

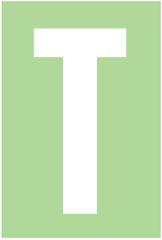


Usability for Children

Is Making Great Strides

Notes on a Conversation with Allison Druin.
Respecting the Short User.

BY ELISABETH D. BOWMAN



This article is the result of a lengthy conversation with Allison Druin, Assistant Professor at the University of Maryland, Institute for Advanced Computer Studies' Human-Computer Interaction Lab (HCIL) and the College of Education. Allison also founded CHIKids in 1994.

Allison Druin: Building Technology That Teaches Kids

In usability, we advocate for the user in designing and evaluating user interfaces. Through experience, training and intuition, we attempt to stand in the shoes of the intended user—be she doctor, lawyer or average citizen. However, when it comes to designing and evaluating technology for children, how many of us can actually achieve the same empathy? “The key word is ‘was’ when people say ‘I remember what it was like as a child,’” says Allison Druin, one of the leading authorities on usability for children.

Druin has been designing new technology for children for 15 years. Her passion and interest in the field began at MIT in the early 1980s with a question posed in a course: “If you could make any computer technology for kids, what would it be?” Answering this question was the basis for the Vivarium Computer Group, founded by Alan Kay and Marvin Minsky. It focused on building technology that can teach kids.

After becoming a member of the Vivarium Computer Group, Druin realized that few people involved children in the technology design process, even when the technology was designed for children. “We thought we could understand things from teachers or parents, without actually asking the children,” Druin says. This was partially due to the reality that children “make the world of research messier.” Children speak a different language and can be harder to communicate and interact with, especially for researchers.

To make technology usable for people who are “shorter than your knee,” designers have to know their audience. While the goal of usability is the same for adults and children, the techniques are very different. Traditionally, observation of play patterns and testing children pre- and post-use of a technology were the dominant methodologies. However, these tested the impact of technology and not its usability. The role for children as testers is more recent—the past 10 or 15 years—in which the children test a product *before* it goes to market.

Children Become Design Partners

The past five to seven years have seen an increase in involving children in the technology design process, but not just as product testers. Mike Scaife and Yvonne Rogers of the University of Suffolk coined the term *informant*, which transforms the role of the children from testers to informers of the design process via brainstorming and feedback on prototypes. Children become design partners who contribute throughout the design process. Researchers and children elaborate on each other’s ideas and engage in back-and-forth dialogue. The idea is developed until ownership is blurred.

This method is not without drawbacks. “It is much messier, slower, and is better for research—it might be too slow and complicated for industry,” Druin says. While not ideal for deadlines, the ability to make great leaps in the thought process makes it an excellent approach when the context is appropriate and resources are available.





In addition to participatory design, contextual inquiry and low-tech prototyping also work well with children. They do, though, require more digging and contextualizing for children than for adults. “Interactors” must translate what the children are actually saying for the designers and other team members. Interactors keep the discussions context-oriented, so the technology or product remains an integral part of the process. “That’s why focus groups don’t work well with kids—the technology or product is too remote; they can’t remember what it was. The interactor in the group interacts with kids and the technology,” Druin says.

While videotaping is used with children, it requires modification—a different perspective. “Videotapes don’t work with kids. They perform and feel self-conscious. We give cameras to the kids and get a different perspective.” Druin attempts to eliminate the evangelical tone of design decisions. “We base design decisions on what is seen and observed, not on past experience,” she says.

Some of the techniques developed for use with children translate well to usability involving adults. For example, Druin finds that her intergenerational design teams work better when the adult team members are interdisciplinary: artists, educators, engineers, computer scientists and the like. “We don’t have to play telephone. We know that information gets lost in translation—one type of observer views only one thing from a certain perspective,” says Druin. With an interdisciplinary and intergenerational team, both perspectives are better represented.

According to Druin, the future of usability design for children is like that for adults: Refine and define techniques, discover new possibilities for communication, and “respect the users even more, even when they’re short.”

BOOKS ABOUT USABILITY FOR CHILDREN. *The Design of Children’s Technology*, edited by Allison Druin. Morgan Kaufmann, 1999. *Robots for Kids: Exploring New Technologies for Learning*, edited by Allison Druin and Jim Hendler. Morgan Kaufmann, 2000.



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A slight modification to the traditional methodology of participatory design involves having children observe other children. Using sticky notes, they record the frequency of children’s likes and dislikes about technology as well as children’s activity discussion patterns. Not surprisingly, the details are different. Children take notes differently than adults—children tend to draw pictures and capture short thoughts and phrases. Their observations can eloquently summarize the big picture, while adults can better capture the details.