

# Practice more important than age in learning to use computer mouse

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Children as young as 5 years old can learn how to use a computer mouse, new research suggests.

While age is an important component in determining how well a child controls a mouse, the study also found that how frequently a child practices may be even more important.

"Learning how to use a computer has become as important as writing and reading in the classroom," says Alison Lane, an assistant professor of [occupational therapy](#) at Ohio State University.

"Since the frequency of computer mouse use is as important as age, it might be beneficial to introduce children to the computer at a young age so that they can slowly develop skills over years of practice," explained Lane.

Lane conducted the study with Jenny Ziviani of the University of Queensland in Brisbane, Australia. Their results appear in a recent issue of the journal *Computers & Education*.

The study examined the computer-mouse skills of 221 Australian children between the ages of 5 and 10 years.

"We wanted to examine the influence of previous experience on children's mouse competence," Lane said.

The tests used to measure the children's mouse control consisted of subtests assessing point and click, dragging, and pursuit tracking movements with the mouse.

One of the subtests, called Chipmunk Fun, required the children to click on as many chipmunk faces as they could within a 20-second time period. The children performed this test six different times, and each time the size of the targets and where the targets were located on the screen would change.

"The way children approached the game seemed to depend on their age," said Lane. "The older children were more interested in the goal of the game, which was speed, whereas the younger children focused on the nature of finding the target and clicking the chipmunk's face as opposed to clicking as many as possible," she said.

While the children's approach to the game was age-dependent, and the speed and accuracy with which they played the game was also strongly dependent on their age, Lane and her colleagues discovered that the frequency of computer mouse use was also vital to determining their skill level.

Other research has found that younger children require more practice to achieve the same mouse movement capabilities as older children. One group observed that children within the range of six to eight years old required more than twice the amount of practice as did ten-year-old children.

There is debate about the best age to introduce a computer to children, and the amount of practice time they should have, Lane explained.

Lane and colleagues found that the largest increases in the children's [computer-mouse](#) accuracy and speed was observed between ages 6 and 7

and between ages 8 and 9. Between the ages of 9 and 10, performance appeared to plateau.

Past research has found that children's reaction times tend to increase around age 6 or 7, and that they start to develop enhanced spatial accuracy and speed around age 8.

"The improvements in speed and accuracy at these ages are most likely due to the children's motor skill development," said Lane.

While older children were faster and more accurate, they were not as smooth with their mouse motions as younger children. This finding came as a surprise to Lane and her colleagues because they expected that smoothness would improve along with speed and accuracy.

Their research found that smoothness continued to decrease as the children grew older. Lane suggests that this may be due to the competitive nature of the older children, who were willing to sacrifice fluidity for speed.

While there were no significant differences between girls and boys in terms of speed and accuracy with the mouse, results showed that girls were slightly more skilled at showing smooth mouse control than were the boys in the study.

Overall, Lane said the results suggested that children had to practice at least once a week or more with a mouse to show the best gains in terms of accuracy, speed and minimization of errors.

"We need more study to determine the optimal duration and content of practice sessions for [children](#) at different development stages," she said. "But practice definitely helps with speed and accuracy."

Provided by The Ohio State University

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