Mobile Technology and Teens: Understanding the Changing Needs of Sociocultural and Technical Landscape

JANGHEE CHO, National University of Singapore, Singapore
INHWA SONG, KAIST, Republic of Korea
ZAINAB AGHA, San Francisco State University, USA
BENGISU CAGILTAY, University of Wisconsin-Madison, USA
VEENA CALAMBUR, Stevens Institute of Technology, USA
MINJIN "MJ" RHEU, Loyola University Chicago, USA
JINA HUH-YOO, Stevens Institute of Technology, USA

Teens' mobile technology use can help teens connect with one another, but it also raises concerns around overuse, addiction, and exposure to harmful content. Traditional tools and methods for parental controls and guidance for mobile technology use among children, such as screen time limits, often fail to address teens' nuanced experiences on the benefits and harm on their mobile technology use. This workshop brings together interdisciplinary researchers, practitioners, and teen advocates to examine how the CHI community can foster healthy teen mobile-technology relationships. Our goals are to: (1) co-design research agenda, (2) foster cross-sociocultural collaboration, (3) generate guidance for stakeholders (e.g., public, policymakers, parents, healthcare providers), and (4) plan actionable steps for ongoing impact. The workshop will explore themes like engaging broader stakeholders, embracing marginalized voices, and navigating the implications of emerging technologies through panel presentations and interactive sessions. By examining these themes, we aim to re-explore the HCI community's discourse on teen mobile technology use and well-being, fostering a comprehensive understanding and inclusive approaches to navigate the multifaceted challenges in the modern digital landscape in diverse sociocultural contexts.

CCS Concepts: • **Do Not Use This Code → Generate the Correct Terms for Your Paper**; *Generate the Correct Terms for Your Paper*; Generate the Correct Terms for Your Paper; Generate the Correct Terms for Your Paper.

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Authors' Contact Information: Janghee Cho, National University of Singapore, Singapore, Singapore, jcho@nus.edu.sg; Inhwa Song, KAIST, Daejeon, Republic of Korea, inhwa.song@kaist.ac.kr; Zainab Agha, San Francisco State University, San Francisco, USA, zainabagha@sfsu.edu; Bengisu Cagiltay, University of Wisconsin-Madison, Madison, USA, cagiltay@wisc.edu; Veena Calambur, Stevens Institute of Technology, Hoboken, USA, vcalambu@stevens.edu; Minjin "MJ" Rheu, Loyola University Chicago , Chicago, USA, mrheu@luc.edu; Jina Huh-Yoo, Stevens Institute of Technology, Hoboken, USA, jhuhyoo@stevens.edu.

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1 Motivation & Objectives

Sofia is fourteen years old and has owned a phone for two years now. She enjoys using it to stay connected to her friends, explore music and videos, play mobile games, follow her favorite social media content creators, pursue her hobbies, and get help with homework. But lately, Sofia's family noticed she's spending too much time with her phone, particularly as they notice it's affecting her sleep and focus in school. Sofia also recognizes this change and sometimes feels more at peace without her phone, but other times gets anxious as she feels disconnected. Her parents have tried to control her screen time because of what the experts on media say about the link between excessive phone use and mental health, but Sofia just gets frustrated that they don't seem to understand that the benefits she gets from her phone—like keeping up with friends, staying in the loop with what's happening, expressing herself through creative apps, and exploring new interests—ultimately outweigh her negative experiences from it.

This vignette reflects the conflicting feelings that teenagers often have regarding their mobile technology use [18] and potential family conflict because of it. Teens enjoy staying connected and entertained but also worry about overuse and its impact on their well-being [68]. Parents and teenagers struggle to navigate and resolve tensions with increasing teen use of mobile technologies [58]. These concerns have bubbled up to global public health concerns, as the United States Surgeon General has released several advisories to warn about a rapidly worsening youth mental health crisis and social isolation, tied to mobile technology and social media use among teenagers [54, 55]. These reports led to controversies around recent online safety bills such as the Kids Online Safety Act [20]. The UK and EU are also considering stricter regulations on teen's media use [1, 47], while Singapore's Institute of Mental Health emphasized concerns on the amount of time teens spend on social media [8, 28] and the exposure to harmful content and broader online risks (e.g., cyberbullying [56], sexual risks [60], information breaches [19]) that affect teen well-being. In response to growing concerns, in the Fall of 2024, Instagram has announced changes to its policies around age limitations, content restrictions, and structural parental control features to enforce stricter rules for children under 16 in accessing and using the app [51].

However, while these indicate industries are responding to the public health concerns, it remains unclear whether such narrowly focused, structural restrictions alone can address deeper challenges like phone addiction, exposure to harmful algorithmic content, and broader concerns regarding parental mediation of technology use. Teens are fast at adopting emerging mobile technology, such as phones, tablets, and wearables. They use these technologies for a multitude of purposes other than just social media, including messaging (e.g., Snapchat, iMessage), gaming (e.g., Minecraft, PUBG Mobile), entertainment (e.g., Youtube), shopping (e.g., Sephora, Depop), or GenAI applications (e.g., ChatGPT, Character AI). Understanding and balancing the benefits and risks of these different uses of mobile technology for teens requires a broader discussion, including and beyond social media regulation [13].

Research in HCI increasingly investigated the role of parents and their approaches to regulating and guiding adolescents' technology use [14, 22, 36, 39, 49, 70]. Given the obscurity of personal device use, parents often struggle to understand what content their teens are engaging with and resort to setting a limit to screen time as a way to mitigate potential negative impacts [14, 49]. Parents typically establish family rules based on their literacy, knowledge, values, and parenting styles but frequently face challenges in managing teens' technology use, with rules often being broken [14]. Mazmanian and Lanette [49] highlighted a disconnect between such rules and the reality of family life, where simply limiting screen time does not effectively address the full scope of concerns. Parents also face conflicts between maintaining authority and allowing their teens the autonomy to make their own decisions. Unlike younger children, adolescents are at a unique developmental stage where they develop a sense of agency and are heavily influenced by external factors such as peers [5, 6].

In response to this tension, Wisniewski et al. [69] critiqued the dominant focus on parental control in current technological interventions, as adolescents often considered such restrictive approaches to be privacy-invasive and counterproductive to regulating their technology use, while negatively impacting the parent-teen relationship [27]. Researchers warn against creating a "moral panic" around teens technology use [35], while advocating for collaborative approaches that involve teens in designing solutions to foster self-regulation and real-time support in managing their technology use [2, 11]. Another line of studies sheds light on agentic use of mobile technology, exploring voluntary or strategic non-use as a way to regain a sense of agency and manage excessive screen time, thereby promoting more mindful use of mobile technology[12, 44, 64]. This body of research highlights the limitations of traditional screen time strategies and parental control, which primarily focus on quantifying usage and often fail to address the issues with mobile technology use at their root cause. These approaches do not account for personality or social and contextual factors that can influence excessive use of these mobile technologies and social media, such as higher levels of individual impulsiveness or lack of quality time and family support [24, 48], which can be driven by broader socioeconomic factors like household income and family educational attainment [59]. Simply counting hours or restricting screen time does not address the complexities of teens' digital experiences or family dynamics. The field recognizes the need to shift away from this narrow approach and move towards more nuanced strategies that account for the quality and context of technology use [15, 31, 40, 41, 53]. Also, it is important to recognize that much of this research has been conducted within the Global North. Contextual factors such as technology access, parenting styles, and risk awareness differ vastly across cultures [29, 30, 45]. In light of the diversity of emerging technologies and sociocultural contexts, one-size-fits-all regulations for screen time and similar guidelines may fail to fully capture the complexities of modern digital use [40].

This gap presents an opportunity for the HCI community to address and reshape the discourse on teen mobile technology use and well-being. **Our workshop aims to further broaden the conversation surrounding *teens' mobile technology use* and discuss alternative approaches and strategies for fostering a healthy relationship with mobile technology for teens**. This workshop will bring together a diverse group of academics, practitioners, and teen advocates to understand the evolving landscape of mobile technology use, explore design guidelines, and set a research agenda that addresses how society should move forward in redefining what screen time means and reconsidering how to support and guide teens' interactions in the evolving landscape. The workshop's multi-pronged goals include: (1) co-designing future research agendas by identifying blind spots in current approaches to fostering positive teen mobile technology use, (2) creating opportunities to foster collaboration toward addressing the unique needs for teens' healthy use of mobile technology across different sociocultural contexts, (3) developing guidance for and resolving tensions between key stakeholders, such as policymakers, parents, and teens, and (4) planning next steps to further concretize the goals through future follow up venues and activities.

1.1 Workshop Themes

Our workshop will focus on several key themes aimed at expanding the conversation around teens' mobile technology use and well-being from a sociotechnical perspective [17, 35]. Below, we share initial themes guiding the conversation:

Engaging Broader Stakeholders in Shaping Teens' Mobile Technology Use: While parents remain the most significant stakeholders in guiding and facilitating teens' mobile technology use due to their caregiving roles, there has been limited attention to other important, yet often overlooked, stakeholders—such as teens themselves, peers, siblings, grandparents, and online influencers—who could also shape how teens engage with technology [9, 32, 37]. Given teens' growing independence and the influence of peers and intergenerational relationships, it is essential to consider how these broader stakeholders contribute to their technology use (e.g., [3, 21, 33]). Teens' online interactions now

frequently extend beyond their immediate peers to include influencers, online friends, and unknown users, exposing them to diverse information that significantly impacts their behavior and well-being [26, 42]. Many teens feel a personal connection with influencers, making them more likely to imitate their actions and adopt their lifestyles [38]. Previous studies also highlight parents' need for community-oriented support systems to manage technology use effectively [70]. This raises important questions: *Who are the key stakeholders in teens' mobile technology use? How can these stakeholders' values and opinions be reconciled with those of parents and teens to promote healthier technology use? Beyond parents and institutional support, how can we engage other stakeholders (e.g., peers, experts, influencers) to support healthy mobile technology use for teens' well-being and mental health? What roles and responsibilities should we expect from stakeholders in shaping teens' technology use, and how can they collaborate effectively with families and communities?*

Embracing Marginalized Voices in Understanding Teen Mobile Technology Use: While much research has shown that adolescents' and children's mobile technology use could be shaped by cultural, historical, and socio-economic factors [16, 39, 41, 46, 52, 61], there remains a lack of engagement with marginalized groups, such as immigrant families, LGBTQ+ youth and foster youth [10], and those with lower socio-economic status (SES), whose unique identities and cultural boundaries influence both their technology use and family dynamics in distinct ways [53]. Moreover, most studies on these topics are predominantly Western-centric, focusing on the Global North, thereby overlooking the experiences of non-Western cultures and societies [7, 57]. To better understand the lived experiences of these underrepresented communities, it is crucial to conduct more inclusive studies that account for diverse sociocultural backgrounds and decolonize perspectives. This raises several questions: *Who and what contexts are being left out within the mobile technology use discourse? How can we design inclusive and culturally responsive technological interventions that reflect the lived experiences of teens from diverse sociocultural contexts? Furthermore, how can diverse cultural and social practices be integrated into policy guidelines for healthy technology use?*

Navigating Emerging Technologies in Teen Mobile Use: Technology has evolved rapidly from phones to the Internet to smartphones [34]. The linear, passive, and closed-network nature of older technologies shape the contemporary screen time strategies. However, with the rise of new mobile tools and the wide variety of social media platforms, each offering distinct interfaces and interactions, we need to rethink *what "screen time" actually encompasses*. Current parental guidelines, largely shaped by outdated models, fail to account for this diversity in media engagement [14, 40]. *How can we develop more relevant strategies that go beyond focusing on screen time, but including the context, content, different affordances of varying media (e.g., YouTube vs. BeReal vs. Thread), and their potential outcomes?*

Moreover, teens are increasingly using generative AI tools, such as ChatGPT, particularly for school work [50, 66]. Parents and educators struggle to guide these technologies, especially when they blend educational and entertainment purposes [39]. *Given the potential expansion of AI-based applications (e.g., mental health therapy via ChatGPT [4, 67]), how should we address these emerging technologies in terms of screen time, well-being, and guidance? If AI tools are used for educational purposes, do they still count as screen time? Should social media or AI-based apps that promote positive outcomes or emotions be excluded from screen time considerations? Do we need to account for long-term consequences of their use? If so, how? What should be limited or promoted to ensure healthy technology use?*

Broadening Interventions Strategies for Teens' Mobile Technology Use: HCI research on teen mobile technology use often focuses on mobile phone interfaces in isolation, relying only on notifications, apps, or alerts to deliver interventions directly to individuals and primarily drawing on psychological perspectives to examine behavioral

aspects. This approach could lead to continuous usage and habitual checking, resulting in users maintaining constant physical contact with their phones. There has been a lack of exploration into other design resources, such as everyday objects or environments, to develop tangible or spatial interactions that could mitigate mobile phone use or redirect attention. Therefore, we are curious about *whether other interfaces (e.g., ambient object [62]) or technological artifacts (e.g., augmented reality [65]) could contribute to teens efforts to reduce, regulate, or reflect on their engagement with mobile technology.* Landesman et al. [43] presented design strategies to support teens' mindful use of mobile technologies, but they did not address possible interventions that support reflection through pre-planned strategies. *Could we use interfaces other than mobile screens to encourage reflection and mindful use of mobile technology? Given these developments, what other ways can these technologies be integrated into daily life to promote healthier mobile interactions? What theoretical or methodological frameworks can be used to embrace and leverage situated contexts, mundane environments, and everyday objects for interdisciplinary perspectives?*

2 Organizers

Our team of organizers represent a range of domains (e.g., social media, chatbots, online communities, teen mental health, self-tracking, domestic technology, robotics), research approaches (e.g., qualitative, quantitative, design research), and disciplines (e.g., computer science, design, media), all with a common interest in health, well-being, and adolescents' technology use, ensuring a well-suited team to conduct this workshop all with unique expertise on this topic.

Janghee Cho is an Assistant Professor in the Division of Industrial Design at National University of Singapore. His research explores well-being, health, the future of work, and reflective design to understand how technology can promote sustainable living and address uncertainty in everyday life. Through a sociotechnical lens, he examines how technology can foster inclusivity, flourishing, and meaningful reflective practices.

Inhwa Song is a researcher in the School of Computing at Korea Advanced Institute of Science and Technology (KAIST). This far, her research has explored the intersection of well-being and technology, aiming to understand how perceptions and experiences of well-being vary across sociocultural backgrounds. She also designs, implements, and evaluates computing systems that shape how people engage with and pursue well-being in their everyday lives. She is currently completing her undergraduate studies at KAIST.

Zainab Agha is an Assistant Professor at San Francisco State University in the Department of Computer Science. Her research lies at the intersection of adolescent online safety, privacy, and participatory design. She focuses on co-designing and evaluating effective online safety interventions or "nudges" with teens to help them self-regulate and manage unsafe interactions online.

Bengisu Cagiltay is a Ph.D. candidate in the University of Wisconsin-Madison Computer Sciences program with a Ph.D. minor in Human Development and Family Studies. Her research focuses on designing social companion robots tailored to the needs and preferences of children and families. She explores how socially interactive agents can be used to improve families' lives, facilitate their routines, and support connections.

Veena Calambur is a Ph.D. student in Stevens Institute of Technology Sociotechnical Systems program. Her current research aims to understand how to design technology to better enable and facilitate social support for youth, in order to promote mental and social health and well-being in interpersonal and community contexts. She is particularly interested in exploring and evaluating such technologies among marginalized and historically under-represented or excluded populations in technology design spaces.

Minjin "MJ" Rheu is an Assistant Professor of Computational Advertising and Strategic Communication at Loyola University Chicago in the School of Communication. Her research explores the social and psychological implications

of emerging technologies on lay users' mental and physical health and designing strategies for computer agents to enhance user experience, literacy, and transparency.

Jina Huh-Yoo is an Associate Professor in Computer Science at Stevens Institute of Technology. Her most relevant work includes working with Philadelphia youth to promote mental health by co-designing positive experiences around technology that can foster youth's social connectedness within family and community. Additionally, she studies how AI can be designed safely to promote online peer support on private social media platforms.

3 Workshop Plans and Activities

We propose a one-day workshop that consists of panel presentations by multiple stakeholders, small group brainstorming sessions, and design activities.

Hybrid vs. In-person. To account for travel and time-zone constraints, we propose a panel presentation with only online participants, while keeping in-person mode for watching the panel presentation and small group activities like brainstorming, discussion, and design.

Stakeholder panelists. To foster a well-rounded discussion on topics such as teen mobile technology use, screen time strategies, and teen mental health and well-being, our workshop will feature a stakeholder panel comprising 3-5 individuals. The panelists will include advocates for teens, grandparents/parents, policymakers, practitioners (e.g., clinical psychologists, therapists), and social media creators who engage with teens. We will request a short position video in advance, in case of technical or accessibility issues. We will also inquire about accessibility needs before the conference, arrange automatic or live captioning, or an interpreter upon request. We aim for inclusivity by using Zoom as a hybrid platform to engage panelists across the globe, but we anticipate that time zone constraints will limit participation to stakeholders from Asia, Oceania, North, and South America. In future conferences, we plan to expand the workshop discussions to stakeholders in other regions to include global perspectives to our ongoing proposed effort.

3.1 Pre-Workshop Activities

We will invite researchers and practitioners interested in teens' mobile technology use, mental health, and well-being through mailing lists (e.g., CHI) and social media (e.g., Twitter, HCI Facebook groups, LinkedIn). Given the complexity of teens' mobile technology use and its impact on well-being, we recognize the need for an interdisciplinary approach. To include diverse sociocultural perspectives and voices from disciplines beyond HCI, we will leverage our professional and personal networks to ensure a diverse range of participants. Participants will be asked to submit a 2-4 page position paper, either *research or memoir type*, to join the workshop. Unlike research contributions, memoir contributions focus on participants' own lived experiences of teens' mobile technology use, capturing subjective and emotional insights from mundane but meaningful events, along with research implications. We will select the participants based on logistical limits (e.g., space limit), quality, and the diversity of perspectives the position papers can represent for the workshop. We plan to accept 20-25 participants, as long as space allows, and at least one author of each accepted paper must register for and attend the workshop in-person. The call for participation and logistical details will be posted on our workshop website once accepted (tentative link: https://sites.google.com/view/chi25teenmobiletech). To make the most of our in-person meeting and foster a sense of belonging, we will invite participants to join a Slack channel two weeks before the workshop. This will allow them to introduce themselves and connect with others. All members will be encouraged to share bios and other relevant work details, preparing for lightning talks to discuss their position papers and promote community building and professional networking. In case of any accessibility issues that prevent in-person participation in the workshop, organizers will use a Slack channel to provide access to the slide deck, asynchronous

questions, and design materials. Furthermore, we will collect any needs with disability among workshop participants pre-workshop and discuss appropriate accomodations in collaboration with the conference's accessibility chairs.

3.2 Workshop Activities

The morning sessions will focus on identifying new directions by scaffolding questions and themes, while the afternoon sessions will concentrate on envisioning new approaches for addressing teens' well-being and mobile technology use.

9:00 - 9:30: Opening and Introduction. Organizers will provide an overview of the workshop structures and goals. Following this, participants will engage in a quick round of introductions to get to know each other and establish initial connections.

9:30 - 10:30: Panel Presentation. Three to five invited panelists, representing different stakeholders, will share their lived experiences and insights on teens' mobile technology use and its impact on mental well-being. The goal is to provide the workshop participants with diverse perspectives, laying the groundwork for subsequent discussions. To accommodate different time zones of multiple continents, the panel will be held in the morning time that is most workable for Asian and North American Continents. Also all panels will be online, and the audience will be in-person to ensure high quality discussions.

10:30 - 10:45: Morning Coffee Break.

10:45 - 12:30: Birds of a Feather Activity. Participants will gather around interest groups, pre-designed with position papers. The participants will present their position statements within their respective groups, followed by collaborative brainstorming to identify key questions that CHI should address. Each group will be provided with discussion prompts based on previously introduced themes, questions, and emerging topics from the accepted submissions. This process aims to foster in-depth exploration of specialized topics of interest by integrating insights from panel presentations. Each group will have an organizer to facilitate discussion and take notes. At the end of the session, one participant from each group will present the main points from their discussions to share insights with the entire group.

12:30 - 14:00: Lunch Break

14:00 - 15:30: Design Workshops. Participants will speculate on future technological interventions, approaches, and solutions based on themes explored during the morning sessions. In newly formed groups, they will identify opportunities and challenges in the design space, focusing on teens' mobile technology use and well-being, particularly considering diverse socio-cultural contexts and stakeholders' perspectives.

15:30 - 15:45: Afternoon Coffee Break.

15:45 - 16:15: Feedback and Consolidation. Each group will share outcomes from their design workshops.

16:15 - 17:00: Reflections and Collaboration Building. In this final session, organizers will summarize the day's key insights and outline next steps. Participants will have an opportunity to share their reflections on the workshop, and we will collaboratively define future directions. We will discuss post-workshop plans, focusing on sustaining community building and creating opportunities for continued collaboration.

Networking Dinner (Optional)

3.3 Post-Workshop Plans

Aligned with our workshop goals, we anticipate three post-workshop outcomes: **(1) Workshop Report.** Building on our workshop discussions, we will develop a white paper for policymakers and institutions. This document will articulate how HCI researchers can address teens' mental health and well-being concerning mobile technology use. The white paper will summarize workshop findings and propose pathways to engage with different audience (e.g., parents,

healthcare providers, technology industry), outlining a strategic framework to inform policy and promote effective solutions for teen well-being. Additionally, for the HCI community, we will publish a Medium blog summarizing group discussions. Attendees will be invited to contribute to both reports. **(2) Community Building.** We plan to continue our conversations on Slack with participants to maintain community engagement, share resources, and explore potential collaborations. After the workshop, we will publish accepted submissions on the website, with author consent, as a resource for ongoing learning and collaboration. **(3) Future Events.** We aim this workshop to inspire future events in different geographic regions, engaging stakeholders from various countries. The organizers plan to hold subsequent workshops at HCI venues on other continents (e.g., Europe) to broaden discussions and integrate diverse sociocultural perspectives. Additionally, as follow-up activities, we plan to develop speaker series, reading lists, and other initiatives suggested by workshop participants.

4 Call For Participation

We invite researchers, practitioners, and students to join our full-day, in-person workshop, which aims to broaden the conversation on teens' mobile technology use and well-being. This workshop will explore interdisciplinary approaches to discussing alternative strategies for fostering healthy relationships with mobile technology for teens, accounting for sociocultural diversity and emerging technologies.

We invite submissions in the form of short position paper (2-4 pages, ACM format[1]). Contributions can be: (1) *Research Position Papers* that explore, but are not limited to, theoretical or empirical research, design fictions, or novel systems/tools related to teens' mobile technology use and well-being; and (2) *Memoir Position Papers* that enrich the discourse by offering unique perspectives on teens' mobile technology use and associated well-being issues. Given the importance of sociocultural contexts, participants are encouraged to share their lived experiences—specific, meaningful events that highlight subjective or emotional insights from the first-person perspective, providing alternative viewpoints on these issues [23, 25]. Participants may contribute both as researchers and as parents (or grandparents), and we also invite them to co-write with their teens to capture multiple perspectives within the household [63].

Papers should be submitted via Google Form. A subset of refereed submissions will be selected for presentation during the workshop. Accepted papers will be published in the workshop proceedings, and at least one author must attend the workshop. The planned workshop activities include interactive discussions and panel speakers. Please visit our workshop website for more details: [workshop website to be hosted via Google Sites: https://sites.google.com/view/chi25teenmobiletech].

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