

Smart mirrors serving as virtual shopping assistants found to increase sales

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Shoppers who used a 'smart mirror' are more likely to purchase the product despite spending less time in the shop. Credit: ariwasabi via 123rf

Mirrors that offer suggestions for what to try on in the fitting room have great potential to accelerate the shopping process and increase sales,

according to a study in the *Pertanika Journal of Science and Technology*.

A 'smart mirror' combines cameras, sensors and displays with powerful cognitive algorithms that predict a [customer](#)'s age, gender and current outfit, to offer clothing suggestions based on personal preferences and trends. For example, a customer trying on a shirt might be encouraged to try on another size or colour of that shirt.

Ravi Ramakrishnan and Dr Loveleen Gaur, researchers associated with Amity University in India , investigated how well smart mirrors can assist customers and prompt more sales. They asked 55 female participants to use a smart mirror, and then surveyed them about the technology.

Garments were attached with a tag that allowed the smart mirror to identify and suggest similar products. Participants were given a smart brand loyalty card with a history of their past purchases, which is used to provide suggestions based on what they bought previously. The consumer could adjust the lighting on the mirror to see how they look in different weather conditions and take an image of the clothes and upload it onto social media.

The results revealed that smart mirrors successfully captured a consumer's profile, current clothing, colour preference, age and gender. It reduced time spent searching for alternatives by providing suggestions and alerting shop staff to bring the items to the fitting room. Overall, customers spent less time in the store, and bought more of what they tried. This had the added benefit of reducing the time shop staff spent returning unwanted items to shelves and racks.

Moving customers through the store more efficiently also meant more time fitting rooms were available for potential new customers. And, retailers gained much better insight into consumer preferences through

the data from their smart brand loyalty card.

Some challenges remain, especially ensuring security of private information collected by smart mirrors. Designers are also investigating how to use the mirror for advertisement or display boards when not in use by a customer.

Future analysis of other factors is required including a suitable model development for using the above smart channel for manufacturing insights to garment providers, including culture, high-end designer clothes, and the effects of long-term use on consumer behaviour. Adding facial, speech and emotional recognition, as well as preference recording and suggestions, will help improve consumer experience and increase the demand in shopping centres worldwide, the researchers conclude.

More information: Gaur, L & Singh, G & Ramakrishnan, R. (2017). Understanding consumer preferences using IoT smartmirrors. *Pertanika Journal of Science and Technology*. 25. 939-948.

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