Teenagers' views on age assurance methodologies in the UK, Ghana and Indonesia

Report by Praesidio safeguarding

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Executive Summary

This research examined how teenagers in the United Kingdom, Ghana, and Indonesia perceive age assurance technologies and methodologies. The study used focus group discussions and individual feedback from teenagers to evaluate six existing approaches to age assurance and analyse their potential impact on young users' ability to access their preferred online platforms and services.

The report's main findings were:

1. Views on methodologies
Due to worries around access and data protection, most teenagers consistently preferred self-declaration to other age assurance methodologies even while they identified that it provided no meaningful indication of age in most cases. Credit cards, the use of formal ID and age inference were the least favoured methods across the whole cohort. Although age inference approaches provide low friction and accessibility, teens disliked the idea that their behaviours and choices were tracked and assessed on an ongoing basis. In the UK and Ghana facial analysis tended to be seen very positively but this met with more resistance among the Indonesian cohort.

2. Transparency, privacy and security
Teenagers in all locations wanted the options for age assurance to be well explained and clearly and proactively communicated. Many teenagers across the whole cohort were sensitive to the collection and storage of their personal data. They believed providers must be transparent about what happens to data used for age assurance and there was strong support for government and legal oversight. Data privacy and security concerns were particularly acute among the Indonesian teens.

3. Inclusion concerns
There were strong concerns about digital exclusion across the cohort. These were particularly acute in Ghana where many teenagers do not own their own device or account and do not have access to formal documents. Participants believed providers should offer a choice of age assurance methods to reflect teenagers' varied circumstances (e.g. access to ID documents, parental approval).

1. Introduction

Age assurance technologies refer to technologies and methodologies that online services use to establish or assess the age of a user. This is used to ensure that the user accessing the service meets any age requirements that are needed to access either the entire service or certain features in the service. Current methods for age assurance include self-declaration, hard verification with a government-issued ID or a credit card, age inference technologies, facial age estimation, and parental verification.

At present, self-declaration is one of the most widely adopted forms of age assurance owing to its convenience for users, requiring little more than the user to tell the service their age. However, the convenient nature and widespread use of self-declaration has meant that under-age users can often access online services, platforms, and content that are not designed or appropriate for them. Research with teenagers in Australia and Europe indicated they would welcome more robust forms of age assurance.[1] Additional research in the UK has noted that the reception of additional forms of age assurance depends on the proportionality of where it is implemented, and how disruptive it could be to their established online habits. In this case, activities that teenagers perceived as "riskier" like online gambling or buying age-restricted products, would require more stringent age assurance than accessing online games and social media.[2]

This study further explores the perspective of teenagers from the United Kingdom, Ghana and Indonesia in relation to age assurance methodologies. Specifically, the study seeks to better understand the views of teenagers beyond Europe and the US, where much of research particularly qualitative work in this area has previously been conducted, to discover how teenagers from globally diverse nations and cultures think and feel about current age assurance technologies. Further, the study explores the practicality and appeal of different existing age assurance technologies from the teenage point of view.

To achieve these objectives the study explores similarities and differences in the views and perspectives of teenagers.

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1 Justine Humphrey, Olga Boichak, and Jonathon Hutchinson, "Emerging Online Safety Issues: Co-creating social media with young people", *University of Sydney* (2023), pp. 1-56 (40); "Usage of Online Platforms & Youth Regulation: European Teen & Youth Focus Group Report", *ThinkYoung Research*, (2024), pp. 1-17 (11-13).
2 "Families' attitudes towards age assurance: Research commissioned by the ICO and Ofcom", *Revealing Reality*, (2022), pp. 1-47 (22).

2. Methodology

Study data was collected from teenagers in the three countries using a mix of focus group discussion and individual feedback. The main study interest lay in participant perspectives on the practicality, suitability and effectiveness of different existing technologies and approaches.

2.1 Recruitment, consent, and data protection

Recruitment: To recruit teenagers, we produced information materials about the project and asked four schools to share the information with young people who may be interested in participating in the project. The information explained the purpose of the project and what would happen to their information.

Consent: When teenagers indicated that they wanted to take part, both parents and teenagers were asked to sign a consent form. The following information was collected from teenagers and parents when they completed the consent form:

- Child's name and signature
- Child's date of birth
- Child's gender
- Parent's name and signature

Data Collection: As found in table (1).During the study we spoke to 140 teenagers from the UK, Ghana and Indonesia.

Table (1): Study participants

Country	Pts aged 13-15	Pts aged 16-17	Total
UK (England and Wales)	27	30	57
Ghana	23	20	43
Indonesia	20	20	40
Total	70	70	140

It should be noted that the teen cohort from the UK consisted of pupils being educated at two state schools, teenagers from Ghana all attended the same state school in Accra, and those from Indonesia came from a private school in Bogor, Java. During data collection we were acutely aware of the different cultures existing in Ghana and Indonesia, we therefore worked with local staff and partners to ensure that the sessions were run in a way that was culturally appropriate. In the UK and Ghana, part of these sessions were run in the English language, and in Indonesia they were run in Bahasa Indonesia.

2.2 Workshop content

Data in each location was collected using a visual toolkit consisting of a set of exercises and questions. At the start of workshops, researchers were interested in the wider context of the teenagers' online lives, specifically:

- how the young people currently engage online
- the services accessed
- the role their parents or carers play in support or supervision.

Interest then turned to existing teen knowledge of the age requirements of the services used and held experiences of platform processes for enforcing age requirements. We then sought views of different age assurance methodologies, their feasibility of use, the extent to which users were comfortable with the approach, and views on effectiveness. Finally, we talked about how and whether teenagers felt the use of these technologies would affect their privacy, and where in the user journey teenagers felt that age assurance processes should occur.

To ensure this, key questions and discussion points were grouped under the following themes:

- Access to the internet and levels of supervision – to understand a baseline of teenager's offline lives
- Awareness of existing age requirements on popular services and platforms
- Practicality and comfort levels related to different existent methodologies with interest focused on the following elements:
    - Self-declaration
    - Age inference
    - Parental verification
    - ID based verification
    - Credit card based verification
    - Facial age estimation
- Teen views and perspectives relating to privacy
- Teen views and perspectives on how age assurance systems should be implemented and governed.

Workshops gathered evidence from teenagers in the form of a short qualitative survey; small group conversations (in twos and threes); conversations in which the whole workshop group took part (n=12 or 13).

At the end of the discussion about individual age assurance methodologies, we also asked the teenagers to rank their views about each one on a Likert scale.

During the research we audio recorded the focus group discussions. We also collected the written contributions from individual and small group exercises alongside anonymised survey data.

The teenagers' identities were anonymised during the focus groups discussions. They were asked to choose a number or a pseudonym (with a separate register that linked their anonymous number to the identity recorded on the consent form).

Written materials from focus groups were gathered and uploaded to Praesidio's IT system, and held securely in encrypted, password protected folders. This included the session registers which link the number or pseudonym chosen by a participant back to their age and identity. All paper copies of consent forms, session registers and written materials have been scanned, uploaded, and kept in a secure encrypted folder. Hard copies have been shredded. The data from the research and the consent forms will be retained for 12 months following project close at which point these documents will be fully deleted from our systems (July 2026).

3. Key Findings

This section considers findings drawn from the total study sample from all three participant countries. It explores some of the similarities and differences between the separate nations. Following this we share the findings drawn from the UK, Ghana and Indonesia individually and in more detail.

Throughout our discussions it was clear that the culture and experiences of participants everyday lives strongly shaped their digital use and consequently impacted on the feasibility and their acceptance of different age assurance approaches. This included practical elements such as the availability of devices (e.g. the use of shared devices and accounts) as well as differences in the availability of ID documents. However, it also appeared to relate to different cultural sensitivities and perspectives that shaped their views of the technologies.

3.1 Views on methodologies

- While study data indicated that teenagers tended to agree in principle that they and other young people should be only be using the services pertinent to and intended for their age group, many worried that in practice that age assurance systems would lead to exclusion from the services they liked and were familiar with. Teenagers from each participant nation liked the ease of existing methods of self-declaration even though they acknowledged that they did not provide a meaningful indicator of age.

- We heard from the teenagers that they routinely misrepresented their age as adult to be sure to they could access the services they wanted. Teenagers understanding of the specific age requirement of the services they used (which were often lower than 18) was often lacking.

- Teenagers in the UK and Ghana were generally in favour of biometric data processes e.g. facial analysis. In contrast, the teenagers in Indonesia were not comfortable with this approach and sceptical about both accuracy and the data security of this process.

- Teenagers across all three countries expressed similar views on the role of parents. Most saw parental involvement as positive and likely to be enabling in terms of their access to the online world. However, some felt that parental interference could create practical barriers and undermine the growing independence from parents they felt teenagers had a right to during adolescence.

- All participant teenagers were resistant to age inference technologies despite the prevalence of this technology in many of their online experiences. Teenagers in Ghana were concerned about whether sharing devices and accounts which are often shared among family members of different ages, would undermine the effectiveness of age inference technologies. This was seen as less of an issue in the UK or Indonesia.

- Teenagers from all three countries teenagers disliked the idea that behavioural data could be used to track their interests and assess their age.

- In regard to providing formal ID to access services, teenagers in the UK and Ghana often lack access to such documents. They also felt that it would be a disproportionately high data risk to use formal ID documents for social media or gaming services. Teenagers in Indonesia were supportive of using formal ID provided that the sites and services were sufficiently legally regulated and secure.

- A common finding across participant teenagers was that teenagers use of credit cards was neither feasible nor suitable. Only a small number could access these, and they all felt the risks of financial fraud were too high.

In addition to our detailed group discussions each participant in the study was asked individually to rate each age assurance methodology on a Likert scale. The formal ratings that participants provided is shown below for the full cohort (n=140) and provides a useful overview of preferences.

Table *(2): All countries combined cohorts - rating of methods on a Likert scale*

Methods	Really like	Like	OK	Do not like	Really do not like
Self-declaration	65	41	27	3	4
Age inference	9	25	51	30	25
Parental verification	32	37	39	21	11
ID based verification	25	28	34	23	30
Credit card based verification	4	9	21	38	68
Facial age estimation	43	29	27	19	22

This is data is broken down into the individual country cohorts in the sections that follow.

3.2 Transparency, privacy and security

- Teenagers in all locations wanted the options for age assurance to be well explained and clearly and proactively communicated. They felt it was important to explain how their data would be used and stored.

- While varying levels of understanding and concern about privacy and data security were found within the teenagers from each participant country, different levels of concern between the nations were also evident. Teenagers from Indonesia showed the highest levels of concern about data leaks and data security, with some comments suggesting concern about these issues was part of a wider cultural conversation. Ghanaian teenagers were also generally consistently cautious; expressing concerns about having their data hacked. In contrast teenagers from the UK tended to be less aware or concerned about these issues.

- In relation to data use, trust and transparency were seen as essential by all, with many teenagers from all countries expressing concerns about fraudulent websites. Trusted brands, Government involvement, security guarantees and legal oversight were perceived favourably and seen to be essential for providing reassurance around data security and privacy.

- Much of our discussion revealed that current data collection practices of popular on online services are not well understood by teenagers. This was particularly evident in relation to our discussions of age inference which prompted relatively negative responses even though it is based on a data gathering practice which drives many of the participants' current online experiences. Key concerns about this seems to be around the lack of transparency around this process and not fully understanding how this assessment would be made. This potentially has broader implications for digital literacy and teaching teenagers about some of the design features of their favourite sites and services.

3.3 Inclusion concerns

- In discussing different methods of age assurance, it became clear there were some strong exclusion concerns across the cohort. These were particularly acute in Ghana where teenagers expressed their worries that because they did not own their own device or accounts, and because they did not have access to formal documents that proved their age, they could potentially be excluded even if they were the right age for the service.

- In line with this, participants believed providers should offer a choice of age assurance methods to reflect teenagers' varied circumstances (e.g. access to ID documents, parental approval).

The following sections present country-specific findings from the UK, Ghana, and Indonesia. These sections are laid out in a way that mirrors how each workshop was conducted - beginning with a consideration of the online use and supervision norms within each country and the awareness teenagers have about age requirements to access popular online services. This is followed by an in-depth analysis of each individual age assurance method as it was presented to the teenagers. Each country analysis concludes with a synthesis of the overall views of the teenagers and their preferred age assurance methods.

4. UK Findings

4.1 Online use, access and supervision

In the UK sample all but one participant had their own phone, and the majority used their own accounts most of the time. When asked about parental supervision the UK teenagers indicated that they experienced limited supervision or involvement from parents with only a small number (n=5) being supervised online. Where parental involvement was experienced, it mostly centred around rules and restrictions on what they could access, and the use of parental control settings.

4.2 Understanding of existing age requirements on popular online services

Knowledge of specific age thresholds varied, with common confusion between app store listings and platform policies in many cases. For instance, some participants understood TikTok requires users to be 13 while other thought the minimum age was 16.

It was common for UK teenagers to admit to lying about their age if they were too young to access the platforms wanted:

> *TikTok, Instagram, Facebook. I just wanted to see it all and felt left out if I wasn't on. (Female, 15, UK)*

> *Snapchat. Was on at age 11. (Male, 14, UK)*

> *I just spin the wheel to get a random date. (Female, 15, UK)*

To address confusions and clarify age restrictions, teenagers from the UK were in favour of clearer, more visible age guidance at the point of app download or sign-up:

> *When you open the app it should say the age you need to be to be aware. (Male, 17, UK)*

4.3 Perspectives on different age assurances methods

4.3.1 Self-declaration

Self-declaration was a familiar process and reflected current practice for the teenagers from the UK we spoke to. Most liked self-declaration because it is easy to use and allowed them to access the platforms and services they wanted:

> *Self-declaration is my preferred method... it's what I used when I first started getting on apps. (Female, 14, UK)*

> *I like it because it doesn't ask you for loads of stuff - you can just get on with it. (Female, 13, UK)*

Despite this, some low level of concerns about how easy it was to lie existed with some teenagers also expressing feelings of guilt or worry about lying:

> *I feel weird about lying, but if you don't, you can't get on the app. (Female, 13, UK)*

Participants were also aware that self-declaration can lead to access to age-inappropriate content. Some expressed unease about this:

> *Sometimes you see stuff you didn't expect... you're too young but they show it anyway because of what age you typed in. (Female, 14, UK)*

> *You can just get access to anything if you say you're older. That's the problem. (Male, 15, UK)*

Despite such concerns, self-declaration was their most preferred method as it reflects their current situation and allows them to access the services they wanted.

4.3.2 Age inference

Teenagers expressed significant levels of discomfort and scepticism about age inference technologies. For UK teenagers, the main concern was that services would track and assess their behaviours and they disliked how this felt. They also raised concerns that the age inference system would not accurately calculate their age because their level of maturity differed from their biological age:

> *Maturity levels. Just because you're the same age, you don't like the same stuff. (Female, 14, UK)*

> *If you have autism, you might be physically 18 but have the mentality of a 13-year-old. (Male, 17, UK)*

Device and account sharing added further complexity. Children worried that shared accounts would confuse the algorithm:

> *If you're on the same account... the 6-year-old could drag the 12-year-old down and possibly get them banned, or vice versa. (Female, 13, UK)*

> *I share with a parent and then a child, so you bring both of your ages down or up. (Female, 17, UK)*

The most persistent objection for UK children appeared to be the idea of having their behaviours and interests tracked. Some struggled to understand that this was automated technologies rather than a person making the age assessments:

> *It's creepy... when something tells me they're watching me, you don't know what else they might be paying attention to. (Female, 16, UK)*

In general, the teenagers showed low awareness of existing data gathering practices. For a few participants, the systems behind age inference felt quite personal even when they had a general understanding and acceptance of how common some of these processes are. Participants also struggled to understand how age inference would work to generate an accurate age assessment:

> *I didn't know they could do that... I doing really mind it though, the majority of apps and websites they watch you anyway. It's like when they ask for cookies - that's how they're watching right? But how could they come up with my age based on what I watch? Are they constantly watching or would it be for a certain period? (Male, 17, UK)*

Although some accepted age inference as an automated background process, there was scepticism about using this methodology for the purpose of age assurance. The prevailing response to age inference technologies was one of mistrust and doubt:

> *Wouldn't that be a bit scary if they're just silently watching until they decide you're lying? (Female, 14, UK)*

4.3.3 Parental verification

UK teenagers had mixed views on parental verification. Many teenagers supported this process, with the main opinion being that their parents support them to gain access, to the extent that they would misrepresent age if necessary.

> *It's annoying but it works really well because if your parent lies about your age then it takes the blame away from the app. (Male, 13, UK)*

However, some expressed concerns about not being able to easily reach their parents, their parents' willingness to help, and their parents' willingness to use their own ID for an age assurance purpose.

At the same time, several teenagers, raised issues and concerns. Some teenagers noted that the requirement for parental involvement assumed consistent access to a parent prepared to provide this support:

> *Like what if you're not with your parents as often, you wouldn't have immediate access to them. (Female, 17, UK)*

While elsewhere, differing parental views was seen as a potential obstacle:

> *Maybe your parents can't agree to let you on; one's for it one's against. (Female, 17, UK)*

While others raised concerns about practical barriers for those without consistent parental access:

> *If someone's parents are not there anymore then they are stuck. (Male, 14, UK)*

Some expressed concerns about the effort required from parents, especially if the process required them to upload their ID or to provide repeated verification. Multiple teenagers felt their parent(s) would be unwilling to enter credit card details for this purpose:

> *My parents would think the app is trying to take money from them. (Male, 14, UK)*

Some worried that their parents would seek to avoid taking on the role of verification:

> *It's too much effort... my mother would just tell me to lie about my age. (Female, 15, UK)*

Another key theme was that parental verification would conflict with their growing desire and expectation that they should be able to act autonomously online during their teenage years. Many teenagers felt their parents did not know enough about their digital lives and should not be gatekeepers:

> *Your parents might be overprotective and say no, but you should still have a right to get on those apps. (Male, 17, UK)*

4.3.4 ID Based Verification

The UK teenagers we spoke to were sceptical about using formal ID documents for the purposes of age assurance. These feelings were linked to a lack of access to valid ID in many cases, alongside unease about sharing personal data with platforms they did not trust. Participants drew a distinction between situations where uploading ID might be acceptable (e.g. institutions they trusted such as banking, transport or government) and doing similar for unknown or private companies, services or apps – which they regarded as much riskier.

Participants often distinguished between apps they trusted and those they did not, noting that for certain utilities (e.g., train apps), ID might be acceptable, but not for social media. In general, they felt sharing this kind of data for social or leisure purposes was disproportionate to the risks:

> *I think it depends on the app – like for the train app I put it in because I knew they needed it, but apps like Snapchat, they shouldn't need it. (Female, 16, UK)*

Young people tended to be more accepting of sharing data with Government organisations, public bodies or large trusted brands. Some felt they would be willing to share formal ID for verification at the level of the app store (perhaps because they were familiar with this) and there was a tendency to distinguish between big, trusted brands and smaller or less well-known entities that might not be trustworthy. There was a lot of unease about sharing data with sites or services that might steal their data or scam them:

> *It could be a scam as well, they could make it look normal, but it's actually fake and they're going to sell your information. (Female, 16, UK)*

> *I feel very disheartened... they might steal or hack my personal information. (Female, 17, UK)*

Even when using formal documentation was seen as acceptable, many UK participants raised the fact that they did not have access to identity documents (e.g. a valid passport, driving license):

> *I don't have a driving licence, and I don't know where my parents keep my passport. (Female, 17, UK)*

It was noted by this group that while some countries use national ID cards, the UK does not.

4.3.5 Credit Card Verification

In a similar vein to the discussion about identity documents, credit card verification was overwhelmingly rejected. Most participants understood that they could not obtain a credit card until age 18 and so pointed out that this method would not be possible for them:

> *You can't get a credit card till you're 18... it's ridiculous. (Male, 16, UK)*

They also felt that even when they were old enough it would be far too risky to share this kind of financial data with most online platforms:

> *It feels too intrusive and personal unless this is for online shopping. (Female, 17, UK)*

> *No! I don't want anyone to steal my money. (Female, 15, UK)*

> *It's too risky for a bit of fun. If they have your credit card and could access your account. (Male, 14, UK)*

4.3.6 Facial Age Estimation

Facial age estimation emerged as a relatively popular method among UK teenagers, (the second most popular after self-declaration). It was liked because it was perceived to be quick, easy and frictionless.

Facial age estimation was not universally popular however, and some teenagers expressed concerns about accuracy, fairness and data security. Some felt that the use of facial images was unfairly invasive.

For those participants in favour, facial age estimation was attractive because it offered a simple, one-time check without needing to share sensitive documents or involve parents. It was frequently described as convenient, especially by those who had encountered similar technology on platforms like Snapchat or Wizz:

> *It's easy and fairly accurate to use. It's quick, it is not annoying to do. (Male, 14, UK)*

> *Easy, quick, not too invasive. Good for my own protection on social media. (Male, 17, UK)*

Despite this general popularity, concerns about the accuracy and fairness of facial analysis technologies were raised by several teenagers that we spoke to. Some were worried that age estimation algorithms might misjudge users with decisions based on physical appearances that were not age typical, or poor-quality photography – e.g. the makeup, lighting, or camera quality:

> *Could be of age but look younger. Camera may be broken or unreliable (Male, 14, UK)*

> *Facial age estimation doesn't seem that efficient. AI would probably get my age wrong as lots of people think I am older than I really am. (Female, 14, UK)*

> *It is easy to take a photo of someone else and pretend it is you. (Female, 16, UK)*

Some questioned accuracy around particular key age thresholds that would be assessed:

> *Depends on the age [of the user]... a 13-year-old probably wouldn't pass as an 18-year-old, but a 16/17-year-old could. (Male, 16, UK)*

Some teenagers also expressed anxiety about data security and wanted reassurances that the images would not be stored or retained:

> *I would be comfortable as long as they didn't take a photo and store it. (Female, 14, UK)*

I'm not very comfortable - I don't know where a picture of my face is going. (Female, 17, UK)

Overall, the teenagers in the UK felt more comfortable sharing this kind of data than data that would verify their ID by sharing an identity document:

It's a lot better than using ID because you are sharing a lot less information. (Male, 14, UK)

It is similar to ID but without giving out lots of information. (Female, 14, UK)

4.4 Privacy and Data Protection

During the workshops, teenagers were asked about data privacy and how this affected their preferences. The UK sample held a wide diversity of views around the importance of data privacy. While a few participants articulated strong concerns about data storage, security, and misuse, many others expressed apathy or indifference, especially when access to platforms was at stake.

It was notable that a significant portion of UK participants expressed little interest or concern about how their data was handled, especially if it stood between them and app access:

I'm willing — nothing to hide and if they want to watch my activity they will do it anyway. (Male, 17, UK)

I don't care, I like going on to look at things. (Male, 14, UK)

At the same time, others in the UK group expressed discomfort about their personal data being collected, stored and shared - including concerns about all different kinds of data whether behavioural, biometric or identity based. However, it was notable that among this group concerns linked to the sharing of identity and financial information were strongest:

Your ID has all your personal information about who you are and where you live. It's dangerous if it gets shared. (Female, 14, UK)

As above, a number of teenagers distinguished between the types of apps they were willing to share information with. Again, more were willing to share their personal data with Government related services and reluctant to share their sensitive information with social platforms. The discussion revealed that their attitudes were shaped by the extent to which they trusted the service or platform.

When discussing data privacy, a number of teenagers reflected that if data is to be collected for age assurance, then the systems and processes used should be openly explained. They indicated that they would welcome a better understanding of how their data would be used or stored, and for how long it would be kept:

It would be useful to have an explanation so you can make your decision. (Female, 17, UK)

When asked how this should be delivered, children consistently preferred clear, brief formats:

Reading paragraphs is just boring... bullet points are better. (Male, 16, UK)

Videos were seen as potentially effective if kept short:

If it's over 1-2 minutes, it's too long. (Female, 17, UK)

When asked whether they would prefer a centralised age verification system (e.g., via app store, Government, or a third party), many participants liked the convenience, but others raised concerns about creating a site of centralised data:

It depends on who is holding onto that data. (Male, 17, UK)

4.5 Timing and Setting of Age Assurance

There was strong support across all UK teenagers for a "one and done" model of age assurance, preferably linked to the device, app store or a trusted third-party system:

You get a new phone, and part of setting it up is telling it your age. (Male, 17, UK)

I'd rather do it once and all the apps listen to that. (Male, 14, UK)

This centralisation was seen as more efficient and less intrusive, particularly when compared with repeated checks per app:

It saves time rather than going on loads of different apps. (Female, 15, UK)

Trust in the entity handling the data was important, with some suggesting a Government entity and other big, trusted brands such as Apple or Microsoft. A small number of teenagers argued it should be Government or NGO led:

I would like it to be with the government because they won't be looking for money but if it was private, it wouldn't get neglected because they are competing with other apps. (Female, 15, UK)

4.6 Overall Views and Preferences

The discussion overall revealed that current data collection practices are not uniformly understood – particularly in relation to age inference which prompted relatively negative responses even though it is based on a data gathering practice which drives much of their online experience. Key concerns about this seems to be around the lack of transparency around this process and not fully understanding how this assessment would be made. This potentially has broader implications for digital literacy and teaching teenagers about some of the design features of their favourite sites and services.

In regard to age assurance preferences, self-declaration remained the most popular method for UK teenagers, while facial estimation was generally popular for its simplicity and ease. Credit card-based systems were strongly rejected, and the majority felt using formal ID would not be practical or proportionate. Parental verification had relatively good acceptance but there were concerns around practical barriers and potential loss of autonomy. The table below shows their preferences, ranked in writing during the workshop.

Table (3): UK combined age cohorts - Likert Scale of methods

Methods	Really like	Like	OK	Do not like	Really do not like
Self-declaration	25	16	14	1	1
Age inference	1	7	29	14	6
Parental verification	12	21	10	11	3
ID based verification	2	11	17	12	15
Credit card based verification	0	2	9	16	30
Facial age estimation	13	18	18	6	2

5. Ghana Findings

5.1 Online use, access and supervision

All of the teenagers in Ghana accessed the internet exclusively via mobile phones. The majority did not own a personal device (only 7 of the 43 teenagers we spoke to have their own phone). Instead, they shared phones with a parent, carer, or multiple siblings. We also found that teenagers in Ghana often tended to share their accounts. This shared use often shaped their views of the practicality or suitability of different age assurance technologies.

We asked the teenagers what role their parents or carers played in terms of supervision or guidance when they were online. We found that around half of the younger cohort and a quarter of the older cohort said that they experienced parental supervision. This included a mix of supervision practices from parents exerting direct control over their use to those who checked in and discussed online activities with them:

> *When I'm researching something, they ask me what I am up to and I tell them. (Female, 15, Ghana)*

It was evident that the girls in our groups tended to describe tighter supervision than the boys with it being more common for their parents to sit with them or actively supervise them:

> *They supervise me by putting passwords and staying with me until I finish what I am doing online. (Female, 14, Ghana)*

It was noticeable that the broad spectrum of supervision practices in Ghana also included those that were very strict with one teen saying that their parents 'corrected my messages when I am chatting'.

5.2 Understanding of existing age requirements on popular online services

We found that the teenagers in Ghana had very limited knowledge of minimum age thresholds for the social media and gaming platforms that they used and enjoyed. Most of the teenagers we spoke to believed that the minimum age requirement was at least 18 for most of platforms they were using (when in fact many of the common social media and gaming apps they were using had a much younger minimum age). Because of this, it was common for them to have lied about their age and said that they were 18+ when signing up:

> *I didn't know the age of some apps so I just lied to say I am 18 to sign up. (Female, 14, Ghana)*

The only caveat to this was that some teenagers explained that because they shared account with parents and siblings, they often did not need to give a false age:

> *I use my parents' accounts, so I have never had to give my age or know the age. (Female, 14, Ghana)*

The young people we spoke to suggested that it would be helpful to know the intended age group of the platforms and services they were using, as they were often unaware of the intended age for those using the service:

> *When you sign up, they should write the age clearly then, so you can see it. (Male, 15, Ghana)*

> *A video showing you how and why would help. (Female, 15, Ghana)*

Some teenagers described trying to see the age of other users to see if an app or service is aimed at adults or children:

> *When you are using the app, I follow and look at the apps and see that there are adults using it or children using it and then I know whether it is for adults or children. (Female, 16, Ghana)*

5.3 Perspectives on Different Age Assurance Methods

5.3.1 Self-declaration

The teenagers we spoke to were familiar with using self-declaration to gain access and mostly favoured this method as it represents what they do currently, and it allows them access to the services and platforms they choose. The teenagers that we spoke to acknowledged that self-declaration was popular because it allowed access without any meaningful barriers:

> *In Ghana it is something we usually do. Before you use the app they do not research about who you are and who [is] allowed. The moment [you] enter or type they give you access. (Female, 14, Ghana)*

> *I am always able to access the platforms that I like because we all just lie about our age. (Male, 15, Ghana)*

Similar to teenagers in the UK, some teenagers in Ghana expressed a discomfort with the fact that they needed to lie in order to access the services they wanted:

> *I will be uncomfortable because I may lie before using the platforms, so there might be a fear in me. (Female, 15, Ghana)*

The teenagers we spoke to understood that the misrepresentation of their ages led to them being exposed to content that was not aimed at their age group. Teenagers generally wanted the freedom to access and view content aimed at older users, but they sometimes expressed unease about this too:

> *I want to watch the things I like, but if I give them my real age, then I can't see them anymore. (Female, 15, Ghana)*

> *You might be afraid of the things you watch if the age is too high. (Female, 14, Ghana)*

5.3.2 Age Inference

The discussion on age inference reflected that their main concern was its accuracy and practicality given the widespread sharing of devices and accounts within families in Ghana. A small number of teenagers also expressed mixed feelings about the methodology of services gathering data and assessing their age based on behaviours and interests.

The teenagers explained that age inference methods would be unlikely to work accurately due to the level of device and account sharing. Many expressed that this would result in a mix of behaviour and interest signals from different users that would potentially make this approach unworkable:

> *I share a phone with my older brother who is much older than me so it's going to be difficult to detect my real age. (Female, 16, Ghana)*

> *It is not possible because I use my family's account, so the information will not be mine alone. (Male, 16, Ghana)*

> *Please it is not possible for me to use this method because I am not the only one who is using this phone. (Female, 17, Ghana)*

Some teenagers also disliked that their behaviour signals would be collected and assessed:

> *I want privacy, and I don't want apps to track me. (Male, 15, Ghana)*

5.3.3 Parental Verification

The teenagers we spoke to had mixed feelings about parental verification. On the positive side, many teenagers felt that their parents would want to actively support them to access online services and platforms and that in principle this method could work effectively. However, they also raised the issue of potential barriers to access created by relying on parents – in particular if it required parents to be physically present with them and if it required them to be able and willing to use formal ID.

They explained parental verification would be possible in Ghana if the system were able to accept the national identification card – a Ghana ID card which is available to Ghanaian citizens from the age of 15. However, they explained that other forms of identify documents such as a passport or credit card would exclude a lot of their parents from being able to verify as they simply do not have these:

> *It would be possible if they can use the Ghana ID card but not possible if they had to use anything else. (Female, 15, Ghana)*

Some also pointed out that their parents would not necessarily be willing to enter ID details for this purpose.

> *This is not possible, and they would not be comfortable with this because they would be worried about someone taking their personal information. They are very suspicious of the internet so would not give over their ID for me to use an app. (Male, 15, Ghana)*

Many of the teenagers we spoke to also expressed concerns about relying on parental verification because they felt that they should have autonomy and independence. This view was stronger among the older group, with the strongest hostility to parental verification coming from girls, suggesting that girls were more likely to be subject to parental supervision and experience a lack of autonomy online:

> *I would not feel comfortable because my parent will be checking what I do on social media. (Female, 14, Ghana)*

> *I am not comfortable with my parents knowing what I am doing online. (Female, 16, Ghana)*

It was explained that this desire for independence online could arise when parents were not supportive of their use, in particular when parents were anxious that their online activities could affect the family or parental reputation:

> *My parents would ask me a lot of questions to understand. It would not be possible for me because if I'm using an app and I do something wrong, it might impact on them negatively and get them into trouble. (Female, 17, Ghana)*

5.3.4 ID-based Verification

We found that teenagers in Ghana were generally resistant to using formal ID to prove their age. Many of the teenagers we spoke to did not have ID available to use (in the 13-15 group very few yet had a national ID card, although in the older group of 16-17-year-olds the majority did have one). Some of those that did not have a national ID card explained that they could potentially access their health insurance card (but this was a minority). We found that even those teenagers that had access to ID expressed a general reluctance to share formal ID details with apps and services due to privacy concerns and a worry that their identity details could be hacked or misused:

I am not willing because I don't want to show my ID online. It breaks my privacy, and it might not be safe to do so. (Male, 15, Ghana)

This method is not possible because I don't have any ID. Even if I did have ID, my parents would not let me share it with the app. (Female, 15, Ghana)

I would not be happy to scan my Ghana card because some people use people's name to fraud others. Maybe they can use my name. (Female, 16, Ghana)

5.3.5 Credit Card Verification

In our discussions about potential ID that could be used for age assurance, the teenagers we spoke to made it overwhelmingly clear that neither they, nor their parents, would have access to credit cards. The use of credit cards was strongly rejected as a potential method:

No because in Ghana no one uses credit cards. (Male, 14, Ghana)

The majority of people in Ghana do not have a credit card so it just won't work. (Female, 14, Ghana)

5.3.6 Facial Age Estimation

The teenagers we spoke to tended to view the potential use of age estimation very positively. In general, the teenagers viewed it as fast and frictionless as well as inclusive because it would not require the inputting of identity documents.

Facial estimation is fast and easy. You just need to scan your face. (Female, 14, Ghana)

Facial estimation is my favourite because there is no need to verify with your ID or credit card. So even if you do not have both of them, you can still verify your age. (Female, 14, Ghana)

This method is easy and quick and does not need more information about you. (Male, 16, Ghana)

The teenagers we spoke to in Ghana tended to trust that the method would be accurate. They also expressed some familiarity due to the experience of using their biometric data to unlock their phones:

It is very easy and simple to do. I think people would like this one because many people already use something like this to get into their phones. (Female, 16, Ghana)

A small number expressed concerns about accuracy and reliability:

> *Some people are older, but their face looks younger... I don't think this method will work - I don't think it would get the age right. I do not trust it. (Female, 14, Ghana)*

Similarly, despite its overall popularity, a small number expressed their reservations about data privacy and security of this method:

> *I would not feel comfortable because I do not have my own phone and I don't want my face scanned on someone else's device. (Female, 16, Ghana)*

> *If they save my face, it could be dangerous, I don't want it to stay forever. (Female, 15, Ghana)*

5.4 Privacy and Data Protection

We asked teenagers how they felt about data privacy, how this affected their preferences and how important this was to them. In general, the majority of teenagers we spoke to in Ghana demonstrated a strong awareness of privacy risks. The teenagers expressed that privacy was an important issue to them:

> *It is very important to me. I would not like to see my data all over the internet. It makes it very easy for others to get access to me. (Female, 14, Ghana)*

Some participants felt all of the methods (except self-declaration) sought too much information from users:

> *It is dangerous because all the methods need to know information about your life and this is very dangerous. (Female, 14, Ghana)*

As discussed above, there was a particular concern and reluctance to share formal identity documents for the purposes of age assurance.

> *I am not willing to give my card. Even if I have one, I won't because I don't give my information. (Female, 16, Ghana)*

> *I feel very disheartening when using this method (ID card) because they might steal or hack my personal information and use it for something else. (Female, 17, Ghana)*

When asked about different methods, teenagers suggested they would welcome clear information and explanations about how the data would be used in each case:

> *It would be helpful to have an explanation about how my data is used. (Female, 15, Ghana)*

> *They should send an alert to my phone – maybe SMS or message. (Female, 15, Ghana)*

The teenagers we spoke to did not express any real preferences about how age assurance should be managed in terms of whether there should be Government involvement or whether it should be led by private companies. Although some expressed concerns about data being collected that could fall into the wrong hands, they did not express a preference between private companies or Government involvement in age assurance systems.

5.5 Timing and Setting of Age Assurance

The teenagers in Ghana did not express strong views on the when and where of how they felt age assurance should occur. Most expressed that they preferred age checks during app installation or during a specific account creation:

> *It must be asked when we are installing new apps on our phones. (Female, 15, Ghana)*

> *When I open the app and start to log in, the age assurance must come first. (Male, 15, Ghana)*

5.6 Overall Views and Preferences

A key theme for Ghanaian teenagers was the fear that they could be excluded from apps and services (even if they were the right age) if they did not meet the requirement of the age assurance methodology. The lack of ID, and the sharing of devices and accounts was felt to complicate some of the potential methods that were discussed:

> *I do not have a phone myself; I share it, and it is not possible for me to find a credit card or ID. If someone looks at my behaviour online to find my age – they will be confused, they will not know which activity is mine, and which is my mum. (Female, 14, Ghana)*

It was noticeable that facial age estimation was very popular, but even here there was some anxiety expressed that this might not be accurate, and that relying on this method might risk their access to services:

> *It will not be possible to have many of these methods for us here in Ghana. I myself, share a phone with my older brother and mother, and do not own ID – nor does my mother, so then what will happen? I will not be able to go on social media accounts and apps again. The only way to prove my age will be my face – but I worry that it will not be correct, what if it thinks I am younger? (Male, 15, Ghana)*

> *I am a little worried that I may miss out on some of the services and apps I like to use if I do not have the right things to do the age assurance. (Female, 16, Ghana)*

At the same time a small number expressed their support:

> *I will not be worried at all because in Ghana, many children below the required age of the app have started using them which is not a good thing to do. (Female, 14, Ghana)*

In line with their anxieties about exclusion, the Ghanian teenagers favoured facial estimation above other methods. They felt it provided a balance between being able to assure age-appropriate content with a realistic and frictionless method that would be broadly inclusive of children in all different situations. The table below shows their preferences, ranked in writing during the workshop.

Table (4): Ghana combined age cohorts - Likert Scale of methods

Methods	Really like	Like	OK	Do not like	Really do not like
Self-declaration	22	10	7	1	3
Age inference	5	10	13	6	8
Parental verification	16	6	9	8	4
ID based verification	12	10	10	3	8
Credit card based verification	4	7	6	8	17
Facial age estimation	30	7	1	2	3

6. Indonesia Findings

6.1 Online use, access and supervision

All of the children in Indonesia had their own phones and social media accounts. Just under a quarter of respondents described active parental supervision or parental involvement in their online lives. This included a spectrum of supervision approaches from the very intensive monitoring to lighter touch approaches that included checking in and discussing online activities. Some of the young people had examples of very strong supervision:

> *When I was 12, I started owning personal gadgets. However, its use is still under the full supervision of parents. They are still very attentive to my activities, such as my browsing history on social media and various applications or content that I access through the gadget. (Female, 17, Indonesia)*

At the other end of the spectrum, some teenagers described a high level of freedom:

> *I first held a cell phone when I was 6 years old. But because my parents are busy, they are not too strict, they are not checking, they are not told anything. And until now it is still the same, it remains loose. (Female, 15, Indonesia)*

6.2 Understanding of existing age requirements on popular online services

The teenagers we spoke to in Indonesia were active users of a range of social media, gaming and shopping apps. Yet despite this, they tended not to have an accurate understanding of the minimum age requirements of most of the online services they used. It tended to be the case that their understanding of existing age requirements for specific services were from their own assessment of the content of the service, sometimes informed by the age rating provided by app stores, rather than from information provided by the services themselves. The majority of the teenagers we spoke to had set up their accounts for over 18 – and simply self-declared that they were over 18 to avoid any age restrictions or barriers. In cases where teenagers did encounter age restrictions, they often described setting up new or secondary accounts in order to achieve the access to services or features that they wanted:

> *I wanted to send a message on TikTok but I couldn't because I was 14 so I created a second account whose age I raised so that I could enter the age of free access to content and messaging which is 16. (Male, 14, Indonesia)*

Some of them mentioned that their age had created a barrier and had led them to uninstall apps. However, this only seemed to occur when they were significantly younger than they needed to be:

> *I couldn't install Instagram at that time. I was still a minor about 7 or 8. I uninstalled it. (Female, 14, Indonesia)*

6.3 Perspectives on Different Age Assurance Methods

6.3.1 Self-Declaration

The teenagers in Indonesia were familiar and comfortable with self-declaration and many of them argued that this was a suitable and practical method that allowed access to age-appropriate content:

> *This is one of the easiest methods and doesn't require in-depth information... I am comfortable because I think this method helps users to determine whether they are of sufficient age or not... (Male, 14, Indonesia)*

Generally, teenagers did acknowledge that while they liked the method it was not effective as a method of age assessment:

> *In my opinion, this method really depends on the honesty of the users. So, even though it is the most popular method, it is not effective. (Female, 15, Indonesia)*

> *With this method, anyone of any age can manipulate it, regardless of policy and conditions. (Male, 17, Indonesia)*

6.3.2 Age Inference

Many of the teenagers expressed that they were uncomfortable with this method. This arose from a mix of concerns related to both its perceived inaccuracy and the fact that they felt it involved collecting a lot of data about them:

> *I am uncomfortable with this because it involves tracking our online interests. (Female, 14, Indonesia)*

> *In my opinion, this method is not very suitable to use, because what we buy doesn't necessarily reflect our age... I don't feel very comfortable with it, I guess I'm not really a fan of this kind of method. (Male, 14, Indonesia)*

Many of the teenagers expressed scepticism that this method would be accurate, with lots of examples of how interests do not necessarily track with age:

> *I think it's not a good method. For example, if my dad borrows my phone and buys a pipe, it might assume I am an adult which isn't accurate. I find it ineffective because it relies on assumptions. This method is just based on guesses not actual data… I feel uncomfortable with it because when I open social media and see unclear or random ads, I find it disturbing. (Male, 14, Indonesia)*

> *Not effective, because there's no clear benchmark to determine a person's age based on their online activity. (Male, 17, Indonesia)*

> *Everyone has different preferences and needs. I myself like to watch cartoons on social media; it doesn't mean that I am a 5-year-old. (Female, 16, Indonesia)*

While many teenagers raised issue with accuracy – of making assumptions about age related to a user's product purchases or interests – others did appreciate that age inference offered a passive and frictionless experience for the user:

> *This method seems helpful in guessing our age by knowing what we like, or based on algorithms from our phone/gadget. I'm comfortable with it since it estimates our age without requiring us to provide it. (Female, 14, Indonesia)*

6.3.3 Parental Verification

The teenagers expressed mixed views about parental verification. While many felt it was appropriate for parents to be involved, and parents were generally viewed as supportive, there were concerns about the practicalities of accessing them and their variable understanding of and involvement in their online lives. There were also concerns about the loss of privacy and autonomy with many feeling that parental involvement was only really appropriate for younger children.

The teenagers raised concerns about their parents' abilities with the technology as well as ease of access to them:

> *It's quite okay because parents can know about our online activities. But it can be difficult if quick parental verification is needed, especially if the parent is not tech-savvy. (Female, 14, Indonesia)*

> *My parents are not tech-savvy and are quite busy… my parents are not fully capable of operating the phones they own. (Male, 15, Indonesia)*

> *Parents are often busy. What if they're out when we need to verify something? It would be inconvenient. It's easier to just fill it in ourselves. (Male, 14, Indonesia)*

Others pointed out that this would be difficult for those without parents:

> *I would like to ask: what about children who do not have parents? Who will help them with the verification process? (Female, 16, Indonesia)*

It was common for members of the group to feel that parental involvement in age verification was only suitable for younger pre-teen children and that they themselves, as adolescents, needed privacy and autonomy in their online use:

> *Although I am still a child, I should already have my own privacy, although there still needs to be parental supervision... It would be better if the child manages it. at my age, I should already have privacy. (Female, 15, Indonesia)*

> *For children under 12, it feels very comfortable because parents can have control. But for those over 12, it feels less comfortable as it may raise privacy concerns. (Male, 14, Indonesia)*

Some teenagers indicated that it would be uncomfortable for them to have to negotiate access with parents:

> *Many parents are now starting to give more trust to their teenage children. So, this parental verification method is actually more suitable for children only application, such as YouTube kids or other similar applications. If applied to applications intended for adolescent or adult users, this method actually feels less effective and can even make it uncomfortable. (Female, 17, Indonesia)*

6.3.4 ID-based Verification

The teenagers we spoke to in Indonesia had mixed views about using ID documents for the purpose of age verification. Most of the group had access to birth certificates but not all of them had a student ID card. Many expressed a clear discomfort about using ID documents to verify their age and an unwillingness to upload ID into online services due to the fear that data would be leaked or misused. However, there were also many in the group (about half of the overall cohort) who expressed that they would support this method for its accuracy and straightforwardness provided that the apps and services the ID was being shared with were well established and legal.

They commonly expressed security concerns:

> *We're not sure if the app or website is secure. There's a concern it might be used for things like online loans or gambling... I'm reluctant because I'm afraid our photo ID cards might be misused. (Male, 14, Indonesia)*

They often felt that uploading ID could simply be disproportionate to the data security risks, and they explained that their willingness would depend on the app and the level to which they felt they could trust the data security:

> *I'm hesitant because I find it somewhat unnecessary, especially if the app asking for it isn't something essential like an e-wallet... I'd be willing, but only with specific and trusted applications. It can be very dangerous if our personal data leaks to the public or is misused. (Female, 14, Indonesia)*

> *There must be a guarantee of security and that the system is registered in the database of the Ministry of Communication and Digital Affairs. I'd be willing, as long as there is a security guarantee and it is officially registered. (Male, 17, Indonesia)*

Some of the teenagers we spoke to did feel comfortable using their ID, but many said the purpose had to be proportionate to the risk and that there needed to be confidence that the data would be held securely. This tended to mean that they were using ID for something useful or necessary and only on sites and platforms they deemed as trustworthy:

> *If it's like me logging in to Shopee and others its ok but if it's from a certain web I don't agree because there are often leaks. When searching for the GPT chat, personal data appears really easily. (Female, 17, Indonesia)*

> *If there is a system that guarantees its security, then I agree, but otherwise no... Because there are several cases from China where there has been a leak. (Male, 16, Indonesia)*

Teenagers also identified that if parents were required to verify with official ID documents many of them would be likely to refuse to do so:

> *There are some parents who certainly do not allow their children to use official data to proceed to the application. (Female, 15, Indonesia)*

At the same time there was support for this method if used on apps and services that were considered reliable:

> *This method is more trustworthy that any other for age verification. Provided it's used on a platform or website run by a legally recognised company. (Male, 17, Indonesia)*

> *It's the most accurate easy and fast. The risk of a data breach depends on us not sharing it with illegal websites or apps. (Female, 17, Indonesia)*

6.3.5 Credit Card Verification

In Indonesia, we found that none of the younger teenagers had a credit card and only three of the older group had one. Across both age cohorts we found that most of their parents had a credit card but that a significant minority did not. For the teenagers we spoke to, the lack of access was the main issue, but they also felt it would be too risky to use a credit card for age verification:

> *Misuse can occur if data is shared carelessly... it could be an entry point for online loan apps to hack data. (Male, 14, Indonesia)*

> *I think it's not very suitable for apps that are not well-known. I'm afraid the money on our credit card could be misused or stolen. if we're not sure whether the app or website is safe, it could put us at risk since our money might get stolen. (Male, 14, Indonesia)*

6.3.6 Facial Age Estimation

We found that the use of facial analysis was very unpopular among Indonesian teenagers due to the combined concerns that it would not be accurate (and that age would be easy to falsify) and the concern that images might be shared if there was a data breach.
The teenagers in Indonesia felt strongly that accuracy was an issue and often would not be achievable with facial analysis:

> *It is not effective because there are people whose faces are old even though their age is lower than their face. (Male, 17, Indonesia)*

> *I think estimating age from a face isn't a reliable method, because the results can be affected by camera conditions or recordings... it's just a physical estimation, not a reliable form of identification. (Male, 17, Indonesia)*

In addition, there was a broader discomfort with the method that a personal photo was being taken and could potentially be shared:

> *I have body dysmorphia, and one of my fears is that a system or platform might have my photo in their database and that it could be seen by people I don't know. (Female, 15, Indonesia)*

The main concern that the teenagers raised in relation to facial analysis was the issue of data security and the worry that their pictures could be leaked and shared and then used for fraudulent purposes:

> *I would be unlikely to use this because of fears about data leaks and the possibility that our faces could be misused to create fake identities and other things... for things we don't know about. (Male, 14, Indonesia)*

On platforms without proper legal oversight this method may be misused and may be prone to data abuse. (Male, 17, Indonesia)

It is feared that our faces can be spread and misused by irresponsible parties. And it is possible that by scanning our faces, personal information can be spread and leaked. Because now it's going viral it's like our faces are being scanned, our data can appear. The fear is that our data will be misused and disseminated openly, without our permission. (Female, 15, Indonesia)

Some Indonesian teenagers recognised that using facial analysis would be relatively easy and frictionless, and this method was supported by a small number. The majority, however, either had concerns about accuracy, or data security, or both.

Using it is comfortable and convenient, but I'm a bit uneasy because it may be unreliable. Our face might appear older or younger than we are. (Female, 17, Indonesia)

6.4 Privacy and Data Protection

We found overall that Indonesian teenagers tended to be quite privacy conscious and highly aware of data privacy and data security issues. The teenagers had a lot to say about wanting to be informed and reassured by platforms about how their data would be collected and used:

There needs to be an explanation from the platform so that we ourselves feel safe and confident that our data is well and strictly guarded. (Female, 15, Indonesia)

The teenagers talked about the sort of explanations they wanted, and the point at which they felt they should receive them:

I personally think the explanation given by the platform for our data to be used is very important. I think the best way is through email. Because if you go through email it seems to be safer and if not through email you can make a post on their social media to guarantee that your data will be safe with us and we will not spread it... and that after we use it, we will definitely delete it. (Male, 14, Indonesia)

I think it should be explained through text provided when we want to register in the registration section... it is explained in rich text 'where is this data going?' (Male, 14, Indonesia)

The teenagers in Indonesia all had a strong interest in and awareness of privacy issues. They were aware of the risks of gathering and collecting data and wary about data being created and shared beyond its original purpose. One teen spoke about the risks of data transference and loss of guarantees once an app or service is sold:

We need to know where our data is going. Not all apps are the same as when they are first created. One app, at first said it was safe, and the data would be stored privately or just with the government, but in the end, it was sold and handed out. So not all apps are as safe as initially claimed. (Female, 17, Indonesia)

We asked the teenagers about the use of third parties such as Government or private companies in developing or running age verification systems. There was some uncertainty about this and the sharing of data between entities which seemed to reflect their overall wariness and scepticism about data security:

In my opinion, if the data is transferred. The government or whoever should also give a reason why it is shared by other parties. The reason must be clear. (Male, 15, Indonesia)

It would be better if the data was stored by themselves and not distributed to other parties even though it may be considered reliable, because we don't know if our data is really guaranteed to be protected or not. Because they could have information leaks that make our data misused. (Female, 15, Indonesia)

6.5 Time and Setting of Age Assurance

The teenagers felt they should be informed in advance of an age check. They tended to feel this should come in the terms of conditions, when creating a new account in a new app. Some teenagers felt for it to be secure and effective verification should be for every new account for every application, but there was broad support for using app store age verification that could be shared, or a single verification that could be shared with other services.

6.6 Overall Views and Preferences

The Indonesian teenagers strongly favoured the existing self-declaration process following by using formal ID for accuracy (under the condition that the platform was perceived as trusted and reliable and could provide security guarantees in relation to the data and this had legal oversight). Other methods tended to fare poorly with Indonesian teenagers albeit there was some acceptance of parental verification for younger users. The table below shows their preferences, ranked in writing during the workshop.

Table (5): Indonesia combined age cohorts - Likert Scale of methods

Methods	Really like	Like	OK	Do not like	Really do not like
Self-declaration	18	15	6	1	0
Age inference	3	8	9	9	11
Parental verification	4	10	20	2	4
ID based verification	11	7	7	8	7
Credit card based verification	0	0	5	14	21
Facial age estimation	0	4	8	11	17

Annex 1

Background information on the schools from which participants were recruited

Ghana

The teenagers in Ghana attended a state-funded school on the outskirts of the capital, Accra. The children attending the school have mixed backgrounds but are generally from lower socio-economic backgrounds. School staff informed us that a proportion of the pupils do not live with their parents, but with guardians who have brought them from rural areas. Many of these children face financial hardship, often lacking money for lunch and engaging in work either in the mornings before school or in the evenings.

UK

The UK teenagers were drawn from two state schools - one in England and one in Wales. The Welsh state school is in an urban, ethnically diverse and deprived area of Wales and most of the teenagers attending the school were from lower socio-economic backgrounds. The English school is a state school in a more rural and somewhat affluent area with pupils from a mix of social backgrounds.

Indonesia

The Indonesian teenagers were from a private school in the city of Bogor which is one of Indonesia's major cities (about an hour from Jakarta). The selected school was a private institution, and this was chosen as it teaches computer science which is currently not covered in state schools. It is useful to note that attending a private secondary is fairly typical in Indonesia with around half of secondary school enrolments being in private institutions. The teenagers from this school in Indonesia tended to be middle class with parents having a relatively stable income.

Annex 2

The availability of National ID in the UK, Ghana and Indonesia

ID in the UK

In the UK there is no national ID card or ID that is widely used or accessible to teenagers. This gap was reflected in our discussions where many teenagers were unsure if they would be able to access ID if they needed too. UK Census data from 2021 suggests that across the UK population 86.5% of the population as a whole have at least one passport but there is no data on access to passports for under 18s.

ID in Ghana

In Ghana passports and credit cards are not very commonly used. However, Ghanian citizens are given a Ghana Card, a government-issued national ID that includes a photograph and date of birth and is mandatory for all citizens aged 15 and above. The Ghana Card serves as proof of identity for both Ghanaian citizens and legally resident foreigners. It is issued by the National Identification Authority (NIA) and is designed to uniquely identify individuals through biometric data. In addition, some individuals possess a health insurance card, which also contains similar identifying information. While these forms of identification are common, they are not universally held, particularly among children and those from lower-income or rural backgrounds.

ID in Indonesia

In Indonesia all citizens are given a national identity card, known as *Kartu Tanda Penduduk* (KTP) and almost all Indonesians are registered for the e-KTP, the electronic version of this card. This identity card is mandatory for Indonesian citizens and residents aged 17 and above. It serves as a primary form of identification and is essential for various activities like opening bank accounts, applying for jobs, and accessing public services. The e-KTP contains personal information including name, date and place of birth, address, a unique identification number as well as biometric fingerprint data.

Annex 3

Likert Scales at a glance

UK combined age cohorts - Likert Scale of methods

Methods	Really like	Like	OK	Do not like	Really do not like
Self-declaration	25	16	14	1	1
Age inference	1	7	29	14	6
Parental verification	12	21	10	11	3
ID based verification	2	11	17	12	15
Credit card based verification	0	2	9	16	30
Facial age estimation	13	18	18	6	2

Ghana combined age cohorts - Likert Scale of methods

Methods	Really like	Like	OK	Do not like	Really do not like
Self-declaration	22	10	7	1	3
Age inference	5	10	13	6	8
Parental verification	16	6	9	8	4
ID based verification	12	10	10	3	8
Credit card based verification	4	7	6	8	17
Facial age estimation	30	7	1	2	3

Indonesia combined age cohorts - Likert Scale of methods

Methods	Really like	Like	OK	Do not like	Really do not like
Self-declaration	18	15	6	1	0
Age inference	3	8	9	9	11
Parental verification	4	10	20	2	4
ID based verification	11	7	7	8	7
Credit card based verification	0	0	5	14	21
Facial age estimation	0	4	8	11	17

All countries and combined age cohorts - Likert Scale of methods

Methods	Really like	Like	OK	Do not like	Really do not like
Self-declaration	65	41	27	3	4
Age inference	9	25	51	30	25
Parental verification	32	37	39	21	11
ID based verification	25	28	34	23	30
Credit card based verification	4	9	21	38	68
Facial age estimation	43	29	27	19	22