

The catch of the day: Fishing for research data at the Museum of Science

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People of all ages recently lined up to do some fishing at the Museum of Science in Boston. And oddly, the fish they hoped to hook were not good ones.

Museum goers were invited to play "Fish Police!!" is a [video game](#) that challenged [players](#) to rid a river of its bad [fish](#), while sparing its good ones. The catch? All the fish looked exactly alike, and could be told apart only by the way a fish puffed in size: a bad fish puffed just a little faster. After all, it was nervous that it would be caught.

The game's premise may sound a little fishy, but it has helped a team of researchers, including Brandeis professors Robert Sekuler and Timothy Hickey, graduate student Yile Sun, and research partners from Boston University investigate audiovisual interaction and the impact of sensory distraction.

The game, which quickly became popular, was played in the Museum's "Living Laboratory," a space dedicated to interactive public science.

"Many people wanted to play again, but we couldn't allow it because there was a line waiting," Sekuler said. "We were delighted to see that so many different people were hooked in a way that combined fun and challenge with an opportunity to contribute to science."

As each fish came into view and swam rapidly across the river it made a distinct humming sound, which the players had been warned to ignore.

Despite the warning, players selected the correct answer more often and more quickly when a fish's humming and puffing were synchronized. Players floundered, though, when a fish's humming and puffing were out of synch.

Interestingly, players varied greatly in their susceptibility to the distracting sound. And surprisingly, the ability to ignore the fish's humming sound did not change with age. Sekuler said players as old as 82 and as young as 6 were about equally impacted by the distracting sound, which all had been warned to ignore.

The researchers knew that conducting the test in the "Living Laboratory" posed several challenges, including ensuring that it would appeal to museum visitors. Graduate student Yile Sun suggested the test be incorporated into a video game and took the lead in developing the game. Adding a big scoreboard that showed how players fared against each other seemed to lure even more to the game.

"Showing how they stacked up against others was a big motivator," Sekuler said.

The research was conducted collaboratively by Sekuler, Hickey and Sun of Brandeis, and Hannah Goldberg and Barbara Shinn-Cunningham of Boston University. The results were recently published in the online journal *iPerception*.

According to Sekuler, the researchers are now working to bring the game to the Internet so that many more people can play, and contribute data. The goal is to figure out why some people are particularly susceptible to the influence of the sound they were trying to ignore. Eventually, a version of the [game](#) could be used to as a training tool to help minimize the impact of irrelevant sounds on performance.

"It may even how people learn how to ignore, which is an important, but often overlooked component of attention," Sekuler said.

More information: *iPerception*,
ipe.sagepub.com/content/6/4/2041669515599332.full

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