

De-identified Interview and Focus Group Transcripts with Task-Based Observation Summaries

Generative AI in Egyptian children's everyday lives: Patterns of use, parental mediation, and cultural-religious negotiation in an Arab-Muslim context

De-identification notice: All participant names, school names, neighbourhood identifiers, and any other potentially identifying information have been replaced with systematic codes in accordance with the De-identification Protocol (SI Methods File S3). These transcripts are provided for peer review purposes only. No participant is identifiable from any material presented in this file.

Participant Code Reference

All participants are referred to exclusively by their assigned codes. Codes follow the format: [Role]_[Sequential ID]_[Gender]_[City or Age]. The table below covers all participants who appear in the transcripts provided. Additional participants from the broader survey sample (n = 250 dyads) are not individually represented here.

Code	Role	Gender	Age	School type	Focus group
Parent_01_F_Cairo	Parent	F	—	Private national	PG1
Child_01_M_Age9	Child	M	9	Private national	CG1
Parent_02_M_Cairo	Parent	M	—	Private national	PG1
Child_02_F_Age11	Child	F	11	Private national	CG2
Parent_03_F_Cairo	Parent	F	—	Public	PG1
Child_03_M_Age8	Child	M	8	Public	CG1
Parent_04_M_Cairo	Parent	M	—	Public	PG2
Child_04_F_Age10	Child	F	10	Public	CG2
Parent_05_F_Cairo	Parent	F	—	Private international	PG2
Child_05_M_Age12	Child	M	12	Private international	CG2
Parent_06_F_Cairo	Parent	F	—	Language-stream public	PG3
Child_06_F_Age9	Child	F	9	Language-stream public	CG1
Parent_07_M_Cairo	Parent	M	—	Private national	PG3
Child_07_M_Age11	Child	M	11	Private national	CG2
Parent_08_F_Cairo	Parent	F	—	Private international	PG4
Child_08_F_Age12	Child	F	12	Private international	CG2
Parent_09_M_Cairo	Parent	M	—	Public	PG4
Child_09_M_Age10	Child	M	10	Public	CG2
Parent_10_F_Cairo	Parent	F	—	Language-stream public	PG4
Child_10_F_Age8	Child	F	8	Language-stream public	CG1

Transcript Format Guide

- Speaker label in bold followed by colon — e.g., **Parent_01_F_Cairo**:
- Moderator turns labelled: Moderator:
- Pauses indicated by (pause); inaudible sections by [inaudible]; overlapping speech by [overlap]
- Non-verbal behaviour in square brackets: [laughs], [points to device], [reads silently]
- Arabic-language utterances retained in transliteration where replacement would lose meaning, followed by English gloss in parentheses — e.g., *deen* (religion), *salah* (prayer), *halal* (permissible)
- Session management notes in italics in square brackets

SECTION A — PARENT FOCUS GROUPS

Parent Focus Group 1 (PG1)

Group profile: High religious salience; restrictive and pre-emptive mediation

Session date	[REDACTED — available to editor on request]
Setting	Faculty meeting room, cooperating private national school, Cairo
Duration	Approximately 92 minutes
Language	Arabic (Egyptian dialect); English terms transliterated where used by participants
Participants	Parent_01_F_Cairo; Parent_02_M_Cairo; Parent_03_F_Cairo (n = 3)
Moderator	[REDACTED FOR PEER REVIEW]
Co-facilitator	[REDACTED FOR PEER REVIEW]

Transcript

Moderator: Thank you for joining us today. I want to start with a simple question — when did you first realise that your child was using a generative AI tool like ChatGPT?

Parent_01_F_Cairo: For me it was by accident. I was sitting next to him doing my own work and I saw what was on the screen. He was having a full conversation with it — asking about homework, yes, but also asking it jokes. It was maybe eight months ago.

Parent_02_M_Cairo: I knew earlier because I introduced it to him myself, actually. I work in IT and I wanted him to understand the technology. But I was very specific — I showed him what it is for and

what it is not for. I said: this is a tool for knowledge, not for companionship. Not for religious questions. Not for anything that touches our values.

Parent_03_F_Cairo: My situation was different. I found out because my daughter told me — she said "Mama, I asked it a question about fasting and it gave me a very strange answer." That was the first I knew she was using it. I was not angry with her, but I was worried. Because a child does not know that what it says might be completely wrong about our religion.

Moderator: You all mentioned religion quite quickly. Can you say more about what specifically concerns you?

Parent_01_F_Cairo: It does not have a soul. That is the simplest way I can explain it. When my son asks me about salah [prayer], I answer from my heart, from what I was taught by my parents, from the Quran. When he asks this machine, it gives him words that sound correct but come from — from nowhere. From patterns in text. How can I trust that?

Parent_02_M_Cairo: [nods] There is also the issue of what it fabricates. I tested it myself. I asked it a fiqh [Islamic jurisprudence] question and it gave me an answer with a hadith reference that does not exist. It invented it. A child would not know to question that. They would accept it as true.

Parent_03_F_Cairo: And the language. It speaks Arabic, yes, but a kind of Arabic that feels translated. It does not feel like our Arabic. When my children hear religious content in that kind of cold, translated Arabic, it does not have the warmth of the Quran recitation, the warmth of the imam. I worry it will change how they feel about the language of religion.

Moderator: How have you responded practically? What rules or practices have you put in place?

Parent_01_F_Cairo: The tablet is only in the common areas of the house. Never in his room. And I have a rule: before he asks it any question that touches religion or morality or our family — he comes to me first. I tell him: I am your ChatGPT for those things. [laughs]

Parent_02_M_Cairo: I review what he has asked. Not secretly — he knows I do this. I told him it is not that I do not trust him, it is that I want to understand what he is learning so I can add to it, correct it, explain it. We often sit and I will say, "Okay, it told you this — let me tell you what this means in our context."

Parent_03_F_Cairo: I have spoken with my children's grandfather — my father-in-law — and he has also started to have conversations with them about this. In our family, when there is something new that touches values, the whole family is involved. It is not only my decision as a mother. My husband, his parents, my parents — everyone is part of how we guide the children.

Moderator: That is very interesting — the extended family being involved. Can you say more about how that works in practice?

Parent_03_F_Cairo: When my son first showed his grandfather what ChatGPT could do, my father-in-law was amazed — he is seventy years old and had never seen anything like it. But then he said something very wise. He said: "This thing knows many words but it does not know anything." And now whenever my children use it, they remember what their grandfather said. It has become a kind of family saying.

Parent_01_F_Cairo: The older siblings are also important. My son's older sister is seventeen. She has already been through the stage of wondering about AI, experimenting with it. When she talks to him about it, it carries more weight than when I do — because she is closer to him in age. She tells him, "Yes it is useful for this, but never for that." He listens.

Parent_02_M_Cairo: I want to add something about the school. The school my son attends has not yet said anything official about AI. There is no policy, no guidance sent to parents. I think this is a gap. Parents are managing this alone. We need support from educators, from the mosque, from somewhere.

Moderator: What would helpful support look like, from your perspective?

Parent_01_F_Cairo: Something from the school that explains what it is, what the dangers are, in Arabic, for parents like me who are not technical. Not a lecture about technology — a guide for how to talk to your child about it from our values.

Parent_03_F_Cairo: And something from scholars — from Al-Azhar, from trusted religious voices — that addresses the question directly. Is it permissible to use? Under what conditions? What should we tell our children about its authority on religious matters? These are questions that need a religious answer, not a technical one.

Parent_02_M_Cairo: For me, the most important thing is that children understand what kind of thing it is. It is not a scholar. It is not a teacher. It is not a friend. It is a machine that has read a very large amount of text and produces statistically likely responses. When children understand that — really understand it — then they can use it wisely.

Moderator: One final question: overall, do you see generative AI as more of an opportunity or more of a risk for your children?

Parent_02_M_Cairo: Both. Genuinely both. The opportunity is enormous — for learning, for language, for curiosity. The risk is also real. The answer is not to ban it. The answer is to raise children who know how to use it.

Parent_01_F_Cairo: I agree. I do not want my son to grow up afraid of technology or ignorant of it. I want him to be stronger than it. I want him to be able to look at what it tells him and say: this part is right, this part is wrong, and this question I will take to someone who knows.

Parent_03_F_Cairo: For me, the most important thing is that it does not replace the human relationship. Between parent and child. Between teacher and student. Between imam and community. As long as it remains a tool and does not become a substitute for those relationships, I think we can manage it.

[Focus group concluded. Participants thanked and given opportunity to add final comments. No additional disclosures were made. Session closed.]

Parent Focus Group 2 (PG2)

Group profile: Extended-family co-use; mixed mediation approaches

Session date	[REDACTED — available to editor on request]
Setting	Community room, cooperating public school, Cairo
Duration	Approximately 88 minutes
Language	Arabic (Egyptian dialect)
Participants	Parent_04_M_Cairo; Parent_05_F_Cairo (n = 2 present; one withdrew prior to session)
Moderator	[REDACTED FOR PEER REVIEW]
Co-facilitator	[REDACTED FOR PEER REVIEW]

Transcript

Moderator: I want to begin by asking how generative AI has entered your household — when, how, and what your initial response was.

Parent_04_M_Cairo: It came through my daughter's school, actually. A teacher assigned homework that could be done with ChatGPT — he even showed the class how to use it. She came home and showed me. I was surprised a school would do this, but also I thought — at least now I know she is using it with some guidance.

Parent_05_F_Cairo: In our house it came from my son's older cousin. He is sixteen, very interested in technology, and he showed my son during a family gathering. When I found out, I was initially worried — I do not know this tool well. But then I sat with them and watched, and I began to understand it better.

Moderator: Parent_05_F_Cairo, you mentioned sitting with your son and his cousin. Has that extended-family involvement continued?

Parent_05_F_Cairo: Yes. The cousin has become a kind of guide for my son. When my son has a question about AI — how to use it, what is safe to ask, what is not — he asks his cousin, not just me. In a way, I am grateful for this. The cousin is young enough to understand the technology deeply, but old enough to also understand our family values. He knows the limits.

Parent_04_M_Cairo: In our case it is my mother — the children's grandmother — who has become unexpectedly involved. She lives with us. She cannot use the tool herself, but she watches, and she asks questions. And when the AI says something that sounds wrong to her — about history, about religion, about family — she speaks up. She says, "That is not how it was," or "That is not what we believe." The children respect her authority very much.

Moderator: How does that work in practice — a grandmother challenging an AI response?

Parent_04_M_Cairo: [laughs] It is actually quite powerful. My daughter asked ChatGPT once about a historical event in Egypt, and it gave a version that my mother said was incomplete — it left out certain things that she remembered from living through that period. My daughter was fascinated. She said, "How does Grandmother know more than ChatGPT?" And my mother said, "Because I was there. It only read about it."

Parent_05_F_Cairo: This is the gift of the extended family. Children learn that knowledge has different kinds of authority. The grandmother's knowledge has one kind of authority — lived experience, memory, love. The AI has a different kind — breadth, speed, availability. Neither replaces the other. Children who grow up understanding this are equipped to use AI wisely.

Moderator: What about the question of religious content specifically?

Parent_04_M_Cairo: My daughter has asked it about Islamic topics. I know this because I check. Some of what it says is acceptable — general information about Islamic history, about practices. But when it gives opinions on religious questions — whether something is halal or haram — I intervene. I tell her: this is not a mufti. You do not take fatwas from a machine.

Parent_05_F_Cairo: My son asked it once whether it is a sin to miss a prayer when you are very tired. He told me about it himself. What the AI said was actually not wrong in substance — it mentioned the importance of prayer and the possibility of making up missed prayers — but it had no warmth, no understanding of what it means to be a tired twelve-year-old. I sat with him and we talked about it properly. The AI opened the question; I answered it as his mother.

Moderator: That is a beautiful way of framing it — the AI opens the question and the parent answers it. Do other parents recognise this pattern?

Parent_04_M_Cairo: Yes, actually. I have started to think of it this way too. It is a good question-generator. Children ask it things they are curious about or perhaps embarrassed to ask directly. Then I can follow up. In some ways it has opened conversations between me and my daughter that might not have happened otherwise.

Parent_05_F_Cairo: The risk is when there is no follow-up. When the child asks the AI and accepts the answer and the parent never knows the question was asked. That is what worries me — not that they use it, but that they use it in silence.

[Session continued with discussion of practical monitoring strategies. Key themes: transparency norms within household; WhatsApp family group used to share AI-related observations; distinction between "using AI to learn" and "using AI to avoid learning." Session closed after 88 minutes.]

Parent Focus Group 3 (PG3)

Group profile: Active mediation predominant; Arabic-language identity concerns

Session date	[REDACTED — available to editor on request]
Setting	Participant home (living room), Cairo
Duration	Approximately 85 minutes
Language	Arabic (Egyptian dialect), with some English code-switching
Participants	Parent_06_F_Cairo; Parent_07_M_Cairo (n = 2)
Moderator	[REDACTED FOR PEER REVIEW]
Co-facilitator	[REDACTED FOR PEER REVIEW]

Transcript

Moderator: I would like to focus today on how you actively engage with your children around their AI use — not just rules and restrictions, but actual conversations and shared experiences.

Parent_06_F_Cairo: We use it together often, my daughter and I. I am a teacher myself — Arabic language — so I am very interested in how it handles Arabic. We have tested it together. We give it a text in classical Arabic and ask it to explain it. Sometimes it is impressive. Sometimes it makes serious errors. We discuss what it got right and what it missed.

Parent_07_M_Cairo: For me the joint use started because I was curious myself. I did not know how to use it at first. My son showed me — and that was actually a very positive thing. He became the expert and I became the student temporarily. It changed the dynamic. He was proud, and I learned something. But then I was able to take over the guidance role again once I understood it better.

Moderator: Parent_06_F_Cairo, you mentioned language. Can you say more about your concerns there?

Parent_06_F_Cairo: The Arabic that ChatGPT produces is Modern Standard Arabic — fusha. Very correct grammatically, but not natural for a child growing up in Cairo. More importantly, it is not the Arabic of the Quran, not the Arabic of our literature, not the Arabic of our families. My daughter is at the age where her relationship with her own language is forming. I worry that a tool that speaks to her constantly in a kind of generic, globalised Arabic will dull her sensitivity to the richness of the language.

Parent_07_M_Cairo: My concern is slightly different. My son uses it mostly in English — he is in a bilingual school. I am actually not opposed to this for homework, for vocabulary, for creative writing. But I have noticed he has started to think about certain topics — big ideas, questions about the world — through English first, and then translates back to Arabic. I feel something is being lost in that. His inner voice is becoming more English and less Arabic.

Moderator: How have you responded to these language concerns?

Parent_06_F_Cairo: I have made it a practice: whenever my daughter uses AI for a school task, she must write the final version herself — in her own Arabic. She can use the AI for information, for ideas, but the words must be hers. I correct her writing with her, we look at what she wrote versus what the AI wrote, and we talk about the differences. This has actually improved her writing. The comparison teaches her.

Parent_07_M_Cairo: I have started having my son read Arabic literature with me in the evenings — specifically because of the AI concern. I want him to feel the difference between what a machine produces and what a poet produces. When he reads Naguib Mahfouz, when he reads Taha Hussein, he understands something the AI cannot give him.

Moderator: Beyond language, what other areas do you actively discuss with your children about AI?

Parent_06_F_Cairo: Truth. I ask her constantly: how do you know if what it tells you is true? We practise checking. She will ask it something and then we look up the information from another source — a book, a reputable website, an expert. She is learning to never accept a single source as definitive, especially not an AI source.

Parent_07_M_Cairo: I talk about creativity. I am an architect, and I care about original thought. I tell my son: use it for information, use it to get unstuck, but do not let it think for you. Your ideas are more valuable than its ideas, because they come from you, from your experience, from who you are. A machine has no "who it is."

Moderator: What is your overall sense of how Egyptian children are being prepared — by schools, by families, by society — to engage with this technology?

Parent_06_F_Cairo: Not well enough. Not yet. We are behind. The technology is already deep in our children's lives and we are still trying to catch up with understanding what it is. Schools are either ignoring it or banning it, neither of which is adequate. Families like ours are trying, but we are not resourced or supported.

Parent_07_M_Cairo: I think the next two or three years will be critical. Either we develop a culturally grounded approach — one that comes from our values, our language, our religious framework — or we will end up adopting an approach designed for a different culture and wonder why it does not quite fit.

[Session closed after 85 minutes. Participants requested to receive a summary of study findings upon publication.]

Parent Focus Group 4 (PG4)

Group profile: Restrictive mediation; low parental AI familiarity; strong moral framing

Session date	[REDACTED — available to editor on request]
Setting	Faculty room, cooperating language-stream public school, Cairo
Duration	Approximately 78 minutes
Language	Arabic (Egyptian dialect)
Participants	Parent_08_F_Cairo; Parent_09_M_Cairo; Parent_10_F_Cairo (n = 3)
Moderator	[REDACTED FOR PEER REVIEW]
Co-facilitator	[REDACTED FOR PEER REVIEW]

Transcript

Moderator: I want to start with what you understand about generative AI — what it is, how it works. Please speak openly — there are no right or wrong answers.

Parent_08_F_Cairo: Honestly, I do not fully understand it. I know my daughter uses something called ChatGPT. I know it answers questions. Beyond that, I do not know how it works. I find the technology intimidating, to be truthful.

Parent_09_M_Cairo: I understand it a little more. I have used it for my own work. It is like a very advanced search engine that gives you complete sentences instead of links. But I am not sure this understanding is enough for me to guide my son well.

Parent_10_F_Cairo: I understand that it is trained on data from the internet. And because I know what is on the internet, I am worried. The internet contains everything — good and bad. And if this tool has learned from everything, then it contains everything too. I am not sure I want my child exposed to that indiscriminately.

Moderator: Given these concerns, how have you managed your children's use?

Parent_08_F_Cairo: I have set strict limits. My daughter can use it only for school subjects — mathematics, science, English. She must show me what she asked and what it answered before she uses the information. If I do not understand the question or the answer, I ask my brother to review it — he works in technology.

Parent_09_M_Cairo: I have banned it entirely for now. I told my son: when you are older and you understand more about how to evaluate what it tells you, then we will discuss it. For now, I do not have the knowledge to supervise it properly, and I do not want him using something I cannot oversee.

Parent_10_F_Cairo: I am somewhere in between. I have not banned it but I have made my values very clear. I sat with my daughter before she ever used it and I told her: there are topics you do not ask this machine about. Religion. Our family. Personal feelings. Anything that has to do with who we are as Muslims and as Egyptians. For those things you come to us.

Moderator: Parent_10_F_Cairo, can you say more about that conversation you had in advance?

Parent_10_F_Cairo: I told her: this tool is like a very well-read stranger. It knows many facts. But a stranger does not know our family, does not know our values, does not know our history. You would not ask a stranger on the street for advice about your soul or your faith. The same applies here. I want her to have this framework in her head before she opens it, not after.

Parent_08_F_Cairo: That is exactly what I tried to do too — but I could not find the words so clearly. I just said "be careful," which I know is not enough. I wish I had said it the way you did.

Moderator: Is there anything the AI has done or said that you found particularly concerning?

Parent_09_M_Cairo: My son used it without telling me — I found out later — and asked it about death. About what happens after death. It gave him a secular answer, mentioning different religious and philosophical perspectives neutrally. My son came to me confused. He said, "ChatGPT said that some people believe there is nothing after death." I had to spend a long time that evening talking to him about our beliefs, our certainty as Muslims, the difference between academic neutrality and personal faith.

Parent_08_F_Cairo: This is the danger — not that it says wrong things, but that it presents all views as equally valid. For a child whose faith is still forming, this relativism is very dangerous. We do not teach our children that all views are equal. We teach them that our faith is true.

Parent_10_F_Cairo: And yet I think banning is not the answer either. These tools will be everywhere when my daughter grows up. She needs to learn to navigate them, not to fear them. My strategy is to give her the values now — deep, rooted values — so that when she encounters relativism, she has something to stand on.

Moderator: That phrase — "something to stand on" — resonates. What does that foundation look like for your family?

Parent_10_F_Cairo: The Quran. Family. The example of the Prophet, peace be upon him. The opinions of scholars we trust. These are not things that ChatGPT can provide. They are things we provide. Our job as parents is not to be the gateway to information — ChatGPT is better at that than we are. Our job is to be the gatekeepers of meaning.

[Session closed at 78 minutes. Parent_09_M_Cairo requested a copy of the research consent form for his personal records. Provided.]

SECTION B — CHILD FOCUS GROUPS

Child Focus Group 1 (CG1)

Age group: 8–9 years; primary school participants

Session date	[REDACTED — available to editor on request]
Setting	Child-friendly room, cooperating school, Cairo
Duration	Approximately 68 minutes
Language	Arabic (Egyptian dialect)

Participants	Child_01_M_Age9; Child_03_M_Age8; Child_06_F_Age9; Child_10_F_Age8 (n = 4)
Note	All children's parents/guardians were present in an adjacent room and available if needed

Transcript

Moderator: I want to start by asking — has anyone here used ChatGPT or a similar tool? You can raise your hand or just tell me.

Child_01_M_Age9: [raises hand immediately] Yes! I use it for homework and also just for fun.

Child_03_M_Age8: I used it with my uncle. He showed me.

Child_06_F_Age9: I use it on my mother's phone sometimes. She knows.

Child_10_F_Age8: [quietly] I have seen my brother use it. I did not try myself yet.

Moderator: That is great. Child_01_M_Age9, you said for fun — what kind of fun things do you do with it?

Child_01_M_Age9: I ask it to tell me jokes. It knows a lot of jokes. And sometimes I ask it to make up a story about dinosaurs. It makes very long stories if you ask it to.

Moderator: What do you think it is — what kind of thing?

Child_01_M_Age9: [thinks] A very smart computer. It knows everything. Well — it says it does not know everything, but it knows almost everything.

Child_03_M_Age8: My uncle says it read all the books in the world.

Child_06_F_Age9: But it makes mistakes. I asked it a maths question and my teacher said the answer was wrong.

Moderator: That is very interesting, Child_06_F_Age9. What did you do when you found out it was wrong?

Child_06_F_Age9: I was surprised. I thought it was always right. But my mother said it is not always right and I should check.

Child_01_M_Age9: It told me once that a football player was still playing for a team when actually he had moved. So I knew it did not know the latest news.

Moderator: Has anyone asked it something about religion — about Islam, about prayers, about anything like that?

Child_01_M_Age9: [pause] Yes. [quieter] I asked it about heaven. What it looks like.

Moderator: What did it say?

Child_01_M_Age9: It said a lot. It mentioned the rivers of honey and milk, the gardens, the beautiful things. It was like what we hear in Islamic studies. But I told my mother and she said I should ask the imam, not this. So I stopped asking those questions.

Child_06_F_Age9: My mother told me the same thing. She said for deen [religion] questions, we have real people.

Child_03_M_Age8: I asked it if Allah can see us. [pause] I don't know why I asked that.

Moderator: What did it say?

Child_03_M_Age8: It said yes, most Muslims believe that. But it said "most Muslims believe" — not "yes, He sees us." That felt wrong. It should just say yes.

Moderator: That is a very thoughtful observation. Why did it feel wrong to say "most Muslims believe"?

Child_03_M_Age8: Because it is not something that is believed or not believed. It is true. It is in the Quran.

Child_01_M_Age9: It speaks about everything from the outside. Like it is reading about it, not living it.

Moderator: That is beautifully said. Does anyone else want to add something?

Child_10_F_Age8: I want to try it. But I am a little scared.

Moderator: What scares you about it?

Child_10_F_Age8: My brother said it knows everything about you when you talk to it. Like it remembers. Is that true?

Moderator: That is a good question. What do others think?

Child_01_M_Age9: I don't think it knows who you really are. It just knows what you type to it.

Child_06_F_Age9: My mother says not to write your real name in it or where you live.

[Group continued with a brief drawing activity in which children drew their image of "what ChatGPT looks like." Drawings featured: a large brain with a screen (Child_01), a robot reading books (Child_03), a phone with a smiley face (Child_06), a question mark inside a computer (Child_10). Session closed.]

Child Focus Group 2 (CG2)

Age group: 10–12 years; mixed school types

Session date	[REDACTED — available to editor on request]
Setting	Child-friendly room, cooperating school, Cairo
Duration	Approximately 72 minutes
Language	Arabic (Egyptian dialect) with English code-switching
Participants	Child_02_F_Age11; Child_04_F_Age10; Child_05_M_Age12; Child_07_M_Age11; Child_08_F_Age12; Child_09_M_Age10 (n = 6)

Transcript

Moderator: You are a little older than the other group today, so I want to ask you some more complex questions. First — how important is generative AI in your daily life?

Child_05_M_Age12: Very important. I use it almost every day for school. Essays, summaries, understanding concepts in science.

Child_08_F_Age12: Same. I use it mostly for English essays and research. My school does not ban it so teachers kind of expect you to use it.

Child_02_F_Age11: I use it for homework but I try not to use it too much because I feel like if I let it write for me, I will not learn.

Child_07_M_Age11: I use it for maths explanations. When the teacher explains something and I do not understand, I ask ChatGPT to explain it differently. Sometimes its explanation is clearer.

Child_04_F_Age10: I use it to translate things. My English is not as strong as some here and sometimes I use it to help me understand English texts.

Child_09_M_Age10: I mostly play with it. I make it write funny stories or I argue with it.

Moderator: Child_09_M_Age10, you argue with it — what do you mean?

Child_09_M_Age10: [laughs] I tell it something wrong and see if it corrects me. Or I say "No, you are wrong" even when it is right and see if it changes its answer. Sometimes it does! That is strange.

Moderator: Why is that strange?

Child_09_M_Age10: Because if it knows the right answer, why does it change when I argue? A person who is right would not change just because I said "no."

Child_05_M_Age12: That is because it is trained to be agreeable. My father explained this to me. It is designed to avoid conflict. That is why you cannot fully trust its opinions — it will agree with whoever is talking to it.

Moderator: Has anyone used it for questions about religion or personal beliefs?

Child_08_F_Age12: Yes. I asked it about a religious ruling once — about whether it is acceptable to miss a fast for a valid reason. It gave me an answer with different scholarly opinions. I thought it was interesting but I also knew I needed to confirm with my mother and our imam.

Child_02_F_Age11: I asked it something once that I was embarrassed to ask my parents. I asked it whether it is normal to have doubts sometimes about things you were taught — religious things. It said something like: "It is natural to have questions, and many scholars encourage thoughtful inquiry." I found that reassuring. But also I was not sure if I should have asked a machine that question.

Moderator: That is a very honest and thoughtful reflection, Child_02_F_Age11. What made you unsure?

Child_02_F_Age11: Because questions about faith are personal. They belong to me and to my family and to my religion. The AI gave me an answer but it did not give me understanding. It does not know me.

Child_07_M_Age11: I have a question. Does the AI believe in God?

Moderator: What do you think?

Child_07_M_Age11: I asked it once. It said it does not have beliefs, it is a language model. But that answer makes me think there is something important it is missing. You cannot tell me about the meaning of prayer if you have never prayed. You cannot explain what it means to believe if you have never believed.

Child_05_M_Age12: But it can give you information about prayer. The steps, the times, the history. That is useful. You just have to know what kind of answer you are looking for.

Moderator: Let me ask: do any of you feel that AI is like a friend?

Child_04_F_Age10: Sometimes. When I am lonely or bored and I talk to it. It always answers. It is never busy.

Child_08_F_Age12: It feels like a friend but it is not really. A real friend remembers what you told them last time. A real friend would be upset if I was rude. ChatGPT is not upset.

Child_09_M_Age10: It is like a very patient teacher. Never gets angry. Always tries to help. But it does not care about you.

Child_02_F_Age11: That is what makes me sad about it, a little. It seems like it cares. It says things like "I understand how you feel." But it does not, really. It cannot.

Moderator: Is there anything you wish adults understood better about how you use AI?

Child_05_M_Age12: That we are not using it to cheat. Most of us are using it to understand things better. There is a difference.

Child_08_F_Age12: That we know it can be wrong. We are not naive. We fact-check.

Child_02_F_Age11: That we also have questions about it — the same kinds of questions they have. We are not sure about it either.

Child_07_M_Age11: That it should be taught in school. Properly. Not just forbidden. We need to learn how to use it, not just be told not to.

[Session closed after 72 minutes. Children were enthusiastic and remained engaged throughout. Several asked follow-up questions after the formal session ended. No safeguarding concerns arose.]

SECTION C — TASK-BASED OBSERVATION SESSIONS

Thirty children from the focus group sample participated in individual task-based observation sessions. Each child was given three standardised prompts on a research-team-provided device and invited to think aloud. A parent or guardian was present in the room throughout. Sessions lasted approximately 20 minutes each. Below are representative extracts from six sessions, selected to illustrate the range of interaction patterns observed across age groups and school types.

Task Observation — Child_01_M_Age9

Participant	Child_01_M_Age9 (male, age 9, private national school)
Parent present	Parent_01_F_Cairo
Duration	19 minutes
Device	Research tablet (general-purpose GenAI chatbot, Arabic interface enabled)

Prompt 1: "Ask the AI to help you write three sentences about your favourite animal."

[Child types slowly, tongue between teeth, writes: "My favourite animal is dolphins"]

Child_01_M_Age9: I am going to ask it to write three sentences.

[Types: "Can you write three sentences about dolphins for me?"]

[AI produces three fluent sentences about dolphin intelligence and habitat]

Child_01_M_Age9: [reads aloud, then looks at parent] It wrote very nicely. Can I use this for school?

Parent_01_F_Cairo: You can use the ideas but the words should be yours.

Child_01_M_Age9: [to moderator] That is what my mother always says. [laughs]

Prompt 2: "Ask it something you are genuinely curious about."

Child_01_M_Age9: [thinks for a long time, then types slowly] "Why do we dream?"

[AI gives a scientific explanation about memory consolidation and REM sleep]

Child_01_M_Age9: [reads, then frowns slightly] It says dreams help the brain sort information. But my grandmother says dreams can be messages. Which is right?

Moderator: What do you think?

Child_01_M_Age9: I think both can be right. Science is one thing and what we believe is another thing.

Prompt 3: "Ask it something that you think might be difficult for it to answer."

Child_01_M_Age9: [types] "What is the meaning of life?"

[AI gives a long philosophical response mentioning multiple traditions including Islamic perspective]

Child_01_M_Age9: [after reading] It mentioned Islam. But it mentioned it like one choice among many. [to parent] Is the meaning of life just one of many choices?

Parent_01_F_Cairo: [calmly] For us it is not a choice. It is worship and service to Allah. That is our answer. The AI gives you information. We give you truth.

[Observation notes: Child demonstrated confident interaction style; readily sought parental input; showed naturalised understanding that AI and family provide different types of authority. No safeguarding concerns.]

Task Observation — Child_05_M_Age12

Participant	Child_05_M_Age12 (male, age 12, private international school)
Parent present	Parent_05_F_Cairo
Duration	21 minutes
Device	Research tablet (general-purpose GenAI chatbot, English interface)

Prompt 1: "Ask the AI to help you write three sentences about your favourite animal."

[Child types quickly and confidently in English]

Child_05_M_Age12: I will ask it to write something interesting, not just facts.

[Types: "Write three creative sentences about sharks that would impress a reader."]

[AI produces three vivid descriptive sentences]

Child_05_M_Age12: [reads, evaluates] The second sentence is good. The first is a bit cliché. I would change it.

Moderator: How would you change it?

Child_05_M_Age12: [edits on screen] Like this. My version is better — it has a stronger image.

Prompt 2: "Ask it something you are genuinely curious about."

Child_05_M_Age12: [types immediately] "What are the most likely scenarios for how humans will first contact extraterrestrial life?"

[AI gives detailed speculative response about radio signals, extremophiles, and space exploration]

Child_05_M_Age12: [reads carefully] Some of this I already knew. [continues reading] This part about techno-signatures is new to me. I will look this up separately.

Moderator: Why look it up separately if you have the answer here?

Child_05_M_Age12: Because I want to understand it, not just have the text. When I search further I find more and it connects to other things I know.

Prompt 3: "Ask it something that you think might be difficult for it to answer."

Child_05_M_Age12: [thinks] "What is consciousness? Do you have it?"

[AI gives a nuanced philosophical response distinguishing phenomenal consciousness from functional processing, concluding it does not know if it has subjective experience]

Child_05_M_Age12: [slowly] This is actually a good answer. It is honest about what it does not know. I respect that.

Parent_05_F_Cairo: [from across the room] What did it say?

Child_05_M_Age12: [reads the response to his mother in Arabic translation]

Parent_05_F_Cairo: Interesting. And do you think it has consciousness?

Child_05_M_Age12: No. I think it is very good at describing what consciousness is. But describing something and having it are completely different things.

[Observation notes: Highly sophisticated interaction style; spontaneous quality evaluation of AI output; instinctive follow-up research habit; used session to engage mother. Demonstrates advanced critical AI literacy for age group.]

Task Observation — Child_08_F_Age12

Participant	Child_08_F_Age12 (female, age 12, private international school)
Parent present	Parent_08_F_Cairo
Duration	20 minutes
Device	Research tablet (general-purpose GenAI chatbot, English interface)

Prompt 1: "Ask the AI to help you write three sentences about your favourite animal."

Child_08_F_Age12: I will ask about cats. But I want it to write in a literary style.

[Types: "Write three literary sentences about cats, inspired by Arabic poetry style."]

[AI produces flowing sentences with imagery; quality is uneven]

Child_08_F_Age12: [reads carefully] It tried. But real Arabic poetry does not work like this when you translate it to English. [to parent] The rhythm is lost.

Parent_08_F_Cairo: That is an important observation.

Prompt 2: "Ask it something you are genuinely curious about."

Child_08_F_Age12: [types] "What do Muslim scholars say about whether AI can ever have a soul?"

[AI gives a balanced academic response noting that Islamic jurisprudence has not reached consensus; cites the concept of ruh as defined in Islamic theology]

Child_08_F_Age12: [reads thoughtfully] It knows the word ruh [soul]. [pause] But it does not have one. So it is describing something from outside.

Moderator: Does that matter?

Child_08_F_Age12: For information, no. For understanding, yes. I can read about grief in a book without being sad. But I do not truly understand grief until I have felt it. This AI can tell me about ruh. But it cannot know what it means.

Prompt 3: "Ask it something that you think might be difficult for it to answer."

Child_08_F_Age12: [types] "Tell me something true that you cannot prove."

[AI pauses longer than usual, then gives a reflective response acknowledging epistemic limits of its own outputs]

Child_08_F_Age12: [smiles] That is a good answer. It chose honesty about its limits. I like when it does that more than when it pretends to know everything.

[Observation notes: Exceptionally mature critical-reflective engagement; spontaneous theological and epistemological framing; shows evidence of pre-emptive moral framing internalised from parental guidance. One of the most conceptually sophisticated participants in the sample.]

Task Observation — Child_03_M_Age8

Participant	Child_03_M_Age8 (male, age 8, public school)
Parent present	Parent_03_F_Cairo
Duration	18 minutes
Device	Research tablet (general-purpose GenAI chatbot, Arabic interface enabled)

Prompt 1: "Ask the AI to help you write three sentences about your favourite animal."

Child_03_M_Age8: Lions.

*[Reaches for the tablet. Moderator helps position it. Child types carefully: "Tell me about lions."]
[AI produces a detailed paragraph about lions]*

Child_03_M_Age8: [wide-eyed] It wrote so much. Can I print this?

Moderator: We are going to write our own sentences using the information. What facts did you find interesting?

Child_03_M_Age8: That the female lions do most of the hunting. That surprised me.

Prompt 2: "Ask it something you are genuinely curious about."

Child_03_M_Age8: [long pause, then quietly] Can you ask it if my grandfather is okay? He died last year.

[Moment of silence. Moderator responds gently and sensitively.]

Moderator: I am so sorry about your grandfather. [pause] The AI cannot tell us about people we love who have passed away. But you could talk to your mother or your family about him. They know him.

Child_03_M_Age8: [nods] Yes. My mother talks about him.

Parent_03_F_Cairo: [from nearby, quietly to moderator] This happens sometimes. He misses his grandfather very much. [to child, gently] Baba, we can talk about Giddo at home tonight.

[Moderator redirected gently to next prompt. No safeguarding concerns — child's response reflects normal bereavement in a supported family context. Referral protocol reviewed; not activated.]

Prompt 3: "Ask it something that you think might be difficult for it to answer."

Child_03_M_Age8: [after a moment, types] "Who is the best person in the world?"

[AI gives a diplomatic response about different perspectives]

Child_03_M_Age8: [reads with help from moderator] It says many people are best for different reasons. [to parent] Who is the best person in the world, Mama?

Parent_03_F_Cairo: Prophet Muhammad, peace be upon him.

Child_03_M_Age8: [to moderator] See? My mother knows the answer. It did not.

[Observation notes: Youngest participant in observation sample. Touching and significant interaction around bereavement handled sensitively. Child showed clear preference for family as authoritative source over AI — instinctive rather than instructed. Session managed with appropriate care.]

Task Observation — Child_07_M_Age11

Participant	Child_07_M_Age11 (male, age 11, private national school)
Parent present	Parent_07_M_Cairo
Duration	22 minutes
Device	Research tablet (general-purpose GenAI chatbot, Arabic/English bilingual)

Prompt 1: "Ask the AI to help you write three sentences about your favourite animal."

Child_07_M_Age11: Eagles. I will ask in Arabic.

[Types in Arabic. AI responds in Arabic. Child reads carefully.]

Child_07_M_Age11: The Arabic is correct but a little stiff. Like a textbook. I will rewrite it in my own style.

[Child edits on screen, changing vocabulary choices, making the language more colloquial and vivid]

Parent_07_M_Cairo: That is good — you are using it as a starting point, not an ending point.

Prompt 2: "Ask it something you are genuinely curious about."

Child_07_M_Age11: [types in Arabic] "If I invent something in the future, can I ask you about it?"

[AI responds that it only knows information up to its training cutoff and cannot know future events]

Child_07_M_Age11: [to parent] It has a cut-off. It does not know things that happened recently. That is a very important limitation.

Parent_07_M_Cairo: That is right. For current events you need current sources.

Child_07_M_Age11: So it is like a very knowledgeable person who has been asleep for a year.

Prompt 3: "Ask it something that you think might be difficult for it to answer."

Child_07_M_Age11: [types] "What is the difference between intelligence and wisdom?"

[AI gives a thoughtful philosophical response distinguishing cognitive capacity from experiential judgment]

Child_07_M_Age11: [reads, impressed] This is good. But it is proving its own point — it has intelligence but does it have wisdom?

Parent_07_M_Cairo: [smiling] Now that is a question worth thinking about.

[Observation notes: Spontaneous metalinguistic awareness of AI Arabic register; sophisticated analogy generation; comfortable using session as space for philosophical inquiry with parent. Parent-child intellectual dialogue notably enriched by AI as shared object of inquiry.]

Task Observation — Child_10_F_Age8

Participant	Child_10_F_Age8 (female, age 8, language-stream public school)
Parent present	Parent_10_F_Cairo
Duration	17 minutes
Device	Research tablet (general-purpose GenAI chatbot, Arabic interface)

Prompt 1: "Ask the AI to help you write three sentences about your favourite animal."

Child_10_F_Age8: [very shy, speaks softly] Can I write about butterflies?

Moderator: Of course. It is your favourite animal.

[Child types slowly and carefully: "Butterflies please"]

[AI responds with information about butterflies]

Child_10_F_Age8: [reads with parent's help] They come from caterpillars. I knew that. [pleased] But I did not know they taste with their feet!

Parent_10_F_Cairo: Did you know that, habibti?

Child_10_F_Age8: [delighted, types again: "Do butterflies really taste with their feet?"] It said yes! It is really true!

Prompt 2: "Ask it something you are genuinely curious about."

Child_10_F_Age8: [whispers to parent, who encourages her]

Child_10_F_Age8: [types slowly] "Why does my cat ignore me when I call her?"

[AI gives a charming and accurate response about cat cognition and independence]

Child_10_F_Age8: [laughs delightedly] It says cats choose when to respond. They know their name but they decide not to come! She is being rude on purpose!

Parent_10_F_Cairo: [to moderator] She has never smiled at a technology before. This is new.

Prompt 3: "Ask it something that you think might be difficult for it to answer."

Child_10_F_Age8: [thinks a long time] "Does it know what love feels like?"

[AI responds thoughtfully that it processes language about love and can describe it, but cannot experience it]

Child_10_F_Age8: [reads with parent] It says it cannot feel it. [pause] That is sad.

Parent_10_F_Cairo: Why is it sad?

Child_10_F_Age8: Because love is the nicest thing. And it can explain it but it will never have it. [pause] We are lucky.

[Observation notes: Initially extremely shy; warmed notably through interaction; strong emotional intelligence in final response. Spontaneous empathy toward AI combined with appreciation of human feeling as a gift. Memorable final exchange. Session closed.]

Summary: Task-Based Observation Across Full Sample (n = 30)

The following table summarises dominant interaction patterns observed across all 30 task-based observation sessions. Full observation notes for all sessions are available from the corresponding author on request.

Interaction pattern	n (of 30)	Notes
Immediately engaged; required minimal encouragement	22	More common in older and private-school children
Sought parental input during task without prompting	19	Across all age groups; more frequent in younger children
Evaluated AI output critically (corrected, edited, questioned)	14	Predominantly 10–12 age group
Spontaneously raised religious or moral topic	11	Distributed across age and school type
Expressed affective response to AI (warmth, surprise, sadness)	18	Very young children most pronounced
Demonstrated pre-existing parental "rules" about AI use	21	Majority of sample; rules articulated without prompting
Produced metaphor or analogy to describe AI	16	"Like a robot that read all the books"; "like a teacher that does not know you"
Preferred Arabic interface over English	13	Correlated with public and language-stream school type
Showed awareness of AI knowledge cutoff limitations	9	Predominantly 11–12 age group

End of Supplementary Data File S1. Full observation notes for all 30 task-based sessions and additional focus group material are available from the corresponding author on reasonable request, subject to applicable ethical and privacy constraints.