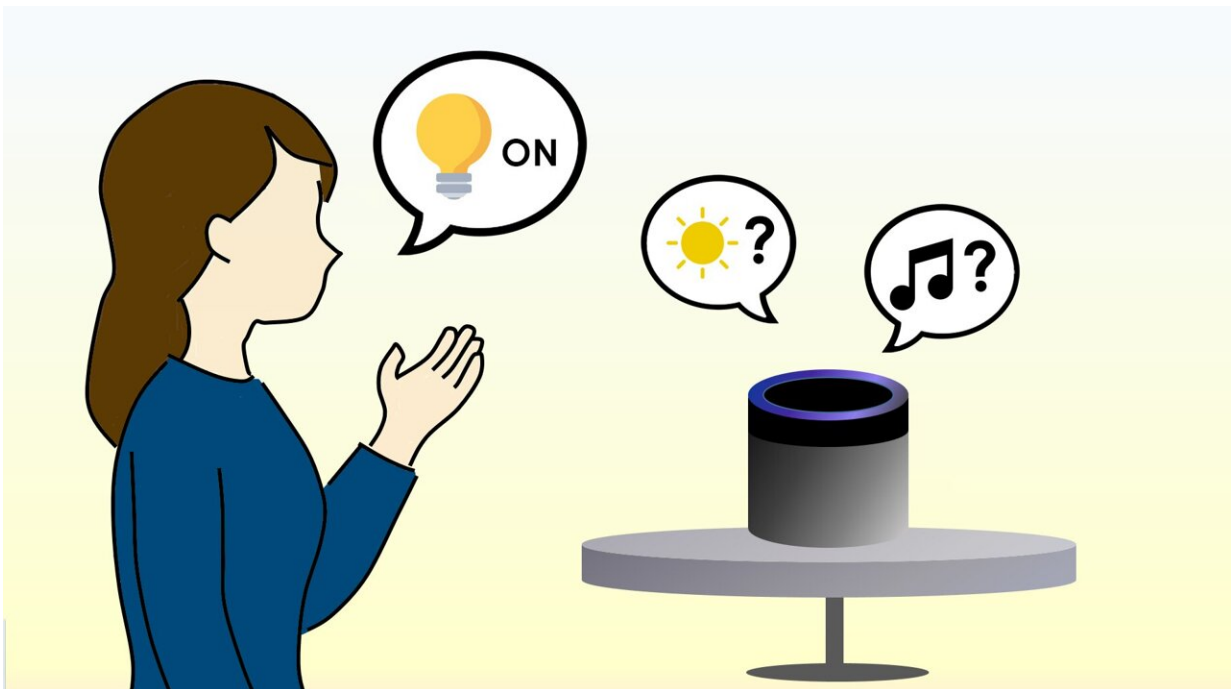


Sorry, I didn't get that: Evaluating usability issues with AI-assisted smart speakers

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New users find using AI-assisted devices challenging even after several attempts.
Credit: Osaka Metropolitan University

With the rapid development of AI technology, voice-controlled smart speakers are becoming increasingly popular due to their convenience and ability to control compatible home devices. Despite the rise in use, smart speakers often do not have screens and little-to-none of the visual information feedback common to manually operated devices. This

aspect complicates their usability, thus providing room for research and subsequent improvement.

A [research](#) team led by Dr. Toshihisa Doi, a [lecturer](#) at Osaka Metropolitan University's Graduate School of Human Life and Ecology, recruited 39 [young adults](#) (22 males and 17 females), who had never used smart speakers, to evaluate the learnability of VUIs (voice user interfaces), such as how a new user learns to operate them and usability problems.

In the experiment, participants were asked to perform 10 operation tasks on the smart speaker under four conditions that combined voice or remote operation, with and without a display screen. The study is [published](#) in the journal *Applied System Innovation*.

The results of the usability evaluation showed that although the user became proficient to some extent after two to three tries under all conditions, the degree of usability remained the same. Lack of feedback from the system and distrust of the system due to response errors possibly contributed to usability issues.

"These results will contribute to improving the usability of the ever-developing [smart speakers](#)," stated Dr. Doi.

"Though it is important to consider the technical aspects as the number of new products and services rise, we would like to continue our research to improve the [usability](#) and adoption of these technologies so that even those unfamiliar with them can enjoy their convenience without being left behind."

More information: Toshihisa Doi et al, Usability Analysis of Smart Speakers from a Learnability Perspective for Novel Users, *Applied System Innovation* (2024). [DOI: 10.3390/asi7030036](https://doi.org/10.3390/asi7030036)

Provided by Osaka Metropolitan University

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