GOOD SYSTEMS
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How Black and Latinx Youth Evaluate Their Experiences with Digital Assistants

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Introduction

AI-driven devices and toys are playing an increasingly important role in children's lives. Of children who have access to a digital assistant, more than 93% use them, and nearly 69% children who has access to a smartphone use voice AI technology (MediaCom, 2018). Black and Latinx children are more likely to grow up in mobile internet only households (Watkins et al., 2018). However, little research has considered how social and economic disparities and cultural differences shape children's engagement with AI.

Research Goal

The purpose of the study is to examine how children from underrepresented populations understand, interact with, and evaluate AI-driven digital assistants.

Methods

Recruitment: electronic recruitment flyers at after-school activities, parent groups, and local schools; word-of-mouth

Sample size: 13 Black or Latinx child and parent participants

The study design includes **two** iterations of instrument design, deployment, and evaluation.

First Approach: Narrative Interview

- In-person narrative interviews with child/parent participants to relate their experiences, frustrations, and future conceptions of the devices they used in their daily lives

Second Approach: Observational interview

- Adapted our approach to be remote due to COVID pandemic restrictions
- Asked the participants to use the device to explore aspects of their culture and family history

Research Results

Research findings from Yi et al. (2020)

1. Children find DAs **engaging**, but sometimes it's **challenging** to get DAs understand their questions
2. Both children and their parents expressed their **privacy concerns** over DAs with always-on audio capabilities. Parents also worry about their **child's reliance on these devices**
3. Nearly every parent mentioned their **child's digital literacy as being important** to them, even when they had reservations about specific devices.

> *"You can ask [Siri] what's the weather of the day; you can ask her for a joke or something...she's kind of your friend."* (P1, 12, boy)
> - *"Sometimes if you don't pronounce a word right, they might not know."* (P2, 8, boy)
> - *"...you have the expectation that they're going to ask you for facts of life...a lot of times they rely on the phone for that...you're competing with this massive network of knowledge that is at their fingertips."* (PP1, grandmother)
> - *"Just for parental guidance...depending on their developmental stage...they might need additional assistance from someone who knows them."* (PP4, mother)

Research findings from Slota et al. (2021)

In the initial narrative interviews:

1. DAs were praised as being more **convenient, faster,** or **more efficient**
2. DAs were seen **as a means of asking a question**
3. DAs **demonstrated some form of social privilege**

In the observational interviews:

1. Participants demonstrated their competence in **assessing and understanding their devices**
2. Participants **consistently accounted for designers' intent** in their understanding of DAs
3. Participants consistently saw the **future growth of DAs** as being related to **an expansion of smart home automation** or **a more responsive personality**.

Conclusion

We found three key themes resulting from these interviews (usability, privacy, and digital literacy) and identified approaches for eliciting feedback about AI and racial equity, including how online data collection can be undertaken during a pandemic. We conclude that future research is needed to ensure that DAs are aligned with the values of youth from underrepresented populations. We also explore potential future steps for engaging youth in the process of developing more equitable technology.

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