Assisting Family Members with Technology in a Remote World
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The coronavirus pandemic imposed a dependence on technology unfamiliar to many, amplifying the need to learn new systems and troubleshoot problems. This study aimed to understand user behavior in the context of adult children assisting their parents with unfamiliar digital technologies in order to recommend improvements to digital technologies' capacity to support less confident users. Naturalistic observations were conducted over Zoom of 3 pairs. Participants chose a desktop-based task the parent needed assistance with from their child. Natural communication between participants throughout their interaction with their chosen systems enabled robust data collection and unobtrusive observation. Data was analyzed through two theoretical Human-Computer Interaction frameworks: Resilience Strategy, proactive contributions users make to avoid mistakes and maintain performance, and Distributed Cognition of Teams (DiCoT), which examines how users with a common purpose interact with technology. The results show that children more readily deployed resilience strategies, transferring their comfort using technology to unfamiliar systems and communicating with their parents to avoid errors. Digital technologies can adopt this role by anticipating common errors and making the resilient action evident, supporting less confident users and reducing anxiety around making mistakes. Analysis through DiCoT revealed how children filter interface feedback into task-centered language, helping their parents understand the result of an action, reassuring them, and prompting them to continue. Hints, descriptions, or tooltips placed where users need confirmation and written from the user’s perspective can explain the purpose of an interface element, extract important information, and empower less confident users to make sense of unfamiliar systems.

Keywords: human computer interaction, resilience strategy, distributed cognition of teams, remote observation, inclusive design