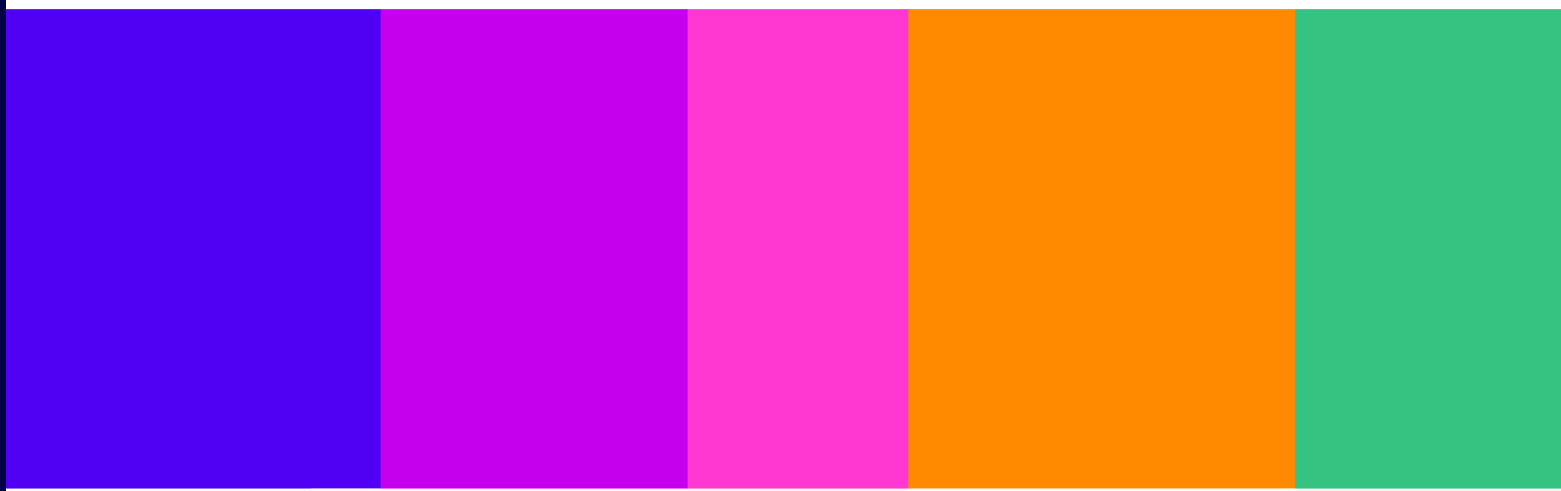


Using Behavioural Insights to Engage Children with User Support Materials

Testing Online Safety Measures with Children (13–17 years)

Behavioural Insights Discussion Paper

Published 30 July 2024



The discussion paper series

Ofcom is committed to encouraging debate on all aspects of media and communications regulation and to create rigorous evidence to inform that debate. One of the ways we do this is through publishing a series of discussion papers, extending across behavioural insights, economics and other disciplines. The research aims to make substantial contributions to our knowledge and to generate a wider debate on the themes covered.

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Disclaimer

Discussion papers contribute to the work of Ofcom by providing rigorous research and encouraging debate in areas of Ofcom's remit. Discussion papers are one source that Ofcom may refer to, and use to inform its views, in discharging its statutory functions. However, they do not necessarily represent the concluded position of Ofcom on particular matters.

Regulatory Context

Ofcom has a duty to promote and research media literacy, which it defines as "the ability to use, understand and create media and communications in a variety of contexts". This includes user ability to understand service providers' Terms of Service ('terms') and give informed consent. Ofcom is also the regulator for video-sharing platforms (VSPs) and since November 2020, VSPs established in the UK must comply with measures designed to protect users. A number of these measures relate directly to terms. For example, where a VSP has a typically younger user profile, they should consider providing child-friendly explanations.

Additionally, this research will build evidence with respect to Ofcom's new duties under the Online Safety Act 2023 ('the Act'). Under the Act, in-scope service providers should, where proportionate, apply user support measures to help keep children safe from harm (Section 12(8)(g) and Section 29(4)(e)). Having accessible user support measures is important to help children a) understand the tools and support available to them on a service and b) know how to use or access these to feel safer online.

Ofcom is specifically looking to gather evidence about effective methods to encourage users to engage with simplified age-appropriate user support materials that explain the tools and support available on a service to stay safe from harmful content.

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Overview

Children say harmful content is ‘prolific’ and ‘unavoidable’ online.¹ ‘User-operated safety features’ (e.g. the option for children to block or mute other accounts or to report harmful content) are available to prevent exposure to harmful content, but children have very low awareness of these² or are simply not motivated to engage with them.

This discussion paper outlines the largest known behavioural trial testing online safety mitigations with children. This trial investigates how service design can be used to influence online behaviours and engage children with user support materials.

Children aged 13-17 years are becoming increasingly independent online. However, due to their early cognitive and emotional development, many (particularly younger children) may overestimate their ability to interpret information or the intent of others and to cope with challenges that arise online.³ Overconfidence in their own abilities to stay safe online is one of the barriers deterring children from accessing support materials.⁴ One way to address this challenge would be to overcome barriers to *motivate* children to access user support materials.

Ofcom’s Draft Children’s Safety Codes⁵ recommend that service providers make age-appropriate user support materials available for children. The effectiveness of these materials is likely to be affected by factors such as whether children access these materials, their understanding of the information, and motivation to comply. Encouraging users to engage with these materials and improve their understanding of key information is an important step in equipping children with the necessary information to protect themselves online.

The way information is presented online (‘online choice architecture’) plays an important role in users’ decision-making and behaviour online⁶ and holds the potential to either encourage or discourage certain choices. Ofcom research indicates that very few children read important information such as Terms and Conditions due to the way it is presented.⁷

Ofcom’s Behavioural Insights specialists partnered with the Behavioural Insights Team (BIT) to run an experiment to build evidence on how online choice architecture affects children’s (13-17 years) engagement with user support materials. We designed a simulated online platform, ‘VidScroll’, for our experimental environment. We used this to test the effectiveness of three design interventions on whether the children would access user support materials (via a Help Centre). Our focus was on providing user support materials at sign-up for two reasons. People are more open to new behaviours at this stage in the journey when it is beginning and new. Secondly, the draft Children’s Safety Codes recommend sign-up stage interventions, so children know which tools are available to them as soon as they begin using a service and how to use them. We also tested whether the children engaged with and understood the Help Centre information.

¹ Ofcom, 2024. [Understanding Pathways to Online Violent Content Among Children](#); Ofcom, 2024. [Experiences of children encountering online content relating to eating disorders, self-harm and suicide](#)

² Ofcom, 2021. [Safety measures on video-sharing platforms survey](#)

³ Ofcom, 2024. [Child development ages, stages and online behaviour](#)

⁴ Ofcom, 2022. [Serious Game Pilot: Trial Protocol Document](#)

⁵ Ofcom, 2024. [Protecting children from harms online. Volume 5: What should services do to mitigate the risks of online harms to children?](#) p.413

⁶ DRCF, no date. [Harmful design in digital markets: How Online Choice Architecture practices can undermine consumer choice and control over personal information](#)

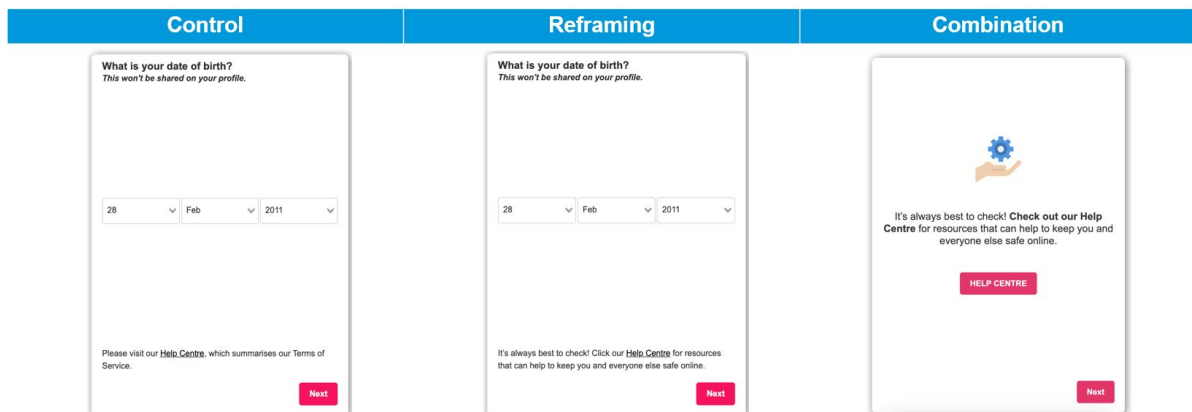
⁷ Ofcom, 2024. [Terms and conditions and content controls](#); Ofcom, 2024. [VSP Tracker Wave 5 Data Tables](#)

The interventions were designed using behavioural techniques to test how users were signposted to the Help Centre as part of signing-up to the platform (Figure 1). For example, using choice structure and choice information⁸ to influence how information is presented through attractive visuals, as well as reducing hassle, attracting attention, tapping into the power of social norms, and prompting users when they are most receptive.⁹

Each participant was assigned to one of three intervention arms:

- **Control:** Prompt to access the Help Centre features **typical wording** currently used across social media platforms.
- **Reframing:** Prompt to access the Help Centre **positively reframes** the call to action and addresses motivational barriers that people may not understand why it is important to visit the Help Centre. Text reads “It’s always best to check! Click our **Help Centre** for resources that can help to keep you and everyone else safe online.”
- **Combination:** We combined three behavioural elements to prevent habitually clicking past the Help Centre. (1) The prompt to access the Help Centre **positively reframes** the call to action, (2) using visual and design elements to direct attention and make the prompt more salient by a **separate screen** with an **eye-catching button**, and (3) a small, enforced **delay** of 2 seconds was applied before it was possible to click the ‘Next’ button.

Figure 1: Trial interventions overview



Following sign-up, participants were randomised to either be exposed, or not exposed, to the Help Centre to test comprehension. To help further with our understanding, the trial concluded with a post-trial survey asking participants about their experiences and expectations of Help Centres.

⁸ Definitions: choice structure- the design and presentation of options; choice information- the content and framing of information provided. CMA, 2022. [Online Choice Architecture: How digital design can harm competition and consumers](#). [accessed 01 July 2024].

⁹ The Behavioural Insights Team, 2014. [EAST Framework: Four Simple Ways to Apply Behavioural Insights](#).

Key Findings

A combination approach, making the Help Centre more noticeable to users, significantly improved click through to user support

As expected, very few participants clicked the link to the Help Centre when presented in the small text at the bottom of the page in the Control arm (0.5%). The Reframing arm, which reframed the language to address motivational barriers without any further changes to the design of the page also had very little impact on click through rates (0.7%).

However, participants in the Combination arm, which used reframed language, increased salience, and introduced a slight forced delay, were 70x more likely to click through to the Help Centre (35.2%) than those in the Control arm (0.5%).

Participants in the Combination arm were 4x more likely to recall there was a Help Centre (68.3%) than those in the Control arm (16.2%). Participants in the Control and Reframing arms were significantly more likely to say they didn't see the link, or that they didn't realise they could click on the Help Centre, than those in the Combination arm.¹⁰

Those who clicked through to the Help Centre also engaged with, and understood the information given

Regardless of whether they voluntarily clicked on the Help Centre at the trial stage or were shown the information in the post-trial exercise (forced exposure) comprehension scores were comparable. This indicates that many participants read and understood the information presented to them in the support materials, and encouragingly also indicates that click-through translated into engagement with the information.

Children say they prefer simplified formats of information including audio and/ or visual elements

Children say they prefer support information in simplified formats, preferably with audio and/ or visual elements, aligning with our research on microtutorials.¹¹

Conclusion

The way in which children are prompted to engage with user support materials has a significant impact on whether they engage with them. Our findings suggest that choice architecture, particularly techniques to make information more prominent, is effective at driving children to engage with these materials. We also found that exposure to user support materials significantly increased children's understanding of them, indicating engagement with the content. Comprehension can indicate future compliance with community guidelines.¹² This indicates that it is not just the availability of age-appropriate user support materials that is important, but also how children are prompted to engage with them.

¹⁰ Participants who reported not seeing the link: Control: 31%, Reframing: 32%, Combination: 5%, $p < .01$; Participants who didn't realise they could click on the Help Centre link: Control: 20%, Reframing: 23%, Combination: 13% $p < 0.01$.

¹¹ Ofcom, 2023. [Boosting users' safety online: Microtutorials](#)

¹² Matias, J.N., 2019. [Preventing harassment and increasing group participation through social norms in 2,190 online science discussions](#), *PNAS*, 116 (20). [accessed 21 June 2024].; Note we did not test compliance with community guidelines in this trial.

Introduction

Almost every child in the UK is regularly online, so online safety is a paramount concern. Most (87%) children aged 3-5 go online. Among teens, 97% of 13–15-year-olds own their own mobile phone and 98% watch videos and send messages online.¹³

We know the risk of harm to children online is significant. 62% of children aged 13-17 report encountering harmful content online in a 4 week period.¹⁴ Certain design features on online platforms appear to exacerbate the risk of harm to children, for example features that encourage or enable children to create a large network of friends or followers, often with people they do not know.¹⁵ Children may also be exposed to harm when scrolling through their ‘for you’ or recommended content page, with 34% of internet users aged 13+ encountering their most recent harm through content suggested by a platform’s algorithm.¹⁶ User support tools can help to mitigate the risk of children coming across these harms - for example disabling the ability for unknown users to search and add their profile, or hiding posts from their news feed that contain a particular word. What’s more, research has shown that children *want* more information and to be empowered to keep themselves and others safe. The UK Safer Internet Centre found that 62% of 8–17-year-olds wanted to act and support others online, while 35% agreed that having more support and online safety education from the industry would make life safer online.¹⁷

The Act requires user-to-user and search service providers to provide user support measures, where proportionate, for the purposes of compliance with the children’s safety duties.¹⁸ In the draft Children’s Safety Codes, Ofcom recommend that some user to user and search services¹⁹ should provide age-appropriate user support materials for children, explaining the user support tools and reporting and complaints functions on the service and how to use them.²⁰ Many online platforms already provide support and education in the form of user support materials via Help Centres and child-friendly Content Policies. For example, Google note that they provide detailed user-friendly information in their Help Centre about how to make complaints, allowing child users to guide themselves through the reporting process.²¹ Amazon provide a “Children’s Privacy Notice”, which is a 90 second cartoon targeted at under 13s,²² and TikTok use pictures and videos alongside text to explain specific aspects of their service.²³

This information can be beneficial to users, such as setting out community guidelines which educate readers on acceptable behaviour on the platform and the kinds of content that is prohibited. It can help to empower users by providing information on the platforms’ safety features and how to use

¹³ Ofcom, 2023. [PARENTS' AND CHILDREN'S ONLINE BEHAVIOURS AND ATTITUDES SURVEY 2023](#)

¹⁴ Ofcom, 2024. [Experiences of using online services](#)

¹⁵ Ofcom, 2022. [Research into risk factors that may lead children to harm online](#)

¹⁶ Ofcom, 2024. [Experiences of using online services](#)

¹⁷ Safer Internet, 2023. [Young people keen to educate parents on online safety – as more than a third of carers are not clear on where to go for support](#)

¹⁸ Sections 12(8)(g) and 29(4)(e) of the Online Safety Act 2023. The Children’s Safety Duties in question are laid out in sections 12(2), 12(3), 29(2), and 29(3) of the Act.

¹⁹ Those which are at medium or high risk of at least two kinds of content which are harmful to children

²⁰ Ofcom, 2024. [Protecting children from harms online. Volume 5: What should services do to mitigate the risks of online harms to children?](#) p.413

²¹ [Google](#) response to 2023 Protection of Children Call for Evidence.

²² Amazon, [Children’s Privacy Notice](#). [accessed 21 June 2024].

²³ TikTok, [Privacy Highlights for Teens](#). [accessed 21 June 2024].

them, as well as providing more transparency around how the platform takes action against community guideline violations.

However, user support materials may have limited effectiveness if users do not access them. For example, users may not be aware of the types of content prohibited by platforms, increasing the risk of harmful content being posted, shared, and not reported. Increasing the proportion of children who actively access these user support materials on platforms can be an important step in empowering them to know the safety features available to them and keep themselves and others safe online. The behavioural insights literature however shows that providing access to information may not be enough to support active, informed choice.²⁴ Consideration of how to engage children with this information, both in terms of encouraging them to *access* it and improving *comprehension*, could help to make children safer online.

Behavioural barriers to engaging with user support materials

When children sign up to online platforms their focus is to gain access to the platform and its features. Terms of service ('terms') and publicly available statements ('statements') typically lay out the rights and responsibilities that a service provider and the users of their service have towards one another.²⁵ However, these are not always clearly signposted. Children, and the adults who care for them, can refer to these terms or statements if they wish to understand how to keep safe online. Without encouragement, there is a risk that users, including children, sign up to and consent to platform terms without being sufficiently informed about important guidelines and rules. Children do not have sufficient *motivation* to seek out this information to empower their online experience, nor are they (in many cases) encouraged to do so – therefore additionally affecting their *capability* and *opportunity*.²⁶

Additionally, research has found that users can find platform terms to be lengthy and technical, leading to difficulty understanding their content.²⁷ The documents frequently use technical jargon or complex language making this information inaccessible to children, reducing their ability to make informed choices about their online activity. If information is not presented in a child-friendly manner, children's *capability* to comprehend the information is also diminished, thus reducing *motivation* to read terms. The draft Children's Safety Codes recognises that no matter how clear and accessible they are, some children may not be able to fully understand information in written terms and statements. While steps can be taken to make these documents clearer and more accessible, they are contractual in nature and do not easily lend themselves to being child friendly.²⁸ Therefore the draft Children's Safety Codes recommends that, where proportionate, services provide additional *user support materials* that are age-appropriate and easily understood by children – for

²⁴ CMA, 2022. [Online Choice Architecture: How digital design can harm competition and consumers](#). [accessed 21 June 2024].

²⁵ Ofcom, 2024. [Protecting children from harms online. Volume 5: What should services do to mitigate the risks of online harms to children?](#) p.283

²⁶ Ofcom, 2023 [Regulating Video-Sharing Platforms \(VSPs\)](#). P. 11-12

²⁷ Ofcom, 2023 [Regulating Video-Sharing Platforms \(VSPs\)](#). Analysis shows that the average terms documents for popular video sharing platforms can take between 8 and 64 minutes to read.

²⁸ Ofcom, 2024. [Protecting children from harms online. Volume 5: What should services do to mitigate the risks of online harms to children?](#) P.286

example, materials that include visuals or interactivity, and specifically designed to help children understand the proactive steps they can take to feel safer online.²⁹

Children who have already used social media platforms may assume they know how to use similar social media platforms intuitively, believing user support materials will not contain any information they do not already know or will learn by using the platform.³⁰ Children (aged 13-17) may also overestimate their ability to cope with harmful content seen online, instead believing additional support to be more beneficial for younger users.³¹ This lack of belief of a tangible benefit to reading terms can further decrease their *motivation* to engage with the materials. What's more, an overconfidence bias may lead children to underestimate the value of understanding platform features, safety guidelines, and privacy settings.³² This can be due to seeing friends and family use the same platform, or from past experiences of using other, similar online platforms. This can leave children uninformed and susceptible to changes to platform rules and guidelines, and unaware of lesser-known safety features.

Meanwhile there is a growing body of evidence showing that platforms' design and their presentation influences how their users interact with the platform³³ - this is their online choice architecture. Users do not make decisions in a neutral environment – small changes in choice architecture can make an impact.³⁴ The Behavioural Insights Team ('BIT') have run research to understand how online choice architecture can be used by online market businesses to improve the likelihood of consumers opening/understanding the terms and conditions and privacy policies during their shopping journeys.³⁵ Additionally, in the realm of misinformation and other online harms, there is growing evidence that introducing a small friction before users undertake an action can improve how considered their response is.³⁶ We wanted to examine whether similar behavioural techniques could be used to improve engagement with online platform user support materials among children. Additionally, we wanted to explore the impact of engaging with user support materials on children's understanding and comprehension of the information the materials contain.

To build evidence on how online choice architecture influences children to engage with user support materials, and subsequently make more informed active choices while using a platform, Ofcom's Behavioural Insights specialists partnered with BIT to run an online randomised controlled trial. We designed a simulated online platform 'VidScroll', which allowed us to measure the effectiveness of different design interventions on increasing the number of children accessing the user support material during the sign-up process. The trial focused on the sign-up stage in the user journey for two reasons. The first reason is from a behavioural perspective: people are more open to new behaviours at this stage of the journey as it is the beginning and is new.³⁷ The second reason is that

²⁹ Ofcom, 2024. [Protecting children from harms online. Volume 5: What should services do to mitigate the risks of online harms to children?](#) p.413

³⁰ Ofcom, 2022. [Serious Game Pilot: Trial Protocol Document](#)

³¹ Ofcom, 2024. [Children's Attitudes to Reporting Content online.](#)

³² Ofcom, 2024. [Child development ages, stages and online behaviour](#)

³³ CMA, 2022. [Online Choice Architecture: How digital design can harm competition and consumers.](#) [accessed 21 June 2024].

³⁴ CMA, 2022. [Online Choice Architecture: How digital design can harm competition and consumers.](#) [accessed 21 June 2024].

³⁵ BIT, 2019. [Final TCs Best Practice Guide.](#) [accessed 21 June 2024].

³⁶ Fazio, L. K. (2020). [Pausing to consider why a headline is true or false can help reduce the sharing of false news.](#) *Harvard Kennedy School (HKS) Misinformation Review.* [accessed 21 June 2024]; Lee, D., 2019. [Instagram now asks bullies: 'Are you sure?'](#), BBC News, 8 July. [accessed 21 June 2024].

³⁷ Kirkman, E., 2019. [Free riding or discounted riding? How the framing of a bike share offer impacts offer-redemption.](#) *Journal of Behavioral Public Administration*, 2(2). [accessed 21 June 2024].

the draft Children's Safety Codes recommend services present user support materials to children as early as possible in the user journey. This is so that services can ensure that children know which user tools are available to them as soon as they begin using a service, and to increase awareness of available support materials so children can revisit them at a later point in their user journey.³⁸

We also examined the effect of being exposed to the user support materials on children's comprehension, compared to children who were not exposed to the materials. For the purposes of this trial, we described these user support materials as the platform's 'Help Centre' since this term is widely used online.

³⁸ Ofcom, 2024. [Protecting children from harms online. Volume 5: What should services do to mitigate the risks of online harms to children?](#) p.418

Interventions

We concluded on the basis of desk research and through behavioural barrier workshopping that the main barriers to children’s engagement with user support materials are the following:

- Poor salience of user support materials leads to a lack of attention and knowledge that they exist, which reduces their *capability* and *opportunity* to engage.
- An overconfidence bias in users that the information contained within the materials will not be useful/ is already known, leading to a lack of *motivation* to read the materials.
- Users during a sign-up process have developed a habit wherein they do not click on support materials, leading to a lack of *motivation* to do so when signing up to new platforms.
- Materials such as Terms of Service agreements are generally long, complex, and overall are an unattractive read to users. This information overload and complex language mean they take significant time and concentration to read and understand therefore giving users no *motivation* to read them, and in some cases, a lack of *capability* to do so.

Addressing barriers to engagement

To develop interventions aimed at the identified barriers, we took inspiration from the CMA’s taxonomy of online choice architecture practices.³⁹ The focus areas considered for intervention development included:

- **Choice information:** Framing of information: name of the user support material, how the material is described, explanations of what information it contains.
- **Choice structure:** How the user support materials are presented to users: salience of link to support material, visual elements, friction required to move on in the process.

The interventions would need to address the barriers outlined above, in addition to fulfilling other criteria such as feasibility (e.g. is it something we can test on a simulated platform, if found to be effective can it be implemented by online platforms/services?) and impact (e.g. will it lead to a clear increase in support material reading?). Working with BIT, we developed three trial arms to test: Control, Reframing, and Combination.

Control

For the control arm we aimed to create a basic design to compare the trial arms to. The message to view the Help Centre was inspired by current social media platforms where links to Help Centres or other support materials are often framed in a passive tone, and do not force nor encourage the reading of support materials.

³⁹ CMA, 2022. [Online Choice Architecture: How digital design can harm competition and consumers](#)

Reframing

'Reframing' refers to an online choice architecture practice whereby relevant decision-related information is presented to a consumer in a particular way that may influence the consumer's decision. Reframing has been shown to effectively influence decisions and behaviours in a variety of contexts.⁴⁰ In this case, reframing was used to address two potential barriers: (a) that children perceive support materials to be unhelpful, or (b) that children believe they already know all the information provided by the support materials.

In a separate trial with an adult population, we tested a reframing intervention to examine the effect of a reframed message on adults clicking through to read a platform's community guidelines.⁴¹ We modelled this trial's reframing message as similar as possible to the adult trial so that we may compare adult and child results. The reframing message was designed to:

- highlight the importance and benefit of reading support materials to both the user and their community in user-friendly language, therefore aiming to provide children with the necessary *motivation* by tackling their potential overconfidence bias and overestimated ability to process information.^{42 43}
- explicitly target users' potential overconfidence bias that they already know the platform rules;⁴⁴

The reframing message reads "*It's always best to check! Check out our Help Centre for resources that can help to keep you and everyone else safe online.*"

Combination

During sign-up, we expect that users would be focused on gaining access to the platform and its features. As such, users may have limited attention or awareness of additional information being presented to them. Links to support materials, particularly ones that are difficult to find (e.g. in small font) are likely to be overlooked.

In this intervention we aimed to build upon the effects of the reframing in the other trial arm by combining multiple behavioural levers. This approach does however mean we are unable to determine which of the combined design features has the most effect. Given our focus was to start generating high-level insights with broad relevance rather than delving into specific nuances, we took the approach of building a trial arm that incorporated the most common practices and well-evidenced behavioural levers.

This combined three behavioural levers:

1. Applying the reframed message to address *motivational* barriers to engage with user support materials.
2. Moving the reframed message to its own separate page in the sign-up process (to attract attention), after children inputted their date of birth. Underneath the message, the button to check the Help Centre is large and salient (visual elements), aiming to tackle the barrier that children don't notice the link and provide them with the necessary *opportunity* and *capability*.

⁴⁰ CMA, 2022. [Online Choice Architecture: How digital design can harm competition and consumers](#)

⁴¹ Ofcom, 2024. [Promoting user engagement with Terms and Conditions](#)

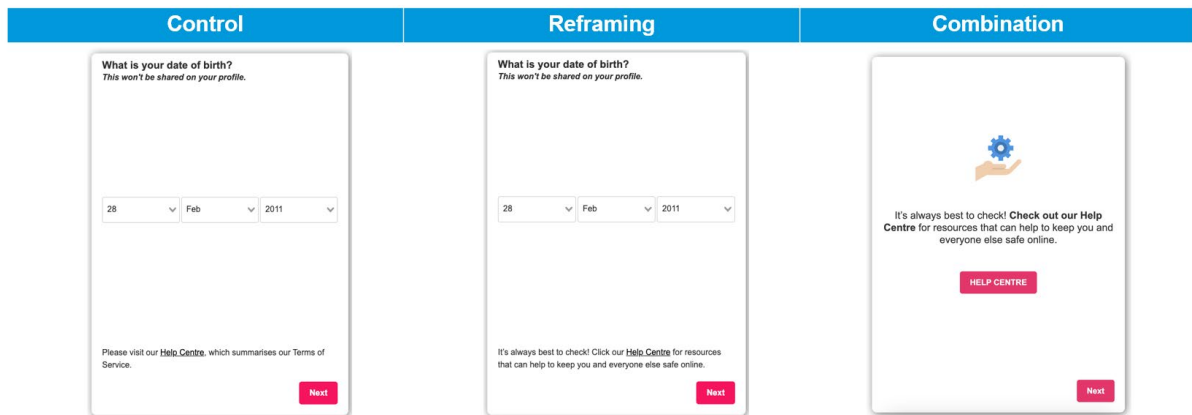
⁴² Ofcom, 2022. [Serious Game Pilot: Trial Protocol Document](#)

⁴³ Ofcom, 2024. [Child development ages, stages and online behaviour](#)

⁴⁴ Ofcom, 2024. [Promoting user engagement with Terms and Conditions](#)

3. Additionally, there is a small, enforced delay of 2 seconds before users can move on to the next page – during this time the ‘next button’ on the bottom right is greyed out (added friction). The enforced delay aimed to tackle the barrier relating to user’s lack of attention to features or buttons that are not directly related to the sign-up process, and overcome the barrier that users click through habitually. This aligns with evidence from previous Ofcom behavioural trials that a short pause introduces a tiny amount of friction prompting deliberation, significantly influencing behaviour.⁴⁵ We chose to use a 2 second delay based on user testing of different time delays. Two seconds was determined to be small enough to disrupt habitual behaviour, but not long enough to cause frustration.

Figure 2: Overview of the three trial arms



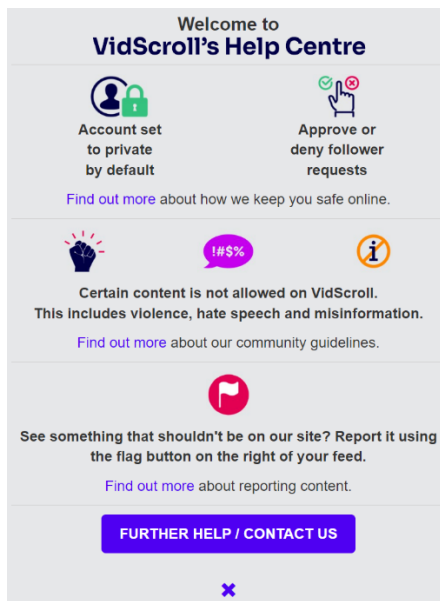
Help Centre

For the purposes of the trial, a basic Help Centre was designed for children to read (Figure 3). The Help Centre was designed to be simple, age-appropriate, and visually appealing, focusing on a few key pieces of information often found in platform terms. This aimed to tackle the capability and motivational barriers caused by terms being long and complex. We ensured it would be short enough to fit on a single device screen to minimise the need for scrolling. It contained information about the rules and guidelines on VidScroll - such as content that is not allowed, and profile safety features (such as making the account private). Visual icons were used to illustrate each ‘rule’. These have been proven effective in increasing user understanding of key points.⁴⁶

⁴⁵ Ofcom, 2023. [Boosting users’ safety online: Microtutorials.](#)

⁴⁶ BIT, 2019. [Best Practice Guide- Improving consumer understanding of contractual terms and policies: evidence-based actions for businesses](#)

Figure 3: VidScroll Help Centre



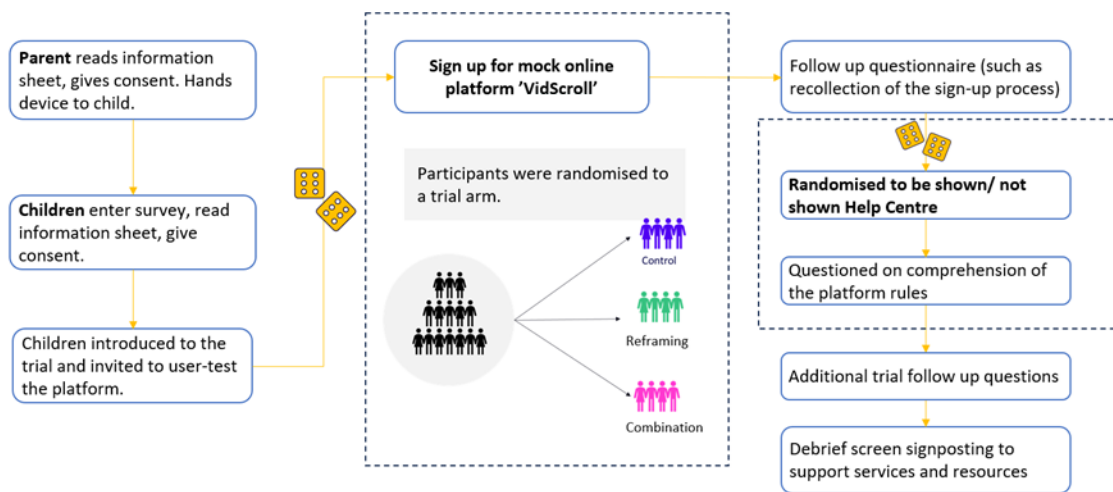
Experimental Design

Participant journey

BIT ran the experiment with a nationally representative sample of 1,807 participants aged 13-17 in the UK, from February to March of 2024. Participants were randomly assigned to one of the three trial arms described in the Interventions section.

The participants' user journey is outlined in Figure 4, followed by a detailed walkthrough.

Figure 4: Participants' user journey in this trial



Introduction to VidScroll: Participants were introduced to the platform VidScroll and invited to user-test the platform, and its sign-up process.

Welcome page and choices: Participants were provided with a default username⁴⁷ before being asked to choose up to three interests from pre-existing categories such as 'animals', 'food', and 'travel', and then asked to allow or not allow notifications from the platform. These steps were to create a more realistic and engaging sign-up process.

Age gate and Help Centre message: On the next page, participants were asked to input their date of birth via scroller menus, as is used on existing online social media platforms. In the Control and Reframing arms, in between the menus and the 'Next' button is the message containing the link to read the Help Centre. We chose this page as links to Terms of Service are usually positioned on the age gate page. In the Combination arm only, there was no message or link to the Help Centre on the age gate page. Participants were instead shown the reframed message and button to view the Help Centre on the following page (See Figure 2 in the Interventions section).

Help Centre: If participants chose to view the Help Centre, they were provided with a pop-up window containing the VidScroll Help Centre designed for the trial. Participants could then choose to click on hyperlinks within the Help Centre to find out more information, or the 'X' at the bottom of

⁴⁷ A default username was provided rather than asking participants to create their own to protect personal information.

the pop-up to return to the sign-up process. Note, if users clicked on a hyperlink to find out more information, they were presented with a further pop-up informing participants this page was still under construction. After passing through the age gate page, participants were shown a page welcoming them to VidScroll and simple instructions on how to navigate the VidScroll content feed.

Post-trial survey questionnaire: Participants were notified at this point that they had completed the testing for the online platform, and that the rest of the platform was still being built. They were then asked follow-up questions about their experience and recall of VidScroll's sign-up process and Help Centre. This included their recollection of the sign-up process and existence of a Help Centre, why they did or did not click on the Help Centre, and how likely they are to use a Help Centre on a platform they already use.

Comprehension: To test the comprehension of those who saw the Help Centre, following the questionnaire half of the participants were randomly assigned to be shown the Help Centre and informed they would be asked about it. They were allowed to view it for as long as they chose. All trial participants were subsequently asked comprehension questions which tested their knowledge of the information contained in the Help Centre.

Final questionnaire: Following comprehension, participants were asked questions about Help Centres and terms in general which included: their habits regarding agreeing to terms, knowledge and use of Help Centres, perceived usefulness of Help Centres, and what they would consider important information for a Help Centre to have.

Outcome Measures

The primary outcome measure of interest in this trial was the proportion of participants who clicked through to the Help Centre. Our hypothesis was that the Combination intervention would lead to a higher rate of click through due to the increased salience.

As our exploratory outcomes, we wanted to examine whether participants could correctly recall that there was a link to the Help Centre, and whether participants who saw the Help Centre had a better understanding of the information contained than those who did not.

Additional outcome measures that were examined in the trial also include participants' attitudes towards using Help Centres.

Ethical Considerations

In line with best practice, ethical considerations were applied to ensure that the risk of harm to participants in the trial was low. To ensure informed consent, clear, age-appropriate information sheets were provided to both children and their parents which detailed the research purpose with written consent provided by both parent and child. Participants were informed that they could opt-out of the research at any time. Within the trial, participants followed a conventional sign-up process which presents very little risk. The post-trial survey questions did not include any discussion of harmful or sensitive topics and so the risk of causing distress or triggering any disclosure linked to experience of online harms was considered low.

Findings & Interpretations

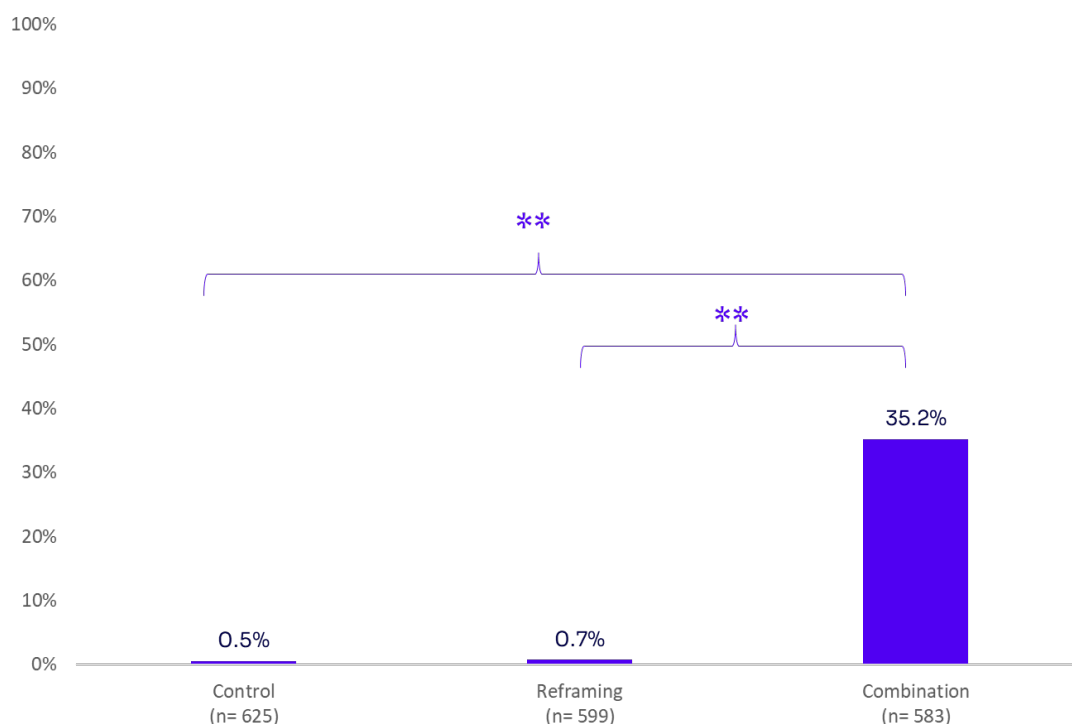
Using prompts to drive online safety behaviour

Participants in the Combination arm were 70x more likely to click through to the Help Centre than those in the Control arm

As expected, with no changes made to the familiar presentation of user support materials in our Control arm, very few participants clicked through to read the information within the Help Centre (0.5%). Simply reframing the language in the Reframing arm also had very little impact, with just 0.7% of participants clicking through to the Help Centre (Figure 5). This shows that minimal changes to the user interface are not sufficient to drive this behaviour, even when designed to overcome known motivational barriers to children seeking help online.⁴⁸

However, when applying a combination approach to make the Help Centre much more salient we saw a large effect. We found just over one-third of participants (35.2%) clicked through to the Help Centre in the Combination arm compared to 0.5% in the Control arm. This is in line with other behavioural evidence where increased salience has been shown to drive online behaviours.⁴⁹

Figure 5: Percentage of participants who clicked through to the Help Centre at sign-up



Note: ** statistically significant at the 1% level ($p < 0.01$)

⁴⁸ Motivational barriers: Overconfidence bias- An assumption that the information is already known and therefore not useful, and that information is mainly needed by younger users rather than themselves.

⁴⁹ Ofcom, 2022. [Behavioural insights for online safety: Understanding the impact of video sharing platform \(VSP\) design on user behaviour](#); Önder, A. & Akçapınar, G., 2023. [Investigating the effect of prompts on learners' academic help-seeking behaviours on the basis of learning analytics](#)

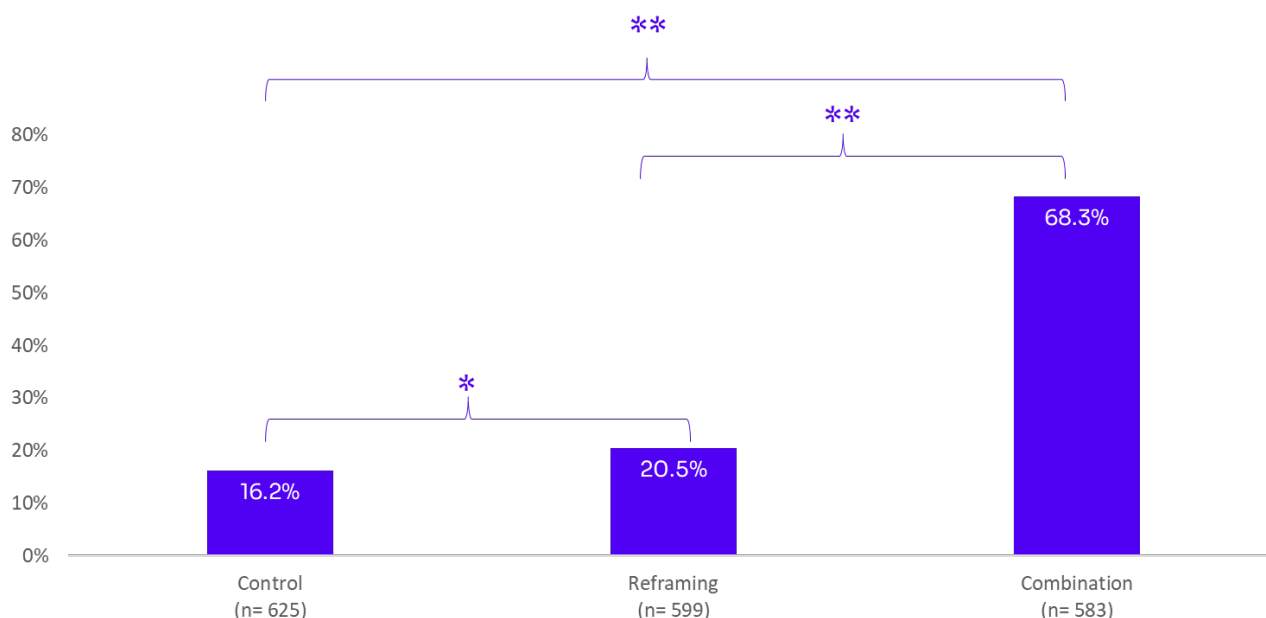
When asked why they clicked on to the Help Centre, the most common response was “to find out more information about the platform” (45%), whilst one-third (33%) “thought they wouldn’t be able to access the platform without doing so”. The perception that clicking on to the Help Centre was compulsory was an unintended consequence, possibly impacted by the two-second forced delay.

Of the participants who did not click on the Help Centre, the most common responses were because they “assumed it would be the same as other platforms they have used” (26%), or that “they didn’t feel they needed to know all the rules in order to use the platform” (25%). This suggests that children may rely on prior knowledge or experiences from other platforms as an indication of platform rules. This may translate into overconfidence bias (assuming they know more than they actually do). We discuss this hypothesis within ‘User Support Materials to improve understanding of service’s Online Safety features.’

Participants in the Combination arm were 4x more likely to recall there was a Help Centre than those in the Control arm

Participants in the treatment arms were significantly more likely to recall there was a Help Centre than those in the Control arm (Figure 6). This was further reinforced by post-hoc analysis of reasons not to click through to the Help Centre, with those in the Combination arm significantly less likely to say they did not see the link, or that they did not realise they could click on the Help Centre.⁵⁰ Despite those in the Reframing arm being significantly more likely to recall they saw a Help Centre, this did not translate into click through. This implies that while reframing the message did make the availability of a Help Centre more noticeable, participants still did not feel motivated to engage with the information available.

Figure 6: Percentage of participants who recalled there was a Help Centre



*Note: *statistically significant at the 5% level ($p < 0.05$) ** statistically significant at the 1% level ($p < 0.01$);*

⁵⁰ “I didn’t see the link”: Combination (5%), Control (31%) and Reframing (32%), $p < 0.01$; “I didn’t realise I could”: Combination (13%), Control (20%) and Reframing (23%), $p < 0.01$.

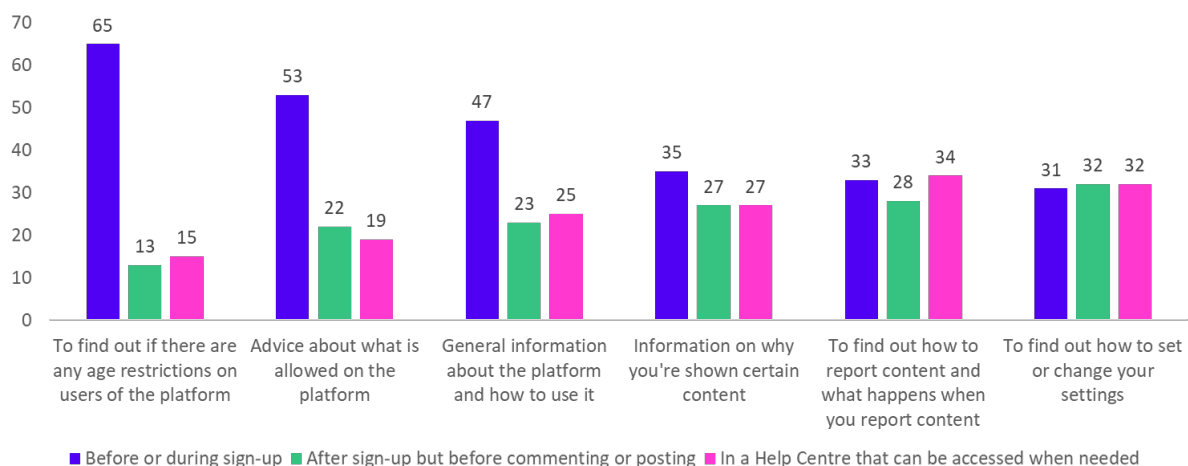
This indicates that increasing the noticeability of the prompt to a Help Centre increases awareness. This addresses one barrier to use of Help Centres and may lead users to seek support later in their user journey should they encounter problems (i.e. they become motivated to do so, matched with their awareness of the Help Centre, leading to greater use of it). Further research is required to test whether participants are likely to click through to a Help Centre while using a platform after sign-up.

Participants felt it was most important to understand key information about the platform *before* or *during* sign-up

Prompts at timely moments, where people are most receptive, have been found to be an effective tool for behaviour change.⁵¹

Participants had a strong preference to be shown relevant information (age restrictions, information allowed on the platform, and how to use the platform) at the beginning of platform use i.e. before or during sign-up (Figure 7). However, information more suited to the user journey (reporting mechanisms and changing settings) was marginally preferred to be accessed as and when needed. This provides indicative findings as to when users might be most receptive to prompts to engage with a Help Centre.

Figure 7: When participants think it's most important for users to understand the following information (%)



This indicates that to have most chance of impact, the timing and focus of prompts to access information needs to be carefully considered e.g. relevant information signposted at sign-up then supplemented by timely prompts at relevant points during the user journey.

As indicated in Ofcom's draft Children's Safety Codes, Ofcom is proposing to recommend that information about a service is made available during sign-up,⁵² so children and the adults who care for them can make an informed decision about whether to sign up to the service.⁵³ Our research suggests users want information on aspects of a service at sign-up (i.e. addressing an important

⁵¹ The Behavioural Insights Team, 2014. [EAST Framework: Four Simple Ways to Apply Behavioural Insights](#)

⁵² Ofcom, 2024. [Protecting children from harms online. Volume 5: What should services do to mitigate the risks of online harms to children?](#) p.418

⁵³ Ofcom, 2024. [Protecting children from harms online. Volume 5: What should services do to mitigate the risks of online harms to children?](#) p.419

motivational barrier).⁵⁴ But further consideration is required regarding the specific information desired by users at sign-up, and the need for, and implementation of, additional prompts during the user journey. This is important context that would support decisions around which further information may be beneficial and linking this to where motivation is higher.

User Support Materials to improve understanding of service's Online Safety features

The combination arm improved both click through and engagement with the information within the Help Centre

The Combination arm improved click through, the first barrier to engagement with online safety information, but to improve online safety we need children to engage with the information provided. By testing comprehension between voluntary click through versus forced exposure in the post-trial exercise we can see importantly that click through also led to engagement with the information.

Participants who voluntarily clicked through to the Help Centre scored similar levels of comprehension (2.0 out of 3) to those participants who were explicitly shown the information in the post-trial exercise (i.e. forced exposure) (2.1 out of 3) and were advised there would be follow up questions.^{55 56} It would not be unreasonable to expect those in the 'forced exposure' group to have the highest levels of comprehension given the nature of their exposure, so seeing broadly comparable levels of comprehension between voluntary and forced exposure indicates that click-through in this trial translated into high levels of engagement with the information.

Those who saw the Help Centre (both voluntarily and through forced exposure) had significantly better understanding of platform rules than those who did not see it, implying that users' reliance on pre-existing knowledge or guesses may not be entirely reliable and that there are benefits to seeing user support materials. This contributes to our hypothesis that overconfidence bias might act as a barrier to engaging with user support materials. Significantly improved understanding of platform information was seen both at an overall score (shown above) and across all three outcomes shown in the Help Centre (privacy setting, community guidelines and reporting mechanisms. See Figure 3: Help Centre).^{57 58}

⁵⁴ Users perceive much of the information traditionally provided via links at sign up not to be relevant given prior knowledge of online services, as such the tangible benefits in 'clicking through' are therefore perceived to be limited.

⁵⁵ Text on this page read, "Thanks for your answers so far! VidScroll's Help Centre is shown below. We will ask you a few questions about it on the next page."

⁵⁶ Those who were not shown the Help Centre scored an average comprehension score of 1.6 out of 3

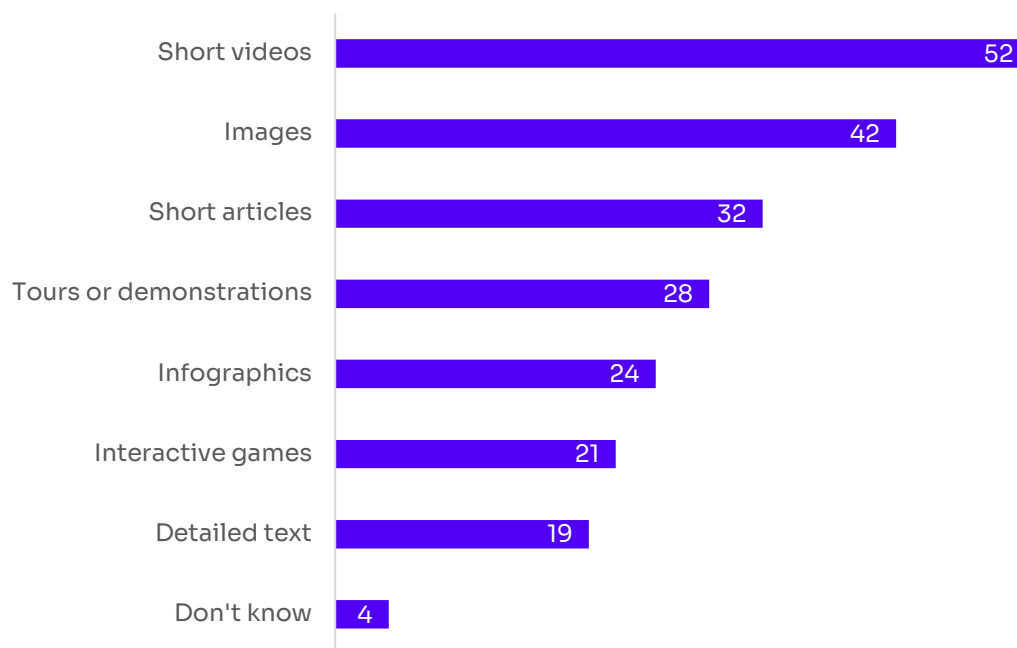
⁵⁷ Statistically significant at the 1% level, $p < 0.01$

⁵⁸ It should be noted that the information within our Help Centre was reflective of real-world practice and therefore responses could be a result of prior knowledge, however as those not exposed would be expected to have similar prior knowledge, we can assume increased comprehension was a result of exposure to our Help Centre.

Children say they prefer information in simplified formats, preferably with audio and/ or visual elements

When asked how they would like to see information within a Help Centre, children preferred simplified information, with detailed text the least attractive option (Figure 8). This aligns with responses to our 2023 Call for Evidence⁵⁹ and guidance⁶⁰ which repeatedly recommend user friendly formats to ensure information is accessible to children.

Figure 8: How children would like to see information about a platform’s rules or how to do things in a Help Centre (%)



Limitations

Simulated environment, short-term nature

Conducting an online randomised control trial allows us to test the impact of design changes on likelihood to click on a Help Centre at sign-up to a simulated platform. However, this is a simulated environment, and how participants behave in an online experiment is likely to differ from how they would behave in the real-world. In addition, participants were recruited via their parents which might lead to increased perceptions of monitoring, particularly where children used their parent’s device (phone or tablet). Children often respond to authoritative figures such as parents or teachers,⁶¹ and therefore children may adjust their behaviours accordingly to please their parents or

⁵⁹ [ParentZone](#) response to our 2023 Protection of Children Call for Evidence; [Antisemitism Policy Trust](#) response to 2023 Protection of Children Call for Evidence; [ICO](#) response to 2023 Protection of Children Call for Evidence; [SWGfL](#) response to 2023 Protection of Children Call for Evidence; [UKSIC](#) response to 2023 Protection of Children Call for Evidence.

⁶⁰ Design for Children’s Rights, 2022. [D4CR Design Principles 2-0](#); ICO, 2020. [Age appropriate design: a code of practice for online services](#).

⁶¹ Sides, N., Pringle, A., & Newson, L., 2024. [The lived experience of weight loss maintenance in young people](#) [accessed 10 May 2024]

the researchers. Therefore, whilst any relative differences in click through rates between experiment arms should be taken as robust indicators of impact (as you would expect any effect of this nature to apply consistently across trial arms), the observed effect sizes should be interpreted with some degree of caution, and not used as a predictor of the real-world impact should this approach be adopted.

We did not test whether comprehension translates into behaviour

Whilst our trial provides promising findings for the impact of salient prompts to drive click-through to a Help Centre, and evidence that improving click-through also improves engagement with the information (tested via comprehension), we do not know (as we didn't test) if this translates to online behaviours designed to improve online safety (e.g. compliance with community guidelines or reporting inappropriate content). Further research is required to extend this research to a simulated social media feed to test whether click-through and comprehension contribute to changes in online safety behaviours. Whilst previous Ofcom research has indicated that educating participants (via microtutorials)⁶² or making information more salient (via design choices or alert messages)⁶³ does translate into online behaviour, it cannot be assumed (nor has it been found) to apply in all contexts.⁶⁴

⁶² Ofcom, 2023. [Boosting users' safety online: Microtutorials](#)

⁶³ Ofcom, 2022. [Behavioural insights for online safety: Understanding the impact of video sharing platform \(VSP\) design on user behaviour](#)

⁶⁴ Ofcom, 2024. [Promoting user engagement with Terms and Conditions](#)

Discussion

Children find harmful content ‘unavoidable’ and ‘prolific’ on the platforms they use,⁶⁵ but despite some services implementing online safety measures designed to protect children from encountering this type of content, these are underused.⁶⁶ Children aged 13-17 years are becoming increasingly independent online. They may overestimate their ability to protect themselves online⁶⁷ and assume platform information, and may habitually skip terms of service. Whilst our research showed significant improvements in accessing user support materials when addressing awareness and prompts (Combination arm), our trial arm addressing some motivational barriers but arguably limited salience (Reframing arm), had no impact on click through to the Help Centre.

Many platforms make user support materials available to children. However, this research shows that providing access to user support materials is not sufficient alone to ensure children engage with them or understand the information within. Our findings suggest the format in which children are prompted to click-through and access this information has a notable effect upon each of these aspects and can extend the usefulness of the provision of these materials.

This research presents the findings of the largest known behavioural trial of children’s online behaviour. Whilst trials into online behaviour have been conducted in adult populations,⁶⁸ we know children behave differently to adults online, likely have different motivations and barriers impacting their behaviour, and therefore specific research with this population is critical to our understanding of children’s online behaviour.

Choice architecture is critical to drive children to user support materials. Those in the Combination arm were 70x more likely to click through to the Help Centre and 4x more likely to recall there was a Help Centre. As improving click through rates to the Help Centre was shown to significantly increase engagement with the information, tested via comprehension, it is recommended that services not only provide user support materials, but also consider *how* (and when) children are made aware of the materials to ensure they can benefit from the protection of a service’s user-operated safety measures.

Our trial adopted a number of choice architecture practices to increase the likelihood of click through to user support materials via a Help Centre. Practices included positively reframing the call to action (reframing) as well as positioning the prompt on a separate screen (attracting attention) with an eye-catching button and an image (visual elements), alongside an enforced delay of two seconds before it was possible to click to the next screen (added friction). Whilst it is unknown which individual or combination(s) of online choice architecture practices led to increased click through, we can be confident in saying that choice architecture significantly contributed to click through to the Help Centre. One-third of participants who voluntarily clicked through to the Help Centre thought they wouldn’t be able to use the site unless they clicked onto it; it is possible the added friction of the forced 2 second delay unintentionally contributed to this perception.

⁶⁵ Ofcom, 2024. [Understanding Pathways to Online Violent Content Among Children](#); Ofcom, 2024.

[Experiences of children encountering online content relating to eating disorders, self-harm and suicide](#)

⁶⁶ Note: We are currently in the midst of a public consultation on our draft Children’s Safety Codes which set out our proposed recommendations for services to comply with the safety duties set out in the Online Safety Act to reduce the likelihood of children encountering harmful content in future.

⁶⁷ Ofcom, 2024. [Child development ages, stages and online behaviour](#)

⁶⁸ For example, see research on [Behavioural insights at Ofcom](#)

Motivation as a barrier to accessing user support materials. Despite a combination of choice architecture practices significantly increasing click through, almost two-thirds of participants in the Combination arm still did not click through to the Help Centre. Motivational barriers, such as their beliefs about capabilities learnt from prior knowledge of social media or other online platform/service’s rules provide a possible explanation for this. Overconfidence bias could be a barrier to engaging with online safety information⁶⁹ where children may overestimate their ability to know the information presented (e.g. what tools are available to help them to respond to experiences of online harms) within a platform’s terms and statements.⁷⁰

Strategies to address motivational barriers need to be much stronger to encourage children to perceive real benefits from engaging with this material if we want to see higher numbers of children doing so.

There may be reasonable assumptions that services have similar rules and functionalities, with knowledge and experience from one platform translating to another. However, our research shows that participants who did not click through to the Help Centre had significantly lower understanding of our mock-up platform’s information (based on common practices), implying that users’ current perceptions may not be entirely reliable.

Strategies to address motivational barriers have the potential to strengthen children’s likelihood of engaging with, and subsequently understanding, platform information. This is important if we want to see higher numbers of children engaging with these materials and being equipped with the necessary information to protect themselves online.

Timely prompts, where users are more receptive to information and therefore motivated to engage with it, might provide one opportunity to address motivation. For example, at sign-up, when people are more open to developing new habits⁷¹ or where they might have encountered harm online and their user journey has become disrupted, motivating the need to engage in a new online behaviour (e.g. blocking, muting or reporting).

Although generally children thought information would be most helpful before, or during, sign-up, there were instances where some information was considered most helpful as and when needed. Subsequent prompts to the Help Centre are likely valuable for safety features that children are more likely to need whilst using the platform (e.g. blocking, muting, reporting).

Overall, we found the online choice architecture a significant contributor to the likelihood of click through to user support materials and subsequent engagement and understanding of platform information.

Future Research

We are keen to explore whether exposure to a Help Centre translates into changes in online behaviour, for example user support tools (e.g. blocking, muting) and reporting and complaints mechanisms, as outlined in Ofcom’s draft Children’s Safety Codes.⁷² Such insights could be

⁶⁹ Ofcom, 2022. [Serious Game Pilot: Trial Protocol Document](#)

⁷⁰ Ofcom, 2024. [Child development ages, stages and online behaviour](#)

⁷¹ Kirkman, E., 2019. [Free riding or discounted riding? How the framing of a bike share offer impacts offer-redemption](#)

⁷² Ofcom, 2024. [Protecting children from harms online. Volume 5: What should services do to mitigate the risks of online harms to children?](#) p.414

pivotal in understanding children's online behaviours, particularly when encountering harmful content.

Applying a combination approach has been found to have a significant impact on children's online behaviour. However, it is unclear which element, or combination of these, is most impactful. We are keen to understand more about which element(s) of our approach is most effective to drive online behaviour, and the optimum application of these behavioural techniques.

This research, and other research into online safety behaviours, has indicated that salient prompts are an effective mechanism to drive behaviour. However, too many prompts may reduce saliency and lead to alert fatigue. We would like to explore the optimum content, format and frequency for prompts to age-appropriate user support materials considering timing and frequency and their impact on subsequent online behaviours.