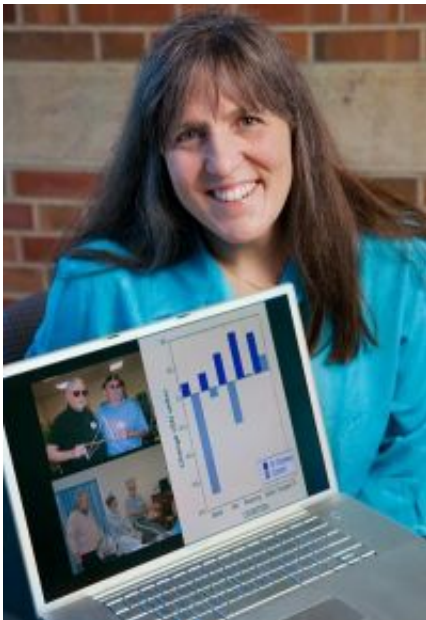


# Aging adults have choices when confronting perceived mental declines

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Older adults with better reading comprehension than their counterparts read differently, according to Elizabeth Stine-Morrow, a professor of educational psychology. By choosing to spend more time familiarizing themselves with new concepts, key details and the characters and settings in stories, older adults can compensate for declines in their working memories and language-processing speeds. Credit: Photo by L. Brian Stauffer, U. of I. News Bureau

Aging adults may joke about memory lapses and “early Alzheimer’s.” They may worry when they can’t understand a drug plan or lose track of the characters in a novel.

But they have more control over their “cognitive vitality” than they may realize, says Elizabeth Stine-Morrow, a professor of educational psychology at the University of Illinois, who has spent 20 years studying learning throughout the lifespan.

Aging adults have choices in the way they allocate effort in everyday mental tasks like reading, Stine-Morrow said. They can compensate for subtle age-related changes rather than either giving in to them or giving up completely on the activity, she said. They also have choices in the way they stay mentally engaged and embrace challenges throughout their lifetimes and into older age.

It’s all part of what she has playfully named the “Dumbledore hypothesis of cognitive aging,” based on a line from the headmaster Dumbledore in the third Harry Potter novel: “It is our choices ... that show what we truly are, far more than our abilities.”

Certain “fluid abilities,” or “mental mechanics,” do tend to decline with age, Stine-Morrow said, but it matters how we respond. “Minor glitches in the cognitive system can loom larger than they perhaps need to because we’ve got these preconceived ideas about what happens with aging,” she said.

She will discuss her “Dumbledore hypothesis” on Aug. 19 at the American Psychological Association conference in San Francisco, in a presidential address for the Adult Development and Aging division. A paper on the subject has been accepted for publication in the journal *Current Directions in Psychological Science*.

In her reading research, Stine-Morrow, also a professor in Illinois’ Beckman Institute for Advanced Science and Technology, has paid particular attention to changes we make – or fail to make – in the way we process and regulate our reading as we age.

More recently, she has initiated a program called Senior Odyssey, designed to engage older adults in team-based creative problem-solving and other brain-teasing challenges. After a pilot study, she is now at the start of a five-year, \$2.8 million grant from the National Institute on Aging to develop the program and study its effectiveness.

Much of her reading research has involved measuring small split-second differences in the way people move through text, and in how and where they pause, noting how those differences affect what they gain or remember from the text.

She has found that older adults who remember more of what they've read tend to read differently from either younger readers or older readers who remember less. They had learned, consciously or unconsciously, that "in order to maintain the same level of comprehension and memory for text as you get older, you have to do it differently," she said.

One thing they do is to spend more time building a "situation model" at the beginning of a story or book. They take time to get a feel for the setting, to get to know the characters, and to get grounded in important details of the story. By doing so, they find it easier to integrate new information later on, Stine-Morrow said. "Page-turners are page-turners later (in a book or story); they're rarely page-turners early on."

Older readers with good comprehension also spend more time at what Stine-Morrow calls the "micro level" of their reading, pausing longer and more often to integrate new concepts or to orient themselves to a change of setting in the text.

"Younger adults who have a better memory (of what they've read) spend more time doing that conceptual integration, or what we call 'wrap-up,' at the ends of sentences, whereas older adults tend to do that more in the

middle of sentences,” she said.

In both cases, older readers with good comprehension have learned how to adjust their allocation of effort to compensate for losses in areas such as working memory and language-processing speed. Current research, yet to be published, is looking at how readers respond when they are coached on using these strategies.

“Effort is a good thing; effort doesn’t mean you’re deficient,” Stine-Morrow said. “It’s just the nature of cognition that it requires effort. Every time you allocate effort, it increases your capacity to do that thing in the future. And that becomes even more important as we get older.”

Aging adults can find themselves “embedded in cultural expectations about aging,” Stine-Morrow said. “They buy into cultural stereotypes of diminished cognitive capacity.”

Drawing on another reference from Harry Potter, Stine-Morrow compares those cultural expectations to the “sorting hat” that Harry dons to select which house he will live in at the Hogwarts school. The hat tries to convince him of one choice, but Harry insists on another.

In Stine-Morrow’s analogy, the “sorting hat of cultural expectations” suggests to aging adults that their abilities are in decline. If they listen, they may shy away from intellectual challenges, and in the process possibly hasten a real decline.

“Fundamentally, it’s a choice,” she said. “We make the choice to listen to those murmurings of the sorting hat, or not.”

Source: University of Illinois at Urbana-Champaign

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