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A HELPER FORM

Hello parent/guardian!

Answering these questions will help us pick the best activities for your child in today's interview session. Leave any questions blank if they do not apply. Thank you so much for your help!

Child's Name or Nickname: _____

What tablet/smartphone type is your child most familiar with?

Check one selection.

- Android
- iPad/iPhone (Apple)

What applications on a tablet or smartphone (or other devices such as a Smart TV or Firestick) does your child use in order to watch videos? Circle all that apply.

- Youtube
- Youtube Kids
- Nickelodeon
- Netflix
- Hulu
- Amazon Prime Video
- PBS Kids Video
- DisneyNOW
- Other _____

What tablet or smartphone games does your child play? Check all that apply.

- NBA 2K19 (or other year)
- PBS Kids Games
- Barbie Dreamhouse
- Lego Life
- Tocca Hair Salon 3 (or other Tocca apps)
- Where's My Water
- Candy Crush Saga
- My Talking Tom
- Dr. Panda Town
- Other _____

What applications on a tablet or smartphone does your child use in order to send photos or videos to others? Check all that apply.

- iMessage
- Facebook Messenger Kids
- GroupMe
- Facebook Messenger
- Whatsapp
- Other _____

B INTERVIEW PROTOCOL (ALL SCENARIOS)

INTRODUCTION

Thanks for being here today!

Today we're going to talk about some of the things you do on a phone or tablet, OK? There are no right or wrong answers—we just want to know what you think.

If you don't want to answer a question or need to stop, just let me know and we can stop.

Do you have any questions before we begin? Okay, let's get started!

- What kinds of technology do you usually use?

(If needed): like a smartphone or iPad or game.

- What about game consoles?
- What about computers?
- What about smart home devices (Alexa, Siri, etc.)
- Who owns these? You or somebody else?
- How often do you use the [device identified by child]?

Now I'm going to ask you about three different things that some people like to do with technology. And I want you to tell me if you ever do any of these.

Present child with the three scenario-specific cards.

- Do you ever take pictures on a phone or tablet? (Present the photo card)
- Do you ever play video games on a phone or tablet? (Present the game card)
- Do you ever watch videos or Youtube on a phone or tablet? (Present the video card)

We can start with whichever one you like! Do you want to pick one of the cards to start with? You can even hold onto it if you like!

Child picks one card and proceed to that scenario...

GAME SCENARIO

(If this is the child's second or third scenario during the session, present them with the relevant scenario card to hold onto in order to provide an engaging transition & help mark their progress)

(If the child is repeating herself for the questions you've asked in the previous scenario(s), you can ask if they see any differences of that particular question between the scenarios. E.g. (I know you've told me who made Youtube when we were talking about videos. But for this game, I wonder if you know who made the game? Is it still made by [maker child mentioned earlier]?)

- Do you ever play games on a tablet or smartphone?

[→If yes]

- What games do you like to play?

[→If the child can't come up with the game names, remind them of some popular ones, show icons]

- Have you ever played with one of these [game icons]?

[→If the child mention multiple]

- Which is your favorite one?

[→If child doesn't recognize any of the games we have]:

Skip this scenario

[Once we find a game that the child is familiar with, proceed to open up the game app on the tablet]

- We are not going to play it now, but ... when you play the game...

- How does it work?
- What happens next?
- Who made this?

[→If child says I don't know]

- Say "If you were to make a guess ..., who do you think made the app?"

[→If the child still doesn't know]

- Ask "Did a person make the game, did a company, or was it both?"
- Did a person make [video app name], did a company, or was it both?

[→person]

- Who are the people, what do they do?

[→company]

- What is a company?
- What do you think the [game] company is or does?
- If you want to learn more about the [game] company, how do you do that?
- Do you think the [company/people] who made [game name] can see what you are doing on the app?

[→If yes]

- How can they do that?
- Why are they doing that?

[→If no]

- Why not?
- How do you feel about that?
- When you play the game, does [game app] remember your progress in the game?

[→If yes]

- How do you think it does that? (remember to follow: you said X, can you explain what that means?)
- Where does the [app name] keep the things it remembers about you? (If the child uses "memories", "brains" etc, we use their words)
- Why does the [app name] keep/remember these things about you?
- Do you think it's okay or not okay that it remembers this? Why or why not?
- Can you delete these memories? How?

[→If no]

- If you turn off the tablet at night and turn it back on the next day, does it still remember?
- How does that work?
- Do you think [game name] knows what kind of games you like or don't like?
- Can you give me an example?
- How do you think [game name] knows that?
- How do you feel about that?
- Do you ever download a new game that it shows you?
- Do you think [game name] shows the same or different games to you than other people?
- Do you think [game name] knows things about you?

- What does [game name] know about you?
 - Have you ever seen commercials or ads when you play [game name]?
- [→If answer is too short]
- What ads have you seen?
 - What do you do when an ad/commercial [use their word] pops up?
 - Why do you think there are ads?
 - Who put ads in the game?
 - Does everybody see/get the same ads?
 - Do you tell your friends what games you play?
- [→If yes]:
- Why?
- [→If no]:
- Why not?
 - Do you play with your friends online?
 - Do you ever get a new game because your friend told you about it?
 - How do you know if the game is okay for you to play on your own?
 - Do you tell your parents what games you play?
- [→If yes]:
- Why?
- [→If no]:
- Why not?
 - Do you play with your parents online? Why or why not?
- [→If no]:
- See if this at all relates to wanting privacy from parents
 - Do you think it's okay or not okay to play games with people you don't know?
 - Do you have a username and password to play this game?
- [→ If not sure what username is]
- Clarify: Ex. something to log in
- [→ If yes]
- What username do you use?
 - Is that your real name?
- [→If it is the child's real name]:
- Do you ever use just part of your name, for example [give examples based on the child's name: first name only? Initials only?].
 - Why or why not?
- [→If it's not the child's real name]:
- Why did you choose to use that name?
 - Do you only use this name here or in other places too?
 - Is it a good idea or a bad idea to use just part of your name, or something that is not your real name? Why?
 - When is it safe to use your real name online?
- [→ If no]
- Let's say you wanted to set up a username. What name would you use? And why?
- [→If it is the child's real name]:

- Would you ever just use just part of your name, for example [give examples based on the child's name: first name only? Initials only?].
 - Why or why not?
- [→If it is NOT the child's real name]:
- Is it a good idea or a bad idea to use just part of your name, or something that is not your real name? Why?
 - When is it safe to use your real name online?
 - Do your parents make any rules for you when you play games on a tablet or smartphone?
 - What are those rules?
 - How do you feel about those rules?
 - Why do you think they made those rules?

END

Well, thank you so much, I learned a lot!

Is there anything else about [game app] you want to tell me before we move on?

Do you have any questions for me about [game app]?

Do you want to pick another scenario card and tell me more about it?

VIDEO SCENARIO

(If this is the child's second or third scenario during the session, present them with the relevant scenario card to hold onto in order to provide an engaging transition & help mark their progress)

(If the child is repeating herself for the questions you've asked in the previous scenario(s), you can ask if they see any differences of that particular question between the scenarios. e.g. (I know you've told me who made Youtube when we were talking about videos. But for this game, I wonder if you know who made the game? Is it still made by the maker child mentioned earlier)

- What apps do you use to watch videos online?
- Can you show and tell me how you use [video app name]?
- How do you find videos to watch?
- How does it work? What happens next?
- How does the video get to [video app name]?
- Who made this?

[→ don't know]

- If you were to make a guess . . . , who do you think made the app?

[→ don't know]

- Did a person make [video app name], did a company, or was it both?

[→person]

- Who are the people, what do they do?

[→company]

- What is a company?
- What do you think the [app name] company is or does?
- If you want to learn more about the [App] company, how do you do that?
- Do you think the [company/people] who made [app name] can see what you are doing on the app?

[→If yes]

- How can they do that?

- Why are they doing that?

[→If no]

- Why not?
- Does [app name] remember what you watched?

[→If yes]

- How do you think it does that?
- Where does it keep what it remembers about you?
- If you turn off the tablet at night and turn it back on the next day, does it still remember?
- How does that work?
- If someone else is using the [app name] or tablet, will it still remember what you did?

[→If no]

- Why not?
- Do you think [app name] knows what kind of videos you like or don't like?
- Can you give me an example?
- How does it know that?
- Did it ever show you a video you didn't want to watch?
- Do you think [app name] shows the same or different videos to you and other people?
- Do you think [app name] knows things about you?

[→If yes]

- What does [app name] know about you?
- Have you ever seen commercials or ads when you watch videos on [app name]?

[→If yes]

- What ads have you seen?
- What do you do when an ad pops up?
- Why do you think there are ads?
- Who put ads in the video app?
- Does everybody see/get the same ads?
- Can your friends look up what you watched on [app NAME]?

[→If yes]

- How?

[→If no]

- Why not?
- Can your friends also see what you've watched on their devices?
- If your friends could see what you watched on [app name], how would you feel about it?
- Do your parents know what you watch on [app]?

[→If no]:

- Why not?
- If your parents could see what you watched on [app name], how would you feel about it?
- What about people you don't know? Is there any way they could find out what videos you watch on [app]?

[→If yes]

- How?

[→If no]:

- Why not?

- How would you feel about it?

- Do your parents make any rules for you when you watch videos on a tablet or smartphone?

[→If yes]

- What are those rules?
- How do you feel about those rules?
- Why do you think they made those rules?
- Do you have a username and password to use the [video app name]?

[→ If not sure what username is]

- Clarify: Ex. something to log in

[→ If yes]

- What username do you use?
- Is that your real name?

[→If it is the child's real name]:

- Do you ever use just part of your name, for example [give examples based on the child's name: first name only? Initials only?].
- Why or why not?

[→If it's not the child's real name]:

- Why did you choose to use that name?
- Do you only use this name here or in other places too?
- Is it a good idea or a bad idea to use just part of your name, or something that is not your real name? Why?
- When is it safe to use your real name online?

[→ If no]

- Let's say you wanted to set up a username. What name would you use? And why?

[→If it is the child's real name]:

- Would you ever just use just part of your name, for example [give examples based on the child's name: first name only? Initials only?].
- Why or why not?
- Is it a good idea or a bad idea to use just part of your name, or something that is not your real name? Why?
- When is it safe to use your real name online?

ENDING

Well, thank you so much, I learned a lot!

Is there anything else about [video app] you want to tell me before we move on?

Do you have any questions for me about [video app]?

Do you want to pick another scenario card and tell me more about it?

PHOTO MESSAGING SCENARIO

(If this is the child's second or third scenario during the session, present them with the relevant scenario card to hold onto in order to provide an engaging transition & help mark their progress)

(If the child is repeating herself for the questions you've asked in the previous scenario(s), you can ask if they see any differences of that particular question between the scenarios. E.g. (I know you've told me who made Youtube when we were talking about videos. But for this

game, I wonder if you know who made the game? Is it still made by [maker child mentioned earlier]?)

- Do you ever share photos you take using a phone or tablet with your friends or family?

[→If yes]:

- What kind of photos do you usually like to share with others?

(Optional):

- Do you ever like to take and share photos of yourself?
- Do you ever like to take and share photos of your things?
- What other kinds of photos do you like to share?
- Are there any kind of photos you don't like to share?
- Why don't you like to share those?

[→If no]: Skip this scenario

- Can you explain how you usually share photos on a tablet/smartphone?

Ask follow up questions to identify an app and understand what the child means about how it works examples:

- How do you like to take photos on a [tablet/smartphone]?
- What is your first step when you want to take and share a photo?
- What happens after that, what do you do next?
- What apps do you use to share photos on a tablet/smartphone?

[→If no app mentioned]: Remind child of some popular ones

- Do you use [ex. iMessage, Facebook Messenger Kids] to share photos?

[→Doesn't know app names]:

- Show child some popular app icons
- Have you ever shared photos with one of these [app icons]?

[→Mentions multiple]:

- Which is your favorite one?

[→Doesn't recognize any]:

- Skip scenario

[→ Identified familiar photo messaging app]

- ****Remember app, proceed to take out the tablet****

"Thanks for telling me about how you like to take and share photos on [smartphone/tablet]! I was wondering if you'd like to show me how you do it using this [tablet]. Can you show me how you might take and share a photo?"

[→ Child responds affirmatively]:

- Proceed with the following set of questions.

[→ Child responds negatively]:

- Help the child to find the camera app and guide the child to take the photo.

(Bring out hidden stickers from the box)

- Do you think you could take a picture of one of these things (present choice of stickers)? You can pick which one you'd like to take a photo of, and then you can take it with you back home!
- Can you show me how you do it?
- Looks like the photo is on the [tablet] now. How do you think the tablet keeps this photo?

"Wow, that is an awesome photo! Could you show me how you would share that photo using [mentioned photo messaging app name]? Is it ok for you to share it with me?"

[→If yes]:

- (Interviewer opens up the photo messaging app on the tablet)
- How does it work? What happens next?
- How do you think the app lets you share photos?
- (Walk child through the process of sending photo on the app. RA contact info will be saved on all applications, send designated photo to generic "researcher" contact and be prepared to receive photo on personal device)

[→If no]:

- Why not?
- (Continue to ask the child questions in other modules)

"Ok, I just got the photo! How do you think the photo got from that tablet to my phone?"

- Do you think the photo went anywhere else when you sent it to me?

[→If the child is confused]:

- Did it go through the air on its way to my phone?
- Do you think it's OK for *me* to send this photo to other people?
- What if you don't know those people?
- Why or why not would that be okay?
- What would make it okay for me to share the photo?

[→ don't know]:

- What if I ask for your permission before sending it to someone else?
- Can I send the photo to other people after you leave?
- Why or why not?
- Did a person make [photo messaging app name], did a company, or was it both?

[→person]

- Who are the people, what do they do?

[→company]

- What is a company?
- What do you think the [app name] company is or does?
- If you want to learn more about the [App] company, how do you do that?
- Do you think the [company/people] who made [app name] can see what you are doing on the app?

[→If yes]

- How can they do that?
- Why are they doing that?

[→If no]

- Why not?
- How do you feel about that?
- Does [app/company/maker] remember what you shared?

[→If yes]

- How do you think it does that?
- [Ask clarifying questions]: You said X, can you explain what you mean by that?

- Where does the app keep the photos and other things you shared? Where does it keep the things it remembers about you?
- Will it still remember if someone else uses the app or tablet?
- Do you think it's okay or not okay that it remembers this?
- Why?
- When is it okay to share your photos with other people?
- What kinds of photos are okay for you to share with other people?
- Do you have to be more careful about certain kinds of photos you share?
- Which ones do you have to be more careful about?
- Do you think it is okay or not okay to share your photos with everyone?
- Are there any people that it's not okay to share your photos with?
- What would happen if you shared a photo with someone you didn't know?
- Do your parents have any rules for who you can share your photos with?
- What are those rules?
- How do you feel about those rules?
- Do your parents ever share photos of you with other people?
- Do you like that or do you not like that?
- Why or why not?
- How about your friends, do they share photos of you? Who do they share your photos with?
- Do you think people should ask your permission before they share photos of you?
- Do photos of you belong to you or the person who took the photo?
- Do you ever connect a different [social media] account you use to log into [photo messaging app]?

[→If no]:

- Skip this optional set of questions.

[Offer clarifying examples]: ex. Have you ever connected a Facebook/Google account to use [photo messaging app]?

- Do you think [mentioned social media account] knows what you do in [photo messaging app]?

[→If yes]

- Does [mentioned social media account] use what they know about you from [photo messaging app]? How?
- Is there a way to find out what [mentioned social media account] knows about what you do in [photo messaging app]?

[→If no]

- Why not?
- How does [photo messaging app] connect to [mentioned social media account]?
- Do you like or not like that [photo messaging app] can connect/talk with [mentioned social media account]? Why or why not?

- Why does [photo messaging app] lets you connect to [mentioned social media account] ?
- Do you think [photo messaging app] knows what you do in [mentioned social media account] ?

[→If yes]

- Does [photo messaging app] use what they know about you from [mentioned social media account] ? How?
- What do the [photo messaging app] do with the information it learns from your FB/Google etc.?

END

Well thank you so much, I learned a lot!

Is there anything else about photo sharing or [photo messaging app] you want to tell me before we move on?

Do you have any questions for me about [photo messaging app]?

Do you want to pick another scenario card and tell me more about it?

CLOSING QUESTIONS

Wow thank you so much for all your help so far, I'm really learning a lot from you. We're almost done with the questions I had, do you think it would be okay to ask just a few more questions? You can answer these questions about anything we've talked about today, or anything else you do on a smartphone or tablet at home.

- Do you think apps on smartphones/tablets remember what you did on them or not really?

[→If the child does not provide enough information]

- Refer back to earlier responses from interview [ex. "Remember when I asked you... When you play the game, does [game app] remember your progress in the game?"]
- Do you think the apps can remember what you did even after you're done using them?

[→If yes]

- What does the apps remember?
- What do you think the apps do with the information they remember about you?
- Is it a good or bad thing if the apps remember such things about you?
- What do you think the apps do with the information they remember about you?
- Is it a good or bad thing if the apps remember such things about you?
- Do apps use the information they remember to learn more things about you? (Remind the child again that she could answer the questions from anything that she has seen so far)
- What might an app you use learn about you? What are some of the things it might know about you?
- Would it know what your gender is? (If the child belongs to a binary gender identity, ask "Would it know if you're a boy or a girl?")
- Would it know how old you are?
- Would it know where you live?
- Would it know what you like?
- Would it know what you don't like?
- How do you think the app figures this stuff out?

- What do you think is the thing that's making all these guesses about you?
- Where is this happening?
- Who is doing this?
- Do you think it can make mistakes?
- Why or why not?
- Has an app made a mistake about you before?

[→If yes]:

- Could you tell me more about that time?

[→If no]:

- For example, do you think it might get your age wrong? Could it maybe think you're a different gender?

[→If the child's answer touches on privacy, safety, risk, etc, follow up with below]

- Are there any ways you could stop the app from watching what you're doing?

[→If yes]

- What are some of those ways?
- Have you ever tried to do any of those things before?
- Do you think it's important to learn how to protect yourself when using the apps?

[→If yes]

- Why

[→If no]

- Why not?

C PARENTAL SURVEY QUESTIONS

Thank you for agreeing to participate in our survey. You will be asked questions about your child, you, and your household in general. The survey is estimated to take approximately 15-30 minutes to complete. Your responses will be kept anonymous, and your participation is voluntary. Questions can be skipped or left blank.

- (1) Is your child currently attending school (including pre-school)?
 - Yes/No/Prefer not to answer
- (2) What grade level is your child enrolled in?
 - _____
- (3) At what age did your child first interact with internet connected devices (smartphones, tablets, etc.)? (Please specify in years)
 - _____
- (4) Does anyone in your household own any of the following devices (check all that apply)?
 - Personal computer
 - Regular phone (mobile or landline)
 - Smartphone (can access internet, etc.)
 - iPad or other tablet devices
 - E-reader (e.g., Kindle, Nook, etc.)
 - Music Playing Device (iPod, etc.)
 - Educational game device (e.g., Leapster Explorer or a V-Smile)

- Console-based gaming system (e.g., Xbox, Nintendo, or Playstation)
- Voice-activated smart speaker (e.g., Alexa/Echo device, Google Home)
- Smart TV that connects to the internet
- Digital media player and microconsole (e.g., Apple TV, Amazon Fire TV)
- Other____
- None of the above
- Prefer not to answer

(5) Does your child own any of the following devices (check all that apply)?

- Personal computer
- Regular phone (mobile or landline)
- Smartphone (can access internet, etc.)
- iPad or other tablet devices
- E-reader (e.g., Kindle, Nook, etc.)
- Music Playing Device (iPod, etc.)
- Educational game device (e.g., Leapster Explorer or a V-Smile)
- Console-based gaming system (e.g., Xbox, Nintendo, or Playstation)
- Voice-activated smart speaker (e.g., Alexa/Echo device, Google Home)
- Smart TV that connects to the internet
- Digital media player and microconsole (e.g., Apple TV, Amazon Fire TV)
- Other____
- None of the above
- Prefer not to answer

(6) Thinking about a typical weekday (Monday-Friday), how much time does your child spend per day using a smartphone or tablet at home?

- Prefer not to answer
- I don't know
- Never
- Less than 30 minutes
- 30 minutes to 1 hour
- 1-2 hours
- 2-3 hours
- 3-4 hours
- 4-5 hours
- More than 5 hours

(7) Thinking about a typical weekend day (Saturday-Sunday), how much time does your child spend per day using a smartphone or tablet at home?

- Prefer not to answer
- I don't know
- Never
- Less than 30 minutes
- 30 minutes to 1 hour
- 1-2 hours
- 2-3 hours
- 3-4 hours
- 4-5 hours

- More than 5 hours

(8) We're interested in whether your child has used a device (e.g., a smartphone, iPod Touch, iPad, or similar smart device) in the last 2 weeks to do any of the following activities. Please indicate the frequency with which they used the device for each purpose in the last 2 weeks.

(Matrix style question with options: Never, less than once a week, about once per week, 2-3 times per week, 4-6 times per week, everyday, several times per day, prefer not to answer, don't know)

- Watch videos/movies
- Use communication apps (calls, texting, video chatting)
- Read electronic books
- Take photos/videos
- Listen to music/audiobooks
- Play games

(9) In the last week, how often did your child use a smartphone or mobile device while falling asleep?

- Never
- Less than once a week
- About once a week
- 2-3 times per week
- 4-6 times per week
- Every night
- Don't know
- Prefer not to answer

(10) [Modified from Valkenburg, P.M., Piotrowski, J.T., Hermanns, J., and Leeuw, R. Developing and Validating the Perceived Parental Media Mediation Scale: A Self-Determination Perspective, *Human Communication Research*, Volume 39, Issue 4, 1 October 2013, Pages 445–469.]

We are interested in how smartphones and tablets are used in your home. How often do you or other household adults...

(Never, Rarely, Sometimes, Often, Prefer not to Answer, and Not Applicable)

- Watch something together (with your child) on a smartphone or tablet because you both like it?
- Try to help the child understand what s/he sees on an app, game, or video?
- Laugh with the child about the things you see on an app, game, or video?
- Set specific media use hours for your child?
- Watch together because of a common interest in an app, game, or video?
- Point out why some things video characters do are bad?
- Restrict the amount of child smartphone or tablet use?
- Tell your child to turn off the tablet or smartphone when they are watching an unsuitable program?
- Explain what something on an app, game, or video really means?
- Watch or play an app, game, or video together just for fun?
- Explain the motives of digital characters?
- Tell your child in advance the apps they may use, games they may play, or videos they may watch on a smartphone or tablet?
- Watch your favorite program or video together?

- Point out why some things digital characters do are good?
- Forbid your child to use certain apps, games, or videos?

(11) [Mobile Device/Digital Literacy Talk] We are interested in how your family usually uses mobile devices. Thinking about the smartphone(s) or tablet(s) that your child usually uses, how would you describe you and/or your child's use of the device? (Never, rarely, sometimes, often, prefer not to answer)

- We talk about what happens in the videos or games he/she uses, including what the characters are doing and any violence
- Before or after downloading an app, we talk about what permissions the app has requested or what data it might be collecting
- We talk about rules about what videos or apps my child is allowed to use and why
- When there is a design feature that encourages more mobile device usage, such as autoplay, daily rewards, or notifications, I point this out to my child.
- I talk with my child about how to tell whether the information they see in videos, online, or in apps is honest or real.

(12) Who downloads and installs applications to your home devices for your child's use? (Select all that apply)

- Myself or other parent/guardian
- My child
- Child's sibling(s)
- Other people (please describe): _____
- Prefer not to answer
- I don't know

(13) [Modified from Alexander J.A.M. van Deursen, Ellen J. Helsper & Rebecca Eynon. 2016. Development and validation of the Internet Skills Scale (ISS), *Information, Communication & Society*, 19:6, 804-823.]

For the following questions please select one of the responses. (Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, Strongly Disagree, Prefer not to Answer):

- I know how to install apps on a mobile device.
- I know how to download apps to my mobile device.
- I know how to keep track of the costs of mobile app use.
- I know which information I should and shouldn't share online.
- I am careful to make my comments and behaviors appropriate to the situation I find myself in online.
- I know when I should and shouldn't share information online.
- I know how to remove friends from my contact lists.
- I know how to change whom I share content with (e.g. friends, friends of friends).
- I know how to open downloaded files.
- I know how to download/save a photo I found online.
- I know how to use shortcut keys.
- I know how to open a new tab in my browser.
- I know how to bookmark a website.

- I find it hard to decide what the best keywords are to use for online searches.
- I find it hard to find a website I visited before.
- I get tired when looking for information online.
- Sometimes I end up on websites without knowing how I got there.
- I find the way in which many websites are designed confusing.

(14) [Modified from Malhotra, N., Kim, S., & Agarwal, J. 2004. Internet Users' Information Privacy Concerns (IUIPC): The Construct, the Scale, and a Causal Model. *Information Systems Research*, 15(4), 336-355.]

For the following questions please select one of the responses. (Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, Strongly Disagree, Prefer not to Answer):

- It usually bothers me when online companies ask me for personal information.
- When online companies ask me for personal information, I sometimes think twice before providing it.
- It bothers me to give personal information to so many online companies.
- I'm concerned that online companies are collecting too much personal information about me.
- Consumer online privacy is really a matter of consumers' right to exercise control and autonomy over decisions about how their information is collected, used, and shared.
- Consumer control of personal information lies at the heart of consumer privacy.
- I believe that online privacy is invaded when control is lost or unwillingly reduced as a result of a marketing transaction.
- Companies seeking information online should disclose the way the data are collected, processed, and used.
- A good consumer online privacy policy should have a clear and conspicuous disclosure.
- It is very important to me that I am aware of and knowledgeable about how my personal information will be used.

(15) What is your age?

(16) I identify my gender as:

- Woman
- Man
- Non-binary
- Prefer not to disclose
- Prefer to self-describe

(17) What is the highest level of education you have completed?

- Some high school
- High school graduate
- Some college
- Bachelor's degree
- Advanced degree
- Trade/Vocational schooling
- Prefer not to answer

(18) I identify my ethnicity as (please select all that apply):

- American Indian or Alaska Native
- Hispanic, Latinx, or Spanish origin

- Caucasian
- Asian
- Black or African American
- Middle Eastern or North African
- Native Hawaiian or Pacific Islander
- Other
- Prefer not to answer

(19) What is your current employment status? Select all that apply.

- Employed
- A student
- A homemaker
- Military
- Retired
- Out of work and looking for work
- Out of work but not looking for work
- Prefer not to answer

(20) Please describe your primary occupation: _____

(21) Would you be interested in being contacted regarding future studies on children's safety online?

- Yes/No/Prefer not to answer

Thank you so much for your time and completion! Your response has been recorded!

D CODEBOOK

Code: Self-protection strategies

Code Values	Definition
Bad characters and their bad behaviors	When children talk about bad people: who are the bad actors, where are the bad actors The things bad actors might do to children, to their account, and to their families. This code also captures children's privacy perception of their account, that they need to protect their account from bad actors like hackers.
Self-protective behaviors from danger or for online safety purpose	What children do to keep themselves safe from all types of danger (bad actors, online threats, risks, bullying, stranger). Include children saying that they would not do/watch something if it's dangerous, or if they will stop doing something if they think it's dangerous or inappropriate.
Risks from exposing one's information	When children explain why they are reluctant to provide personal information(real name, email, address etc). When children explain why they think it's important to protect themselves online due to the risks.
Safety rules and lessons learned from parents, school and other places	When children mention rules about safe app usage behavior or online behaviors learned from various sources like parents, school, library, educational websites etc. If children mention why they choose to follow (or unfollow) or like (or dislike) certain rules. If the rule is not about safety but something else like screen time limit, DO NOT code here.
Strategies to evaluate whether content is appropriate to consume	When children mention they use different evaluation criteria to decide if the content is appropriate for them to consume (whether it's ok to download certain games, play certain games, watch certain videos, etc.) by checking reviews, checking age ratings, asking parents for approval, talking to parents about what he/she watches, watching/playing to find out, other
Other	Code here when other categories do not fit

Code: Personal account(activities) and other stakeholders

Code Values	Definition
Definition of "personal account"	Include children's explanation about their app account, how it works, what the account includes, how they use their account, where the account is, and whether their account is tracked/remembered/known by the app.
Family members' online interactions with me, my account or account activities	When children mention they use their family members' account, family members know about their account, how accounts work among family members, and how children interact with family members when using different app accounts. This code also captures if the child says something about username or password sharing with family members. Also counts if the child doesn't say the word "account" but saying something like "I have my parents in the app as a contact."
Friends' online interactions with me, my account or account activities	When children mention whether their friends know about their account or not, friends can or can't see their account activities, whether they interact with friends online or not. Include both their positive or negative attitudes. Include kids explain how they play with their friends, or the types of interactions they engage in with their friends in the digital world.
Other people's (e.g.,stranger, other online users) view of /interaction with my account and account activities	When children mention whether other people (e.g.,stranger, other online users) know about their account or not, whether other people can or can't see children's account activities, and whether children interact with other people online or not.
Code here when other categories do not fit	

Code: App company and my account

Code Values	Definition
Understanding of app company	When kids answer questions about app companies (including questions such as what a company is, where is it, how it works, who works there, and how you can learn more about the company, or any comments about a company, etc.)

Code: Varying definition of "personal" information

Code Values	Definition
Varying definition of "personal" information	Whenever children mention "personal" or "personal information" and give some sort of examples or explanations of what personal information includes.

Code: Surface cue about how app (features) work

Code Values	Definition
Game apps	When children give a vivid description on how the app works (e.g., things pop up, or you need to tap here for it to go away, etc.)
Video apps	
Photo apps	
Other apps	

Code: Surface cue on how app track/remember your information/data

Code Values	Definition
Game apps Video apps Photo apps Other apps	When children give a vivid description of how they learned from visual surface cues regarding how search history, watch history, playing records, other records are remembered or tracked by the app or device. (e.g.,you can tap the "history" menu, there's the "continue to watch" section to tap etc.) Also code when children recall how they interact with the app from memory, and describe it vividly in a visual way.

Code: Surface cue on app knows your preference for recommended or personalized content

Code Values	Definition
Game apps Video apps Photo apps Other apps	When children give a vivid description of how they learned from visual surface cues regarding how apps know your preferences, recommend you new or personalized content (e.g.,the app says "you might like..." or the homepage will have more Minecraft videos).

Code: Remove surface cue to end the relationship

Code Values	Definition
Remove surface cue to end the relationship	When children mention delete/remove the app, close the app, close the device etc to indicate they don't want to have contact with the apps anymore.—but it has to be very visual description like "you press the delete button." Don't code general mentioning about deletion.

Code: Purpose of data memory/tracking/monitoring/storage

Code Values	Definition
Benefit me	For my benefits, conveniences (e.g., new content recommendation etc.)
Benefit general users/people	When children mention deleting/removing the app, closing the app, closing the device etc. to indicate they don't want to have contact with the apps anymore. Ensure that it is a visual description like "you press the delete button."
Benefit app itself or the company	Improve app service, make apps better, make money etc.
Remember what people did/what people have	This is when children simply say "it remembers what you/people/me/users did" without further expand on concrete benefits. This code also captures if the children says the game remembers what you have in the game: how many coins you have, how many items you've collected.
Negative purpose to people	This includes everyone, people, users, the children him or herself. This code captures when children thinks apps have a negative or harmful purpose such as "get people addicted"
I don't know/unclear	If children say "I don't know" with no follow-up from child/researcher.
Other (Purposes)	Code here when other categories do not fit

Code: Attitude toward apps memory or knowledge of me and my behaviors

Code Values	Definition
Positive (Attitude)	Positive attitude (e.g., "fine," "ok," also include when app monitoring is ok)
Negative (Attitude)	Negative attitude (also include when app monitoring is not ok)
Neutral (Attitude)	Neutral attitude (e.g., "don't care," "so-so," "average")
I don't know (Attitude)	When children say "I don't know"
It depends (Attitude)	When children say "it depends" or give both positive example or negative example

Code: Ways that app can or can't monitor/track/watch people

Code Values	Definition
Via people/workers	When children mention about company or apps having people or workers to monitor/watch/track users. Also code if children mention that the lack of people is the reason that no tracking/watching/monitoring occurs.
Via computer/programs/account/software	When children mention that apps or app companies use computer programs/software/account to monitor/watch/track users. Also code if the children says the lack of computer/programs/accounts/software is the reason no tracking/watching/monitoring occurs.
Via camera/screens	When children mention that apps or app companies use cameras/screens to monitor/watch/track users. Also code if the children say the lack of cameras or screens is the reason no tracking/watching/monitoring occurs.
Can't monitor/track people	When children mention that apps or app companies can't monitor/watch/track users in general. This one can be double coded with any of the first 3 sub-codes. For example, if children say "app can't track me because there's no camera" code it both under "can't monitor" and "via camera."
Other (Ways)/unspecified	Code here when other categories do not fit
Don't know/not sure	If children says "I don't know" etc. with no follow-up from child/researcher.

Code: Data memory/tracking storage location

Code Values	Definition
Local storage	When storage is in the iPad, computer, phone, storage bin, local files, local account (when children mention the app doesn't need to connect to the internet to use)
Internet/cloud storage	When the storage is in the cloud, server, internet account, search history, app history
Unspecified (location)	No location is specified.

Code: How I can manage apps' memory (monitor) of me

Code Values	Definition
How I can manage apps' memory (monitor) of me	When children mention the actions they take to manage or influence the way apps remember about them. Examples: "If don't watch it, it will delete the video after 3 months," "If i like or dislike the video"

Code: How app preference work or how apps know my preferences

Code Values	Definition
How app preference work or how apps know my preferences	When children explain how app preference works, or how apps are able to know their preferences. Including comments like, "If I use the app, the app would know that I like the app" or "If I delete the app, the app would know I dislike it"

Code: Preference related to ads

Code Values	Definition
Preference related to ads	When children mention how the app (or ads) know (or show) their preferred types of ads. If you code something here, don't double code it with the "how app preference work" code above.

Code: Gendered view on in-app activities contributing to apps inferences

Code Values	Definition
Gendered view on in-app activities contributing to apps inferences	When children mention the app will know their gender from typical male or female behavior or interests.

Code: How you might influence how apps infer about you

Code Values	Definition
Influence the inferences by providing inaccurate information or show pretended behaviors.	If a typical behavior disproves the norm or deliberately inputting false information (e.g., a female watching "violent" content, then the app will think you are a male; if you input a different age, the app will think you are of that age).
Inferences are drawn from your in-app behaviors	When children mention how their behavior or inputs influence the app's ability to make inferences about them (e.g., "you have to tell the app your age or it won't know" or "I need to put in my age for the app to know"). This code also captures when the children mention how they can control what the app infers about them through settings (e.g., enable/allow or disable/deny data access request).
Other	Code here when other categories won't fit.

Code: Different types of inferences

Code Values	Definition
Inference of preference (content, app choice) "First-level" inference of content or preference (e.g., "it maybe knows what types of videos I like"). You may double code this with the "How app preference work or how apps know my preferences." Include inference of app preference (e.g., "the apps knows that I like using this app").	
Inference of personal characteristics (gender, age, other hobbies, styles, appearances, skills)	Any inference about personal characteristics. Example: "The app might know that i like to eat ice cream because my username is ice cream 001 or my profile picture is an ice cream."
Inference of name/email	How the app may or may not know your name/email. Example: "The app knows my name (because I gave it to it in the beginning)" "the app knows my email"
Inference related to ads	When children mention how the app makes inferences about you by showing you "personalized ads"
Inference about address or location	How the app may or may not know your address/location. Example: "I don't think it would know where I live"

Code: The thing in the app that makes guesses about you

Code Values	Definition
The thing in the app that makes guesses about you	This code captures if children mention about where/who makes inferences about them occurs/lives.

E LIST OF APPS

Video Streaming Apps

- YouTube Kids
- Nick
- PBS Kids Video
- DisneyNOW
- YouTube
- Amazaon Prime Video
- Hulu
- Netflix

Game Apps

- NBA 2k Mobile Basketball
- PBS KIDS Games
- Barbie Fashion
- LEGO Tower
- Candy Crush
- My Talking Tom
- Where’s My Water?
- Toca Hair Salon 3

Messaging Apps

- iMessage
- GroupMe
- WhatsApp Messenger
- Facebook Messenger
- Facebook Kids Messenger

F SCENARIO CARDS

Scenario Cards



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