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## A Natural Way of Making Your Brain More Efficient

**New study finds that increasing your attention comes from using newly acquired knowledge**

By [Mojgan Sherkat](#) On JANUARY 28, 2016



Rachel Wu

RIVERSIDE, Calif. ([www.ucr.edu](http://www.ucr.edu)) – It's unclear whether brain-training games actually help our brain, especially in the long term. While there may not be a "magic pill" to make our brains more efficient, gaining new knowledge and using existing knowledge in new ways can improve our attention abilities, according to new research by Rachel Wu, a psychology professor at the University of California, Riverside.

"Adults can increase their attention skills by grouping objects into categories, and then using these categories to search for objects more efficiently. In other words, we can build new knowledge or use existing knowledge to increase our attention. Infants and children similarly can increase their attention skills by categorizing objects," explained Wu.

Published in the journal *Attention, Perception, & Psychophysics*, Wu's study showed one way in which we can become more efficient in our attention abilities – by using newly acquired knowledge of individual items to group them into categories. Wu's previous studies show that it takes 200 milliseconds to find one object (among others on a computer screen). Interestingly, when many items are grouped into one category, people can find any of the items from that category within the same amount of time. In this new study, Wu found the same signature of attention in the brain waves of participants who had just learned that novel

objects could be grouped into categories.

"You can think about it this way – by knowing the category of food, it makes it much easier to search for something to eat for lunch, rather than searching for the huge number of individual items that you could eat for lunch. This new study showed how you can increase your attention abilities by learning about features of individual items to build a new category," said Wu.

The study showed how the construction and acquisition of knowledge increases efficiency in attention. Attention is inherently tied to learning and knowledge. The use of knowledge very often determines the outcome of attention.

Wu concludes that you shouldn't train "attention" by making people complete "attention games"; you should train "attention" by making people gain new knowledge and use their existing knowledge in new and flexible ways.

"The latter method is similar to how infants and children increase their attention skills in real life. We don't make infants and children play attention games to increase their attention skills. So, why would we make adults play these games to boost their attention?" asked Wu.

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