and five relating to

digital engagement (for example, "I feel confident about posting my own writing online")[13]. The sample was divided into quartiles to explore how young people in the lower quartile (i.e. with lower CDLE scores, n = 1,664) and upper quartile (higher CDLE scores, n = 1,280) differ in terms of literacy and online communication.

Comparing young people who score in the lower and upper critical digital literacy engagement quartiles

Literacy engagement was associated with CDLE in several ways, with the biggest differences relating to attitudes to reading, writing and listening[14]. There was, for example, at least a 20-percentage-point difference in the percentage of young people with low and high CDLE scores who enjoy reading and writing, and read and write daily outside school (see **Figure 36**).

Figure 36: Percentage agreement with literacy-engagement statements by those who score in the lower or upper critical digital literacy quartiles

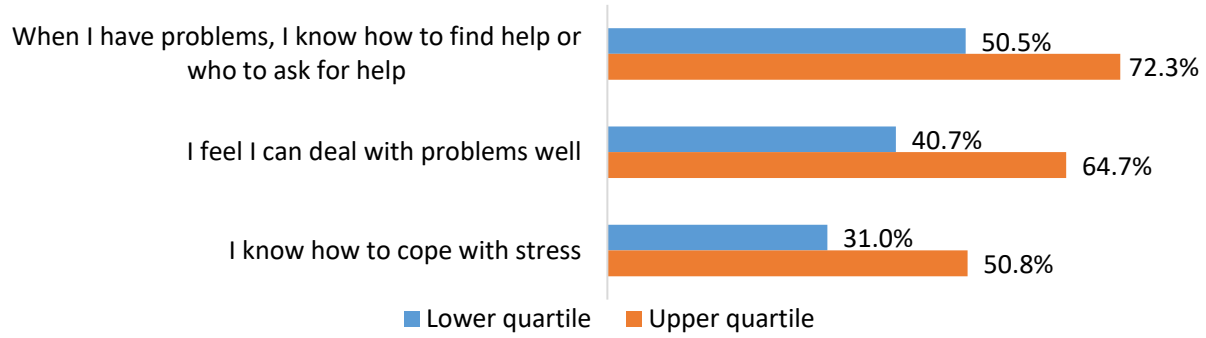


Differences were also found between young people with the lowest and highest CDLE scores and responses relating to statements about mental wellbeing. In particular, more young people with high critical digital literacy reported having good coping skills (see **Figure 37**). For example, while almost 2 in 3 (64.7%) young people with high critical digital literacy said they feel they can deal with problems well, just 2 in 5 (40.7%) of those with low critical digital literacy say the same.

[13] Cronbach's alpha = .744, M = 41.46, SD = 4.88, range = 19 to 59; quartile scores: lower = 19-38; lower middle = 39-42; upper middle = 43-45; upper = 46-59

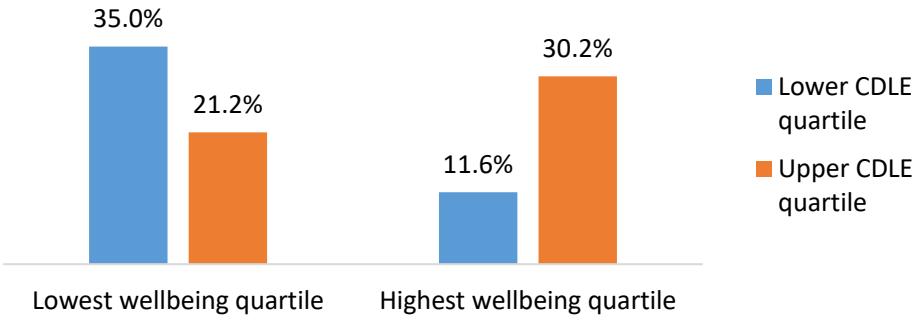
[14] There was a statistically significant small positive correlation between literacy engagement and critical digital literacy scores, $r(4,961) = .35$, $p < .0005$

Figure 37: Percentage agreement with statements on coping skills by those who score in the lower or upper critical digital literacy engagement quartiles



Critical digital literacy engagement was also found to be associated with overall self-reported mental wellbeing[15]. Overall, findings indicated that nearly three times as many young people with the highest critical digital literacy engagement scores have high mental wellbeing compared with those with the lowest critical digital literacy (30.2% vs. 11.6%, see **Figure 38**). Conversely, while 35% of those with the lowest CDLE scores were in the lowest wellbeing quartile, this decreased to 21.2% of those with the highest CDLE scores.

Figure 38: Levels of mental wellbeing by those who score in the lower or upper critical digital literacy quartiles



While this demonstrates a correlational rather than a causal relationship, it suggests that improving literacy engagement and developing positive critical digital literacy attitudes may have the potential to support young people's wellbeing.

How young people learn to communicate effectively online

More young people learn about trusting online information from their parents rather than their teachers, and most learn how to communicate effectively online by themselves.

We were interested to explore how young people learn how to communicate effectively online, to evaluate online information, and how to question the sources of information they

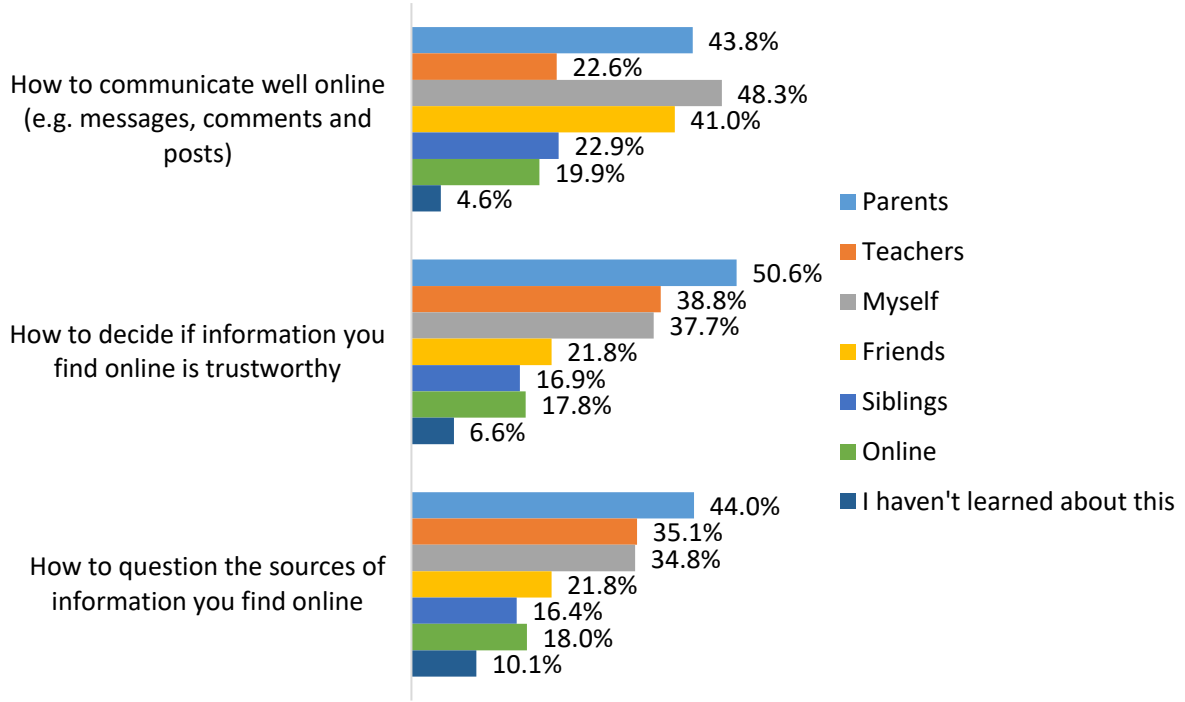
[15] There was a statistically significant small positive correlation between critical digital literacy and mental wellbeing scores, $r(6,237) = .19$, $p < .0005$

find online. In the UK, high-quality frameworks and resources[16] are available to support young people in taking a critical, informed and reflective approach to the digital world. Many of the resources are underpinned by principles familiar to advocates of critical digital literacy, such as helping children and young people explore "the impact of online technologies on self-image and behaviour" (UKCIS, 2020). However, such guidance is not statutory, and activities such as reading and writing on social media and communicating while playing video games take place in young people's leisure time outside normal school hours.

For this reason, it is perhaps unsurprising that most (48.3%) young people said they learn how to communicate effectively online by themselves, followed by learning from parents (43.8%) and friends (41.0%, see **Figure 39**). Fewest young people said they learned about effective online communication from teachers (22.6%) or by researching online (19.9%).

However, young people's main sources of guidance when learning how to decide if the information they find online is trustworthy are their parents (50.6%), followed by teachers (38.8%, although this was also very closely followed by 'by themselves' [37.7%]). This pattern is repeated with regard to learning how to question the sources of information they find online, with most young people citing parents (44.0%), teachers (35.1%) and friends (34.8%) as the main sources of guidance when learning these skills.

Figure 39: From who, if anyone, have you learned about the following? (Tick all that apply).



[16] See, e.g. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS_Education_for_a_Connected_World_.pdf, https://projectevolve.co.uk/ and https://www.gov.uk/guidance/online-media-literacy-resources

These findings suggest that young people could benefit from better advice and support around critical approaches to reading online, and more effective online communication. In addition, as part of this research, we invited young people themselves to share any advice they would share with their younger selves in these areas. Their responses will be used to inform the next stage of this research, which will focus on producing resources for schools to be made available through National Literacy Trust networks.

Discussion

Findings from this survey indicate that online platforms can offer valuable opportunities for literacy, communication, self-expression and support for many young people. Most use digital devices and social media daily for entertainment. However, many also say they find reading material online that matches their interests, are inspired to read more widely by online content, and feel that what they read online can help inform their opinions and expand their thinking. Most of the young people responding to the survey say they prefer to socialise in person, and are considerate of other people's feelings when communicating online. At the same time, a significant percentage (particularly boys) said chatting while playing video games can help them communicate better with friends. Findings also suggested that young people who prefer not to define their gender may benefit more from the opportunities for self-expression and identity exploration offered by online platforms.

However, young people's responses to the survey also suggest a need for greater support for literacy and digitally mediated literacy practices to ensure that these lead to positive outcomes for all young people's learning and wellbeing. For example, few young people say they feel confident about posting their own writing online. Furthermore, while most are confident that they know how to check if the information they find online is accurate, only half take time to consider if news stories are true. Responses also suggested that fewer young people from lower-income homes feel confident around critical approaches to reading news and information online, and fewer girls than boys feel that online engagement opens up possibilities for them. This must be addressed to enable all young people to thrive in the digital age.

Notably, findings indicate that high literacy engagement is associated with better critical digital literacy attitudes and behaviours. This suggests that in the digital age young people with the lowest literacy engagement may be at risk of missing out in both the offline and online spheres, whether through lack of knowledge around critical engagement when reading information online or a poorer sense of empowerment resulting from engagement with social media. In turn, young people with high levels of critical digital literacy engagement also reported the highest levels of mental wellbeing. Indeed, compared with young people with low critical digital literacy engagement, nearly three times as many young people with high critical digital literacy had high mental wellbeing (11.6% vs 30.2%). These findings suggest that improving literacy engagement and developing positive critical digital literacy attitudes may potentially support young people's wellbeing.

Acknowledgements

This work was undertaken by the National Literacy Trust and was funded by the Sir Halley Stewart Trust. The views expressed within this report are those of the authors and not necessarily those of the trust. We are grateful to the Sir Halley Stewart Trust for their financial support, which made this piece of research possible. We would also like to offer our sincere thanks to Family Kids & Youth[17] for facilitating the online focus groups, the experts supporting the research and to all the schools and young people who participated in the survey.

Appendix

Additional information on sample characteristics

Most respondents identified themselves as White British (64.2%, n = 4,472), White Irish (0.9%, n = 62), White Traveller of Irish heritage (0.5%, n = 37), White Romani (0.2%, n = 17) or other White background (6.7%, n = 463); 4.4% (n = 303) as Asian or Asian British Pakistani; 2.6% (n = 178) as Indian; 0.9% (n = 65) as Bangladeshi; 0.9% (n = 62) as Chinese; and 1.8% (n = 125) as any other Asian background; 3.1% (n = 216) as Black or Black British African; 0.9% (n = 62) Caribbean or other (0.5%, n = 32) Black background; 1.8% (n = 125) as any other mixed-race background; 1.5% (n = 104) mixed White and Asian; 1.2% (n = 86) mixed White and Black Caribbean; 1.1% (n = 78) mixed White and Black African; 1.1% (n = 76) as Middle Eastern and Middle Eastern British; and 5.7% (n = 398) would rather not say.

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[17] https://www.kidsandyouth.com/

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Our charity is dedicated to improving the reading, writing, speaking and listening skills of those who need it most, giving them the best possible chance of success in school, work and life. We run Literacy Hubs and campaigns in communities where low levels of literacy and social mobility are seriously impacting people's lives. We support schools and early years settings to deliver outstanding literacy provision, and we campaign to make literacy a priority for politicians, businesses and parents. Our research and analysis make us the leading authority on literacy and drive our interventions.

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Suggested reference for this report is: Picton, I., Clark, C., Riad, L., and Cole, A. (2022). Insights into young people's literacy, critical digital literacy, gender and wellbeing. London: National Literacy Trust.

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