

Connecting generations

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Purpose This paper describes the process of using a co-participatory design method to produce a toy prototype for children and adults. Based on suggestions from both groups, co-participatory design activities were organized around a single guiding principle: to construct an interesting and creative toy to help both generations interact with each other. Our findings support the usefulness and necessity of this design method and illustrate how designers could implement them in future work. **Method** Two industrial designers, six older adults (three male and three female, aged 65–75), and six children (3 male and 3 female, aged 5–7) were involved in the co-participatory design process, which was conducted via daily dialogue, scenario creation, and semi-structured interviews. These methods were applied in two stages: (i) Since none of the participants had previously experienced the co-participatory design process, almost all were very shy at the beginning. To facilitate the children's participation, the designers guided them through various roleplaying scenarios to help them transition into a game session. During the session, narratives and metaphors were used to elicit tacit knowledge and to allow the designers to gain insight into the children's mindset. After the session, the older adults were interviewed regarding their conceptualization of the ideal toy—including their ideas, needs, and preferences—based on their experiences while playing with the children. (ii) We collected oral data, extracted key sentences, and sorted them into three design categories via Observer XT analysis (shape, material, and interaction methods) based on preferred features. The Observer XT is the professional and user-friendly software package for the collection, analysis, and presentation of observational data. Using the data from the design sessions, a multimedia-interactive toy prototype was developed (*Figure 1*). The touch screen rotating panel designed with various icons (daily life activities, numbers, animals, fruit, etc.) allows children and older adults to play by turning the panel together. When the panel stops, both generations of players can exchange knowledge or tell a story based on the prompt music and voice provided by the combination of icons (*Figure 2*). **Results & Discussion** This research described a co-participatory design process that included designers, children, and older adults. Data gathered from the process revealed that children had creative design ideas that considerably improved the interactive toy. However, as some children cannot clearly describe their ideas, the role children can play as full design partners is limited. Unlike traditional design methods, it is important to note that the co-participatory design process enlightening. By repeatedly meeting with older adults and children over time and engaging them in different sessions, both user groups were able to present their needs more clearly. This enabled the designer team to achieve a better empathic understanding of older and younger users, and to work on a project that was grounded in the interests of both target groups.

Keywords: work & leisure, co-participatory design, older adults, children, toy

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Figure 1. Two round touch-screen panels allow players to generate random combinations that inspire them to vocalize or share ideas based on the different pictures



Figure 2. The play scenario.