

# Study finds that visually pleasing computer graphics enhance user performance

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An eye-catching and appealing graphic on a mobile phone or website helps people perform tasks quicker and more easily as the job gets more demanding. Investing a little bit extra to design aesthetically pleasing visuals for electronic devices, websites or anything people need to interact with will be beneficial in the long run. This is the advice from British researchers Irene Reppa of Swansea University and Siné McDougall of Bournemouth University. The results of their study on how the aesthetic appeal of visuals enhances performance are published in Springer's journal *Psychonomic Bulletin & Review*.

Reppa and McDougall used computer icons in the study because these visuals are well-defined stimuli and part of modern life. In a search-and-localization task, participants first memorized a target icon and then searched for it among an array of nine icons. This assignment was designed to reflect the kind of task people perform when interacting with modern electronics. This includes finding and selecting icons representing tasks to be carried out from among a number of distracting symbols.

Simple and familiar icons were the easiest to find, but when the task got harder, aesthetically appealing icons provided a performance boost that was not found for less-appealing visuals. The researchers conclude that appealing icons are not only pleasant to use, but also speed up people's ability to solve multi-step problems with visuals when using websites or mobile phones. Pleasing aesthetics prove to be most important under taxing conditions, such as when users deal with complex, abstract or

unfamiliar material.

"Savings of even a few milliseconds at a time all add up when one is performing multi-step interactions on a website or a [mobile phone](#)," says Reppa. "This might make people avoid some interfaces, such as certain websites or phones, in favour of those that maximise efficient performance."

Designers can take a few pointers from Reppa and McDougall's results by developing icons which are visually simple, concrete and familiar, especially when needed for tasks that require speedy responses.

And what should designers do when they need to draft icons that convey more complex information, are abstract or might be unfamiliar to the viewer? Invest in designing visuals with the most widespread appeal as possible, is the researchers' advice. Doing so will not only enhance the user experience but it will allow people who use mobiles and websites to be more efficient, yielding benefits for the industries creating the applications and interfaces.

"Use of aesthetic visuals produces a win-win situation for all parties involved," concludes Reppa.

**More information:** Reppa, I. & McDougall, S. (2015). "When the going gets tough the beautiful get going: Aesthetic appeal facilitates task performance," *Psychonomic Bulletin & Review*. [DOI: 10.3758/s13423-014-0794-z](https://doi.org/10.3758/s13423-014-0794-z)

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