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Mind games: Brain-fitness software makes staying sharp fun

June 10, 2008

I forget things. My mind is full of crazy, tech-related facts and acronyms—GPON, anyone? LTE? Femtocells? GPX?—but when my wife asks me, "Hon, did you put my phone back in my purse after you charged it?" I am without a clue.

Fortunately, a whole industry of online games and other software is popping up to help people like me try to reclaim what we're sure we've lost. (I know my recall used to be better—or am I misremembering?)

How brain games work

These video games and training software try to make memorization exercises, math problems and pattern recognition tasks fun.

For example, at *lumosity.com* (\$9.95 a month after a seven-day free trial), one game tests your visual attention and your working memory by flashing an image of a bird on your computer screen while simultaneously popping up a letter of the alphabet. If you click near the bird's location and remember the letter that popped up, you play a version of "hangman" and spell a variety of bird: "F-I-N-C-H," for instance. Believe me, it's more fun than it sounds.

Research shows that to help keep your brain nimble, you can play "concentration"-style memory games that test your recall; "Simon says"-type games that challenge your working memory, reflexes and visual attention; as well as games that work your math-solving and pattern recognition abilities.

\$2 billion market by '15

The market for "neurosoftware" will hit \$2 billion by 2015, up from \$225 million last year, says Alvaro Fernandez of market researcher Sharp Brains. Hoping to cash in is Marbles Brain Fitness, a three-week-old venture in Woodfield Mall in the Chicago suburb of Schaumburg. Billed as the world's first in-mall retail outlet concentrating on brain fitness software, books and board games, business partners Lindsay Gaskins and Karen Luby are trying to figure out what consumers will want from cognitive-training tools.

While brain-training software is not new—Posit Science has been making products for more than a decade aimed at helping the elderly—the concept of a brain fitness store is so new, Gaskins says, that some customers don't know what to make of it.

"Some people get it," she adds, "but others see our brightly colored sign and think we're just for kids."

That's the story of brain games, which got a big boost in the U.S. in April 2006, when "Brain Age" arrived for the Nintendo DS portable video game system, a device seen by some as a toy for kids and young adults. Selling an eye-opening 120,000 units in its first three weeks and 600,000 games in its first four months in America, "Brain Age" tallied more than 1 million sales in game-crazy Japan in all of 2005.

But where there is a possible \$2 billion market, you'll find software developers trying to get a piece of it, especially when census and marketing data indicate aging Baby Boomers get spendy on things that help maintain youthfulness.

So, "Brain Age" for the Nintendo DS hand-held system was quickly followed by such video games as "Brain Boost," "Big Brain Academy," "Hot Brain," "Work Time Fun" for the PlayStation Portable—and more recently by "Brain Challenge," a \$10 download available on the Xbox 360, and "Mega Brain Boost" and "Brain Voyage," both for the Nintendo DS.

On the computer side, Core Learning's Mind Builder and Mind Builder Pro arrived last fall, based on the education software company's research in test preparation programs.

The \$2 billion question

Do they work?

In spending two weeks trying a variety of really fun software and games for this report, I felt I was learning to play the games better, not improving my cognitive fitness.

I will spend more time with them—I thought two weeks would be enough, but there are more games than I expected—and tell you if I notice a difference, but I can say that even if my brain isn't getting brawnier, most of these games are entertaining and engrossing—even to this hardcore gamer. And if my brain is getting a workout, that can't be bad.

The key is to not take the results personally, as I tend to do. I developed gut-wrenching anxiety while playing because I thought my brain's reputation was at stake.

If you get into these games, enjoy them as you would "Tetris" or "Boom Blox." Play for fun. You are not taking a test.

There's no proof playing brain games will cure memory loss or prevent age-related dementia—and none of the games claims it will.

At the very least, though, brain-training games can stimulate working memory—the taking in, processing and organizing of information—and long-term memory—the storage and retrieval of information.

You might get bonus benefits if you round up some friends to play, too. Just adding a social component can flex those brain "muscles."

"When people interact, they have to remember places and names and use their language skills to tell a story and express their thoughts, and sometimes they plan and organize new activities," says Dr. Chuang-Kuo Wu, a neurologist at Chicago's Northwestern Memorial Hospital.

egwinn@tribune.com

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