Good management and software design can help older workers thrive with IT-based tasks

*The capacity to perform work tasks that require using organisational IT tends to decline with age. **Stefan Tams** finds that this happens only because of lower information processing speed. He writes that managers and software designers can help older employees be more productive by simply reducing the relevance of information processing speed for job tasks. He suggests more training for older workers and the development of application interfaces that rely less on spatial metaphors.*

Older employees have lower job performance levels than their younger counterparts when their jobs require the use of information technology (IT) like Microsoft Excel. For example, accounting tasks such as reporting or reviewing financial data using Excel can be more challenging for older employees. This is alarming at a time when the workforce is rapidly aging and organisational technologies are proliferating. Since the explanation for these lower performance levels remains unclear, managers and software designers are not sure how to help older employees realise their full potential as contributors to organisational success. The research presented here identifies the declining information-processing speed of older employees as the cause of their reduced capacity to perform work tasks that require using organisational IT.

By means of a scientific task involving the substitution of digits for symbols in a short amount of time, this research shows that older employees process information more slowly than younger employees. This means that older employees accomplish less information processing work in a given amount of time and that they have more difficulty integrating and manipulating information. Multitasking also proves more challenging for them.

Importantly, this research demonstrates that chronological age does not hinder performance on IT-based tasks directly. Instead, older employees perform more poorly only because of the reduction in information processing speed that occurs with age. This is great news for managers and software designers, for it indicates that they can help older employees be more productive by simply reducing the relevance of information processing speed for job tasks.

This help can include, for example, developing application interfaces that use keywords instead of spatial metaphors such as folders. Spatial metaphors generate an additional cognitive burden for older users because spatial abilities decline with age, aggravating the problem of reduced information processing speed. At a large restaurant chain, the way orders are taken has been transformed by giving iPads to the waitstaff, but the food items that customers order are often hidden in complex folder hierarchies such as Menu/Dinner/Appetizer/Finger Food. Particularly for older employees of the restaurant chain, navigating these complex hierarchies impedes performance. By contrast, a keyword-based interface would take full advantage of the greater vocabulary of older employees, who are often more familiar with the keywords used during the performance of their job tasks. Thus, a keyword-based interface can help them remain productive members of the workforce despite the decline in their information processing speed.

This research also shows that managers can help older employees be more productive by increasing their self-confidence related to the use of organisational IT. If older employees have greater IT-related self-confidence, they are motivated to make a greater effort while processing information to perform work tasks using IT, and this additional effort compensates for their declining processing speed. Thanks to IT-related self-confidence, they are able to process information faster, and they find it easier to manage multiple demands at the same time.

IT training is a straightforward strategy to help older employees develop self-confidence related to the use of organizational IT. However, because of the shorter payback period, managers and older users themselves are often unwilling to invest time and money into training initiatives. Also, managers often hold the stereotypical view that older users cannot learn new skills. Managers must be made more aware that IT training for older employees is an important means of increasing their IT self-confidence, which compensates for declines in information processing speed so that normal task performance levels can be maintained. To motivate these employees to participate in training initiatives, managers can incentivise participation with monetary compensation or awards. Other ways of motivating older employees include setting clear goals for them and taking their opinions into account.

The training should be conducted face-to-face instead of online because human interaction is important to older employees. Indeed, they often find it reassuring. In addition, the training should be performed directly on the job to make it easier for older employees to apply the skills that they learn to their job tasks. Moreover, older employees should be retrained in the use of the same software in the event that major system changes occur. For example, when the menu structure in Microsoft Excel changes drastically, they should be retrained. The training programs should be specifically designed for older employees because these employees require about twice as much time as younger ones to complete IT training tasks and develop IT skills, with this increased time often being the result of reduced information processing speed.

Mentorship programs pairing older employees with expert users, who can provide system-related advice and on-the-job coaching, are another useful way to help older employees develop self-confidence and remain productive IT users. Compared with regular training initiatives or with IT help services at organisations, mentorship offers the advantage of being more informal and friendly, and more focused on the specific needs of individuals. This means that it may make older employees feel more comfortable about seeking advice.

Overall, the five strategies revealed in my article can improve the likelihood that older employees will continue to have high performance levels all the way until retirement:

The issue addressed here is important because the rapid aging of the workforce engenders an increasing demand for high-functioning older users of workplace IT. At the same time, it is essential to emphasise that the findings presented here hold for older employees in general, but not for all older employees. No one can deny that there are older employees who can outperform younger ones on work tasks involving IT. Most importantly, these findings should not be interpreted as encouraging discrimination against older users or any kind of ageist stereotyping.

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- *This blog post is based on Helping older workers realize their full organizational potential: a moderated mediation model of age and it-enabled task performance, MIS Quarterly*
- *The post expresses the views of its author(s), and do not necessarily represent those of LSE Business Review or the London School of Economics.*
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