Critical Ethical Reasoning as a Method to Increase Well-Being In Youth Technology Interaction

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CCS Concepts: • **Social and professional topics** → **Children**.

If invited, we would love to use the platform of this workshop to explore possible participatory approaches that exist in computing ethics education that account for the culture and contexts of educational settings, the commonalities and methodological intersections between philosophy for children and participatory design, as well as some challenges that community foresees in the act of combining philosophical praxis, agency, and well-being together. Our objectives in participating in this workshop are two-fold: (1) to solicit feedback on this position, and (2) brainstorm participatory approaches to fostering youth's technological wisdom in service of building their agency in their technology interactions. Our main contribution to the workshop would be our respective expertise combined with an innovative approach to teaching critical reflection about technology using methodologies new to computing, such as techniques from philosophy for children, in order to foster increased feelings of autonomy for youth, leading to better overall well-being.

1 WHY WE WANT TO PARTICIPATE

The impact of emerging technologies on youth and their well-being has been a trending topic in recent headlines. Parents are wondering how they might talk to their children about A.I chat bots [4], state officials are deciding to intervene and limit children's screen time [21], and social media apps like TikTok made headlines in congressional hearings [19] and empty promises alike [17]. It is not longer easy to ignore the extensive impact technology has on children's lives - and academia agrees. The flourishing body of work exploring the ways in which educators are thinking about children's relationship with technologies [2, 10, 11] show the academic interest in this topic as well. In their article, Vakil et al. [27] outline the ways educators engage youth with technology, while implicitly or explicitly laying out their underlying worldview of the role and status of technology in our society. In their work, the authors suggest positioning youth as philosophers of technology as a innovative way to both teach about and with technology - proactively moving away from previous approaches which often endorse technological solutionism and existing power structures [12], and instead looking to develop *technological wisdom* with and for young people. Centering a critical inquiry approach to

thinking about technology engages youth in looking at technologies in their lives not as given facts, but rather as fluid and contextual artifacts, thereby encouraging the questioning of the role of technology and their own place alongside it, as consumers, designers, and citizens of the digital world [27].

In other lines of research, youth have been shown to be capable of the type of reasoning and critical thinking [5, 22] that technological wisdom seems to require. Developing this technological wisdom involves reflecting on their interactions with technology and its potential negative impacts, all the while grounding themselves in their own lived experiences and situated knowledge. These types of critical thinking skills are rarely taught in mainstream education venues. One pedagogy may be an exception; the field of philosophy for children (P4C). Philosophy for children [15, 24], taught formally and informally around the world, emerged as a praxis-based approach to engage children in representing, discussing, and working through fundamentally philosophical questions - ranging from the ethical, epistemological, and metaphysical queries they often encounter as they go through the world. Literature examining the practice shows the effects of doing philosophy with kids has on both their cognitive abilities [6, 7, 13], as well as the positive effects on children's affective and social skills [9, 18, 25]. At its core, philosophy with kids requires developing both critical thinking and good discourse skills; being able to think beyond the facts, reflecting on one's own positionality and listening to a peer speak and respond thoughtfully. These are all skills that are crucial to doing philosophy with kids - and creating youth as philosophers of technology as well.

In a parallel narrative, researchers have made tremendous strides in learning how we may design technologies that not only avoid impacting youths' mental health, but actively work to improve it and their overall well-being. Work in positive technologies [1], experience design [8], and positive computing [3] among others have made it clear that designing for well-being is not only possible, but imperative as we move forward into the digital future and invite youth to it. The Motivation, Engagement, and Thriving in User Experience (METUX) model [20], for example, draws on self-determination theory (SDT) and its emphasis on designing for user autonomy and competence when interacting with technology [16].

Our line of research seeks to make the link between developing youth's technological wisdom using the methodological tools philosophy for kids presents, in order to increase their sense of autonomy and agency when interacting with technologies. By doing this, we argue that youth will be able to uncover many of the black boxes technologies, such as A.I, machine learning and social media sites often present themselves to be, and encourage youth to rethink their relationship to these innovations. This may, in turn, increase youth's sense of autonomy and agency when interacting with the digital forces they face, and contribute to their overall well-being. Our objectives in participating in this workshop are two-fold: (1) to solicit feedback on this position, and (2) brainstorm participatory approaches to fostering youth's technological wisdom in service of building their agency in their technology interactions.

2 WHAT WE CAN CONTRIBUTE

The authors of this workshop application are both published scholars in their respective fields, converging on this exciting new frontier of working towards increasing youth's well-being by philosophical praxis. We bring expertise in technological well-being and computing education. We also bring experience teaching and developing curricula for a wide range of topics, such as philosophy for children as a model for ethical discourse and ethical viewpoints on technological advancements .

Rotem is a PhD student with developing expertise in critical computing education and creating positive technology experiences for youth, with prior experience in curricula design and teaching both children and adults. Rotem is an author of an IDC 2023 publication that sought to gain deeper insight into how creators of children's technology

operationalize child well-being, and developed a framework outlining current industry conceptualizations of designing for child well-being, with the depth of well-being support mapped to one axis and respect for children's agency mapped to the other [14]. Both Rotem and Jean also collaborated on an IDC 2023 paper looking into children's perceptions of algorithmic injustices, and contributed a more nuanced understanding of children's situated reasoning of technology, suggesting their potential for critical engagement, as well as a blueprint for engaging children in scaffolds yet open-ended sense making around algorithmic fairness, informing the design of tools, curricula, and other learning experiences for children [22].

Jean is a postdoctoral scholar with expertise in computing education for children. Her prior research investigated how children develop understandings of code, researching the factors contributing to their understanding and developing techniques to scaffold their learning of code. She has worked with educators to translate her research findings into classrooms worldwide through professional development and curriculum design. She is currently applying that expertise and experience towards studying how children understand the role of technology in their lives and society. She is interested in exploring how techniques from philosophy for children and other participatory approaches can scaffold children in developing technological wisdom.

Our main contribution to the workshop would be our respective expertise combined with this innovative approach to teaching critical reflection about technology using methodologies new to computing, such as techniques from philosophy for children, in order to foster increased feelings of autonomy for youth, leading to better overall well-being.

3   WHAT WE WANT TO GET OUT OF THE WORKSHOP

If invited, we would love to use the platform of this workshop to explore the following questions with this community of experts:

- What participatory approaches exist in computing ethics education (or related fields) that account for the culture and contexts of educational settings [23, 26]?
- What are the commonalities and possible methodological intersections between philosophy for children and participatory design? How can one enhance the other?
- What are some challenges that community foresees in the act of combining philosophical praxis, agency, and well-being together? How might we prepare for these collaboratively?

We hope that by participating in this workshop we might have a chance to both learn and impart our knowledge, be inspired by fellow community members who are experts in their respective fields, and form bonds for future implementations of our shared visions that may bring about the change we think we need to see in the world.

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