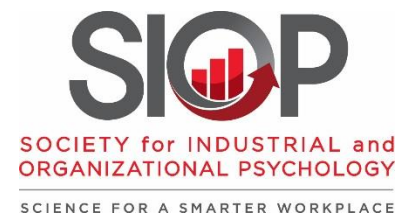


# Strategies for Engaging and Retaining Mature Workers

Margaret E. Beier  
Department of Psychology, MS-25  
Rice University  
6100 Main St.  
Houston, TX 77005  
713-348-3920  
[beier@rice.edu](mailto:beier@rice.edu)



Copyright 2015  
Society for Human Resource Management and Society for Industrial and Organizational Psychology  
The views expressed here are those of the authors and do not necessarily reflect the view of any agency of the U.S.  
government nor are they to be construed as legal advice.



**Margaret Beier** is an Associate Professor of Industrial and Organizational Psychology at Rice. She received her B.A. from Colby College and her M.S. and Ph.D. degrees from the Georgia Institute of Technology. Margaret's research examines the influence of individual differences in age, gender, abilities and motivation as related to success in educational and organizational environments. Her research on workforce aging has examined the relationship between age and training, and the determinants of retirement decisions. Her work has been widely published in outlets such as *Psychological Bulletin*, the *Journal of Applied Psychology* and the *Journal of Business and Psychology*. She currently serves on the editorial board of *Human Performance*, the *Journal of Applied Psychology*, the *Journal of Business and Psychology*, *Psychological Bulletin*, and *Work, Aging, and Retirement*. She is a fellow of the Society for Industrial and Organizational Psychologists (SIOP).

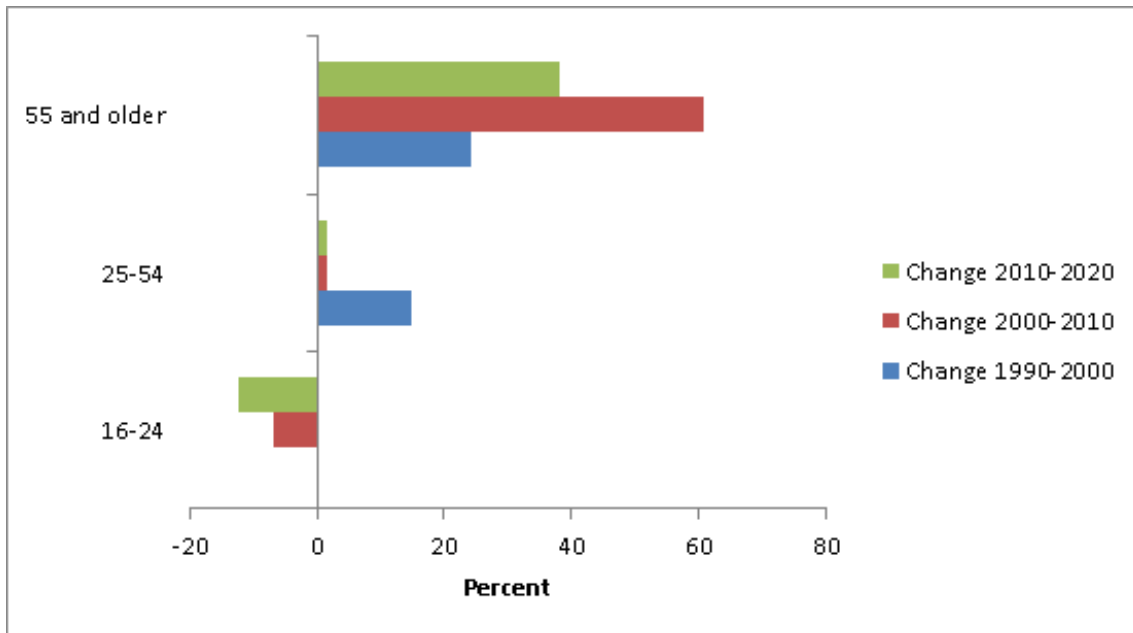
## ABSTRACT

The aging of the labor force promises dramatic shifts in workforce demographics that have implications for human resource (HR) science and practice. The looming retirement of the Baby Boom generation, seemingly *en masse* over the next decade in industrialized countries, will leave many organizations with vacancies that will be difficult to fill with younger, less experienced workers. The imperative for organizations faced with such an exodus in talent is to understand how best to retain and engage mature workers. Yet, relatively few organizations report developing strategies to prepare for these demographic shifts. This paper provides a review of current research on workforce aging relevant for engaging and retaining mature workers. Specific topics include job performance, age-related changes in abilities and motivation, and considerations for training. Strategies presented highlight the importance of developing organizational policies that engage—and benefit—workers of all ages.

The aging of global populations, particularly in developed and developing nations, has been described as a “silver tsunami” (*The Economist*, 2011), to highlight its formidable impact on health care, pensions and social security. Its impact on human resources is also predicted to be immense. The group of workers age 55 and older in the labor force has grown exponentially, experiencing a 60% increase in workforce participation levels between 2000 and 2010 (Figure 1). Even though the aging population implies changes for organizations around the globe, there has been relatively little effort made to understand the impact of aging populations and the aging labor force within organizations (Society for Human Resource Management, 2013). Indeed, a recent survey of executives by *The Economist* (2011) found that the majority of organizations admit that they are neither equipped to adapt HR strategies to meet the demands of an aging workforce, nor do they have immediate plans to do so (Tishman, Van Looy, & Bruyère, 2012). This is unfortunate. Corporations stand to lose the institutional memory, knowledge and skills of their experienced workforce when

older workers collectively exit the workforce through retirement (Heavey, Holwerda, & Hausknecht, 2013).

**Figure 1: Percentage Change in the Civilian Labor Force by Decade and Age Group**



Note: Data from the Bureau of Labor Statistics (Toossi, 2012), Table 1.

This paper will review current research on aging as relevant to work, such as how age-related changes in abilities and motivation affect job and training performance, and will present strategies for retaining and engaging mature workers. Older workers are surprisingly difficult to define, however. On the one hand, the Age Discrimination in Employment Act (ADEA) protects workers age 40 or older. On the other hand, age 40 is relatively young for most age-related changes in abilities and motivation to be relevant in the workplace. Many entities, including the Bureau of Labor Statistics (Toossi, 2012), focus on trends in older workers who are age 55 or older, but this cutoff is also somewhat arbitrary. It is based on focusing on the decade prior to an average—or

normal—retirement age of 65. Further complicating matters are differences in how people age, which makes it relatively difficult to describe an average person at any age. For instance, a 55-year-old may have the memory and achievement motivation of an average 30-year-old, or he or she may more resemble a 70-year-old.

To illuminate the important aspects of age as a psychological construct, researchers have developed various approaches to studying age, including normative (i.e., how old a person is relative to others he or she works with), psychological (i.e., how old a person feels) and functional (i.e., the physical and psychological capacity of the person; see Kooij, de Lange, Jansen, & Dijkers, 2008, for a review of different approaches to studying age). In general though, the discussion of age-related workforce issues presented here considers age-related changes broadly and without an indication of the exact age at which workers become older or mature. A note about definitions that is important relative to the terminology used in this paper: the terms *older* or *mature* workers are not meant to facilitate the grouping of workers as either young or old, which could lead to stereotyping and bias. The terms *older* and *mature* are meant to describe a relative standing on age that includes within-person changes (e.g., we are older today than yesterday).

“People vary in terms of when and how they experience aging and whether they perceive themselves as aging.”

Paullin, 2014

## **Age and Performance: The Evidence**

Research on the relationship between age and job performance has consistently shown that older workers are no more or less productive on average than are younger workers (McEvoy & Cascio, 1989; Ng & Feldman, 2008; Sturman, 2003; Waldman & Avolio, 1986). Furthermore, when performance is broadly considered to include organizational citizenship and prosocial behaviors, such as mentoring, helping others with their work and maintaining a positive attitude about work, age is significantly positively related to performance (Borman & Motowidlo, 1997; Ng & Feldman, 2008; Organ, 1988).

Table 1 provides a summary of research on the relationship between age and eight dimensions of job performance taken from an analysis of hundreds of research studies. For those dimensions of job performance that are arguably the most important for organizations, there tends to be either no relationship with age (core task performance and creativity) or a positive relationship with age (meaning that older workers are rated higher on performance, organizational citizenship behaviors and safety behaviors). Age is negatively related to some aspects of job performance, but these are mainly dimensions for which lower ratings are better. For instance, age is negatively related to tardiness, absenteeism and other counterproductive work behaviors. In summary, age is not detrimental to most aspects of job performance. The only positive aspect of job performance that is negatively related to age is training performance, indicating that relatively older workers tend to perform less well in training compared with younger

workers (Ng & Feldman, 2008). The relationship between training and age will be discussed further below.

**Table 1: Relationship Between Dimensions of Job Performance and Age (Ng & Feldman, 2008)**

Negative Relationship with Age	No Relationship with Age	Positive Relationship with Age
<ul style="list-style-type: none"> <li>• Tardiness</li> <li>• Absenteeism</li> <li>• Counterproductive work behavior (CWB)</li> <li>• Training performance</li> </ul>	<ul style="list-style-type: none"> <li>• Core task performance</li> <li>• Creativity</li> </ul>	<ul style="list-style-type: none"> <li>• Organizational citizenship behavior (OCB)/contextual performance</li> <li>• Safety behavior</li> </ul>

It is important to consider that studies on age and job performance typically average the effects of cross-sectional research. Cross-sectional research makes inferences about age-related changes by analyzing data collected from people of various ages at one point in time. For example, a cross-sectional study on the topic of age and job performance would capture all data on age and job performance from one group of workers concurrently. Data on age and job performance would then be correlated and inferences made about how age affects job performance. By contrast, longitudinal research studies examine changes in a group of study participants over time. A longitudinal study on age and job performance would require the measurement of job performance ratings over a meaningful span of time—e.g., the course of a career—for all research participants. Needless to say, the ease of cross-sectional research relative to longitudinal research makes cross-sectional studies the most

popular method for examining age-related phenomena in both basic and applied psychology, despite the limitations of this approach.

Because cross-sectional studies infer age-related changes based on performance differences among employees of different ages, these studies tend to include older workers who have been successful in their careers and may not include those workers who—for whatever reason—left a job or career. Thus, these studies tend to have a bias toward higher-performing workers. For instance, workers may develop strategies for approaching their jobs that mitigate age-related difficulties over time (Sterns, 1986). And because they have neither been terminated nor left voluntarily, mature workers are probably performing at a level that is mutually beneficial to them and to the organization. This bias in cross-sectional research makes it somewhat difficult to detect the impact that age has on job performance because workers for whom age may have negatively affected performance would be more likely to leave an organization. Nonetheless, the samples in cross-sectional studies do represent the current state of affairs at most companies; older workers who are retained tend to be performing just as well—and even better in some areas—as younger workers.

### **Age-Related Changes in Abilities**

Researchers typically consider abilities to be relatively stable traits, meaning they remain consistent throughout much of the lifespan. This can be contrasted to skills, which are considered to be more malleable and subject to the gains and losses associated with practice or lack thereof. In the work context, researchers have noted that changes in vision, hearing and physical abilities can affect job performance. These



changes can usually be easily corrected and accommodated, however, and tend not to negatively affect job performance. Loss of physical abilities associated with age—the weakening of muscle strength and aerobic capacity—will affect job performance in physical labor jobs (Hedge, Borman, & Lammlein, 2006). Indeed, workers tend to cite physical limitations as a major factor in retirement decisions in jobs that have high physical demands (Rice, Lang, Henley, & Melzer, 2011).

Even though age-related changes in physical abilities can affect job performance, many mature workers develop strategies to compensate for these changes. For instance, interviews with janitors and maintenance workers suggest that—whether aware of it or not—these mature workers modify their approach to work as they age. Specifically, they tend to be more mindful about the weight of objects they lift, they develop strategies to protect their back and joints, and they are more likely to use the tools available to them than they were earlier in their careers (Sanders & McCready, 2009).

Age-related cognitive changes typically point to a loss of cognitive speed, memory and reasoning abilities with age, which are offset by stability or gains in knowledge acquired through life experiences (Beier, 2015). Speed, memory and reasoning abilities are associated with solving novel problems and learning performance. There is also evidence that mature workers develop strategies to maintain performance in the face of declining cognitive abilities. A study of typing abilities, for example, showed that older typists were more likely to anticipate upcoming keystrokes than younger typists

were, allowing them to maintain high levels of speed even when measured cognitive speed was negatively related to age (Salthouse, 1984, 2010).

Knowledge acquired through experience and education is an important determinant of both performance and learning, particularly when a person can draw on past experiences to help process new ones (Ackerman & Beier, 2006; Beier & Ackerman, 2005). Even for jobs high in processing speed and reasoning abilities (abilities that are expected to decline with age), experience and knowledge matter. For instance, air traffic controllers rely heavily on speed of processing and reasoning ability in their jobs (National Center for O\*NET Development, 2015), but extensive knowledge of their flight sector and knowledge of aircraft rules of engagement acquired through years on the job are paramount to successful performance in this role (Nunes & Kramer, 2009).

Job experience is also central to the strategies people develop to adapt to workplace demands, such as job crafting. Job crafting refers to “the physical and cognitive changes individuals make in the task or relational boundaries of their work” (Wrzesniewski & Dutton, 2001, p. 179). These changes can include crafting the tasks or relationships associated with the job (e.g., negotiating a new set of tasks or expanding or developing new professional networks associated with work), but job crafting also includes changes in the way that people think about their jobs. Cognitive job crafting, for instance, involves reappraising the meaning of tasks. For example, a customer service worker in an insurance company might consider his role in supporting people who are experiencing devastating loss; a school custodian may think about her role in

education. Job crafting has been shown to have a positive effect on employees' degree of psychological well-being, work engagement and performance (see Wrzesniewski & Dutton, 2001 for a review).

In summary, changes in abilities should not affect the job performance of mature workers because losses tend to be offset by the knowledge, skills and strategies developed over the course of one's career. For instance, a seasoned accountant will know how to reconcile a budget, even if the process changes a bit from year to year; an experienced manager will know how to conduct a team project meeting even if she is managing a new project team each time. Indeed, most of the jobs currently available to educated workers in Western economies rely heavily on prior knowledge and experience and should not be negatively affected by age-related changes in abilities. It is difficult to think of a job in which workers rely exclusively on speed of processing, memory and raw reasoning ability.

### **Work Motivation**

Stereotypes about declines in work motivation with age may be pervasive, but they are generally not supported by research (Kanfer, Beier, & Ackerman, 2013; Kooij, de Lange, Jansen, Kanfer, & Dijkers, 2011). Work motivation is complicated; it is influenced by individual factors, such as interest and values, and environmental factors, such as organizational climate and culture. Moreover, motivation for work is influenced by factors outside of the workplace that change the value workers place on an array of activities. For instance, workers may place less value on work when they have extensive family demands that entail caring for young children and/or aging parents. These types

of family demands will ebb and flow as workers navigate work/life balance throughout their careers (Kanfer et al., 2013). And although it is true that organizations don't have much control over the extraneous demands that influence worker motivation and performance, organizational policies can influence older worker motivation related to individual and environmental factors.

**Individual factors influencing worker motivation.** One key individual influence on worker motivation is a worker's perception of the amount of time he or she has left to work. More mature workers are likely to perceive that their time left at work is limited because of looming retirement relative to younger workers, who may perceive a more expansive work-related time horizon (Carstensen, Isaacowitz, & Charles, 1999). This changing perspective on time left at work can lead to a shift in goals from extrinsic/achievement focused (e.g., I want to be successful to obtain status and salary) to intrinsic/personal meaning focused (e.g., I want this project to succeed because it is personally meaningful to me; Kooij et al., 2011). The shift in goals will influence worker choices about the activities in which they engage. For example, mature workers may be more motivated by opportunities to develop mentoring relationships with others in their workgroup than they would be to take on an extra project that would increase their likelihood to obtain a promotion. In summary, older workers aren't less motivated to work compared with younger workers, but they are motivated by different things (Kanfer et al., 2013).

**Environmental factors influencing worker motivation.** Perceptions that an organization cares about the unique needs of older workers can affect retention,

motivation and productivity, and these perceptions can create a climate where older workers feel valued and supported. Research suggests, for instance, that organizational climates perceived as welcoming and valuing the contribution of older workers increase worker feelings of belongingness and motivation (Armstrong-Stassen & Schlosser, 2011). When older workers perceive that the organization supports and values them, they will be more motivated and committed and less likely to perceive that they are plateauing (i.e., not growing, developing or advancing; Kanfer et al., 2013; Pitt-Catsouphes & Matz-Costa, 2009).

Even when organizations attend to creating environments free of overt discrimination and bias, subtle bias against mature workers can create a hostile climate. Explicit age discrimination is less likely now than it was 30 years ago due to federal protections such as the Age Discrimination in Employment Act (ADEA), but there are subtle and insidious forms of discrimination that can be just as pernicious, including verbal (e.g., fewer words), paraverbal (negative tone and less friendliness) and nonverbal (e.g., less eye contact and smiling, fewer positive affirmations) behavior directed toward a stigmatized group (Hebl, Foster, Mannix, & Dovidio, 2002), including older workers.

Stereotypes about older workers are perhaps less straightforward than other biases for two reasons. First, negative stereotypes (e.g., older workers are costly, inflexible, hard to train and unable to keep up with technology) tend to be balanced by positive stereotypes (e.g., older employees are more reliable, loyal and productive than younger workers; Bal, Reiss, Rudolph, & Baltes, 2011; Kite, Stockdale, Whitley, & Johnson, 2005;

Posthuma & Campion, 2009). Because the stereotypes are both positive and negative, they are likely to be more accepted by people of all ages. Needless to say, however, reliance on stereotypes—whether positive or negative—to evaluate employees in selection, performance or training contexts should be avoided.

Second, age-related stereotypes can be considered more pervasive than other types of stereotypes because they are held by both younger and older people alike. This is perhaps because no one is exempt from the experiences of aging—not all of which are welcome. These stereotypes have the most deleterious effect when they are internalized by the aging workers themselves. For example, these stereotypes have a negative impact on worker motivation and worker beliefs about their own competence, which will affect worker motivation for performance, growth, development and intentions to retire (Palacios, Torres, & Mena, 2009).

One way that organizations can create a climate welcoming to mature workers is to attend to the age diversity of their workforce. Age diversity sends a powerful message about the value of workers of all ages, and it also serves to dispel misperceptions about age and work by increasing the interaction between older and younger workers. This interaction provides information about individual workers that colleagues and supervisors can use to make competence assessments rather than to rely on stereotypes. Furthermore, research on team composition suggests that age-diverse teams increase worker motivation and team productivity, particularly when the task at hand is complex. The benefit of age-diverse teams for complex tasks is likely due to the range of skills and abilities such teams possesses; younger workers are better able to

develop novel solutions to tasks and older workers bring their wealth of knowledge acquired through experience (Wegge, Roth, Neubach, Schmidt, & Kanfer, 2008).

## **Training**

The above discussion describes research on age-related changes in abilities and motivation in the context of job performance. But, workers generally grow and develop through a series of jobs in their careers, continually updating their skills and abilities either through informal on-the-job learning or more formalized training. The age-related changes in abilities and motivation discussed above will also affect performance in, and motivation for, training and development activities for mature workers.

Although research shows that age tends to be negatively related to performance in training and positively related to training time (Kubeck, Delp, Haslett, & McDaniel, 1996), most research on age and learning has been conducted in laboratory environments, which control for prior knowledge and experience. Specifically, these studies tend to test memory and learning for decontextualized material such as word lists, names and faces. These environments are problematic for mature learners because they control for the skills and knowledge that are advantageous to mature learners in the real world. In contrast to studies conducted in laboratory settings, field research using real-world training material generally shows that age is not a barrier to learning, particularly when training is designed with the needs of mature workers in mind. In particular, training that links content to prior knowledge and training that is self-paced benefit older learners (Beier, Teachout, & Cox, 2012; Callahan, Kiker, & Cross, 2003; Kubeck et al., 1996).

Even though mature workers do well in real-world training environments, motivation for training and development activities can be negatively affected by age. Stereotypes about age-related difficulties associated with learning new things and inflexibility lead many organizations to limit the training and development opportunities provided to older workers. Moreover, mature workers may internalize age-related stereotypes, which will serve to decrease their own motivation and efficacy for training and development. These stereotypes may be slow in changing, but there is ample counter-evidence to suggest that organizations should not limit the developmental opportunities provided to mature workers (Beier et al., 2012; Callahan et al., 2003)

As discussed above, changes in goals associated with perceptions of time left affect not only worker choices for task engagement but also the types of training and development activities older workers desire. Research suggests that mature workers are more likely to pursue development activities related to a personally fulfilling goal than development opportunities that provide increased accessibility to the next promotion (Cate & John, 2007). A challenge for management is to understand the goals and aspirations of workers of all ages rather than to make assumptions based on worker age.

### **Organizational Best Practices for Engaging Mature Workers**

Relatively simple strategies can help engage and retain workers. Not surprisingly, some of the best ideas come from workers themselves. For example, to accommodate workers for the physical stress experienced on an assembly line, BMW implemented an



array of relatively small changes (70 changes in total) in the physical environment of a manufacturing plant. These changes included adding a wooden platform that was easier on joints, purchasing ergonomic chairs and providing magnifying glasses for some tasks. Accommodations were designed and implemented with input from workers as part of an effort to retain an aging workforce in a remote German village, where relatively few younger workers were available to replace retirees. After the accommodations were implemented, the company reported reduced absenteeism and increased productivity. These changes also had a positive impact on employee morale due to management consideration of worker needs and worker input for implementing the changes. The organization benefited in its ability to retain a productive workforce, with relatively little cost—the entire project cost about 40,000 Euro (less than \$50,000 dollars; Loch, Sting, Bauer, & Maurermann, 2010).

In the BMW example, management took action to accommodate the needs of

**Accommodations at a BMW plant assembly line in Germany reduced absenteeism, increased productivity and positively affected morale for older workers.**

**Loch et al., 2010**

mature workers because they understood how demographic realities would affect their business (i.e., an aging population and relatively fewer younger workers to replace retirees). But relatively few organizations have attended to the demographic shifts in the labor force that

promise to affect the availability of talent in the coming decades (Paullin, 2014). An important first step in engaging and retaining mature workers is to conduct an

assessment of workforce demographics. This type of assessment will yield knowledge about pending retirements, assess pending skill shortages and help develop workforce plans for hiring and training an age-diverse workforce. Organizations that are prepared for shifts in their workforce related to demographic changes will benefit over the long term.

A specific recommendation related to such an assessment is to conduct an age audit by gathering information about worker age relative to retirement norms in the organization and analyzing the data by division. This audit will identify the areas of greatest need in terms of labor shortages due to pending retirements. An important consideration in such an analysis is to make sure that it is done at the unit/group level and that age is not attached to individual employee data. More specific information about conducting a demographic assessment is available in an excellent review

provided by the Society for Human Resource Management Foundation's report, *The Aging Workforce: Leveraging the Talents of Mature Employees* (Paulin, 2014; see reference list).

**An assessment of workforce demographics includes consideration of pending skill shortages due to retirements in critical jobs.**

Conducting demographic assessments can inform the creation of an age-diverse workforce, which will create a welcoming environment for mature workers. As described above, an age-diverse workforce can affect motivation and perceptions that mature workers are valued, and age-diverse teams tend to have better performance than teams that are more homogeneous with respect to age (Wegge et al., 2008).

Another important consideration for engaging and retaining mature workers described in the BMW example is the actual accommodations made to the work environment. Organizations that appear unwilling to accommodate mature workers risk being perceived as pushing older workers out the door, which can lead to litigation with regards to age discrimination (Tishman et al., 2012). As in the BMW example, accommodations do not have to be elaborate or expensive, and they can make the work environment safer and more comfortable for workers of all ages. Although environmental accommodations are likely to vary by industry, job and organization, recent research by Sharit and Czaja (2012) provided a review of age-related factors that influence job design and guidelines for workplace accommodations, which are summarized in Table 2.

Accommodations are also appropriate in training environments, and they can be straightforward and include providing ergonomic furniture and ample lighting, and ensuring that audio and visual training material is presented in a way that can be readily accessed (or easily adjustable). The pace of training can also be controlled by the trainee, and training content should be linked to prior knowledge whenever possible. These factors can serve to reduce the strain on memory abilities and will increase learning and self-efficacy in training (Beier et al., 2012).

**Table 2: Age-Related Workplace Modifications**

<ul style="list-style-type: none"><li>• Provide flexibility to accommodate work preferences, such as adjustable workstations that permit sitting or standing.</li></ul>
<ul style="list-style-type: none"><li>• Provide correct tools and training on how to use these tools appropriately.</li></ul>
<ul style="list-style-type: none"><li>• Encourage workers to avoid prolonged periods in one position; for instance, encourage workers who sit for long periods to stand and walk periodically; if such movement is designed into the work itself, all the better.</li></ul>
<ul style="list-style-type: none"><li>• Design work to avoid repetitive motion.</li></ul>
<ul style="list-style-type: none"><li>• Ensure workers have adequate breaks, particularly for physically demanding work.</li></ul>
<ul style="list-style-type: none"><li>• Provide tools to assist in tasks that include lifting and carrying heavy objects.</li></ul>
<ul style="list-style-type: none"><li>• Ensure that tools are easy to use.</li></ul>
<ul style="list-style-type: none"><li>• Reduce glare on workstations.</li></ul>
<ul style="list-style-type: none"><li>• Ensure that written materials include sufficient contrast (e.g., background to text) for ease of reading.</li></ul>
<ul style="list-style-type: none"><li>• Reduce ambient noise in the work environment.</li></ul>
<ul style="list-style-type: none"><li>• Provide decision aids and memory cues.</li></ul>

Source: Sharit, J., & Czaja, S. J. (2012). Job design and redesign for older workers. In J. W. Hedge & W. C. Borman (Eds.), *The Oxford handbook of work and aging*. New York: Oxford University Press.

Although a listing of general accommodations for work and training environments is informative, organizations should also seek input from workers themselves. As in the BMW example, soliciting input from workers about workplace modifications that help workers do their jobs more comfortably and efficiently enhanced productivity, decreased absenteeism and made employees feel valued and listened to in the process. One important consideration in this regard, however, is that many workers may not be comfortable requesting accommodations, particularly if they perceive that the

organization will associate their request with a disability. Indeed, evidence suggests that requests for accommodation that are attributed to disability are less likely to be honored (McMullin & Shuey, 2006), despite the fact that most disabilities do not impede worker productivity. This suggests that both organizations and workers will benefit from efforts to normalize requests for accommodation on the job or in training.

One additional HR practice that has been cited by researchers and organizations alike as important for engaging older workers is providing flexible work arrangements. Flexible work arrangements contribute to worker perceptions of autonomy in their job and are thought to be particularly important for mature workers who return to the workplace after retirement in bridge employment arrangements (Paullin, 2014). Flexible work arrangements are another means for retaining talent, institutional memory and valuable knowledge possessed by mature workers who might otherwise retire.

A summary of the strategies for retaining and engaging older workers discussed above is provided in Table 3 on the following page.

**Table 3: Recommendations for Retaining and Engaging Older Workers**

Recommendation	Description
<b>Provide training and development opportunities</b>	Although achievement motivation may change with age, older workers should be expected to remain intellectually engaged and motivated for opportunities for continuous growth and development throughout their careers. Attending to worker goals for development and providing modifications in the training environment will enhance the effectiveness of training.
<b>Conduct workforce demographic assessment</b>	Organizations can plan for labor shortages when they understand how normal attrition and worker retirement will affect the staffing of critical jobs. Workforce planning should also include an assessment of the knowledge, skills, abilities and other attributes (KSAOs) necessary for critical roles, and the availability of these KSAOs in the labor pool.
<b>Accommodate the aging workforce (See Table 2.)</b>	Case studies suggest that relatively small and simple accommodations can positively affect worker productivity, performance in training and morale. Moreover, workers themselves are often the best resource for understanding which accommodations might be most effective. Workers will feel valued when organizations ask them how they can best be accommodated.
<b>Build an age-diverse workforce</b>	Age diversity sends a message that the organization values the contribution of workers of all ages and creates a positive organizational climate for aging. Moreover, research suggests that age-diverse teams are advantageous: they include members with expertise/prior knowledge and members with new perspectives.
<b>Seek input from workers themselves</b>	Workers feel valued when organizations attend to how they can best do their work comfortably and efficiently. Seeking input will also serve to normalize requests for accommodation and will enhance perceptions that the organizational climate is welcoming to workers of all ages.
<b>Flexible work arrangements</b>	Flexible work arrangements provide perceptions of autonomy and control to workers of all ages and may be particularly important for the retention of older workers.

## Conclusion

Clearly, the aging workforce and the impending retirement of the Baby Boom generation will affect business in industrialized countries. Many industries stand to lose institutional memory and policy knowledge when valued older workers retire. Yet, many companies report that they have no strategies to address their aging workforce. So what can an organization do? In general—and as described above—communicating that the organization cares about the welfare of older employees through HR policies can increase older worker engagement. Acknowledging and accommodating the needs of older employees can include considerations of physical space, training and organizational age diversity. Caution is warranted, however. In particular, it is dangerous to single out employees based on their age. It may reinforce age-related stereotypes (e.g., older workers get extra attention in training because they are inflexible), and it may feel exclusive to workers who are not targeted. Happily, the HR strategies that benefit older workers (e.g., attending to individual concerns, normalizing accommodation requests, hiring an age-diverse workforce, encouraging and supporting training and development opportunities) will ultimately benefit all workers.

## References

- Ackerman, P. L., & Beier, M. E. (2006). Determinants of domain knowledge and independent study learning in an adult sample. *Journal of Educational Psychology, 98*(2), 366–381. Retrieved from <http://doi.org/10.1037/0022-0663.98.2.366>
- Armstrong-Stassen, M., & Schlosser, F. (2011). Perceived organizational membership and the retention of older workers. *Journal of Organizational Behavior, 32*(2), 319–344. Retrieved from <http://doi.org/10.1002/job.647>
- Bal, A. C., Reiss, A. E. B., Rudolph, C. W., & Baltes, B. B. (2011). Examining positive and negative perceptions of older workers: A meta-analysis. *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 66B*(6), 687–698. Retrieved from <http://doi.org/10.1093/geronb/gbro56>
- Beier, M. E. (2015). The aging workforce and the demands of work in the 21st century. In *Facing the challenges of a multi-age workforce: A use-inspired approach* (pp. 108–133). New York: Routledge.
- Beier, M. E., & Ackerman, P. L. (2005). Age, ability, and the role of prior knowledge on the acquisition of new domain knowledge: Promising results in a real-world learning environment. *Psychology and Aging, 20*, 341–355.
- Beier, M. E., Teachout, M. S., & Cox, C. B. (2012). The training and development of an aging workforce. In J. W. Hedge & W. C. Borman (Eds.), *The Oxford handbook of work and aging* (pp. 436–453). New York: Oxford University Press.
- Borman, W. C., & Motowidlo, S. J. (1997). Task performance and contextual performance: The meaning for personnel selection research. *Human Performance, 10*, 99–109.
- Callahan, J. S., Kiker, D. S., & Cross, T. (2003). Does method matter? A meta-analysis of the effects of training method on older learner training performance. *Journal of Management, 29*, 663–680.
- Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist, 54*, 165–181. Retrieved from <http://doi.org/10.1037/0003-066X.54.3.165>
- Cate, R. A., & John, O. P. (2007). Testing models of the structure and development of future time perspective: Maintaining a focus on opportunities in middle age. *Psychology and Aging, 22*(1), 186–201. Retrieved from <http://doi.org/10.1037/0882-7974.22.1.186>



- Heavey, A. L., Holwerda, J. A., & Hausknecht, J. P. (2013). Causes and consequences of collective turnover: A meta-analytic review. *Journal of Applied Psychology, 98*(3), 412–453. Retrieved from <http://doi.org/10.1037/a0032380>
- Hebl, M. R., Foster, J. B., Mannix, L. M., & Dovidio, J. F. (2002). Formal and interpersonal discrimination: A field study of bias toward homosexual applicants. *Personality and Social Psychology Bulletin, 28*(6), 815–825. Retrieved from <http://doi.org/10.1177/0146167202289010>
- Hedge, J. W., Borman, W. C., & Lammlein, S. E. (2006). *The aging workforce: realities, myths, and implications for organizations*. Washington, D.C.: American Psychological Association.
- Kanfer, R., Beier, M. E., & Ackerman, P. L. (2013). Goals and motivation related to work in later adulthood: An organizing framework. *European Journal of Work and Organizational Psychology, 22*(3), 253–264. Retrieved from <http://doi.org/10.1080/1359432X.2012.734298>
- Kite, M. E., Stockdale, G. D., Whitley, B. E., & Johnson, B. T. (2005). Attitudes toward younger and older adults: An updated meta-analytic review. *Journal of Social Issues, 61*, 241–266.
- Kooij, D., de Lange, A., Jansen, P., & Dikkers, J. (2008). Older workers' motivation to continue to work: Five meanings of age: A conceptual review. *Journal of Managerial Psychology, 23*(4), 364–394. Retrieved from <http://doi.org/10.1108/02683940810869015>
- Kooij, D., de Lange, A., Jansen, P., Kanfer, R., & Dikkers, J. (2011). Age and work-related motives: Results of a meta-analysis. *Journal of Organizational Behavior, 32*(2), 197–225. Retrieved from <http://doi.org/10.1002/job.665>
- Kubeck, J. E., Delp, N. D., Haslett, T. K., & McDaniel, M. A. (1996). Does job-related training performance decline with age? *Psychology and Aging, 11*, 92–107.
- Loch, C. H., Sting, F. J., Bauer, N., & Maurermann, H. (2010). The globe: How BMW is defusing the demographic time bomb. *Harvard Business Review*. Retrieved from <https://hbr.org/2010/03/the-globe-how-bmw-is-defusing-the-demographic-time-bomb>
- McEvoy, G. M., & Cascio, W. F. (1989). Cumulative evidence of the relationship between employee age and job performance. *Journal of Applied Psychology, 74*, 11–17.

- McMullin, J. A., & Shuey, K. M. (2006). Ageing, disability and workplace accommodations. *Ageing & Society*, 26(6), 831–847. Retrieved from <http://doi.org/10.1017/S0144686X06004958>
- National Center for O\*NET Development. *O\*NET OnLine*. Retrieved May 14, 2015, from <https://www.onetonline.org/>
- Ng, T. W. H., & Feldman, D. C. (2008). The relationship of age to ten dimensions of job performance. *Journal of Applied Psychology*, 93, 392–423.
- Nunes, A., & Kramer, A. F. (2009). Experience-based mitigation of age-related performance declines: Evidence from air traffic control. *Journal of Experimental Psychology: Applied*, 15(1), 12–24. Retrieved from <http://doi.org/10.1037/a0014947>
- Organ, D. W. (1988). A restatement of the satisfaction-performance hypothesis. *Journal of Management*, 14, 547–557.
- Palacios, C. S., Torres, M. V. T., & Mena, M. J. B. (2009). Negative aging stereotypes and their relation with psychosocial variables in the elderly population. *Archives of Gerontology and Geriatrics*, 48(3), 385–390. Retrieved from <http://doi.org/10.1016/j.archger.2008.03.007>
- Paullin, C. (2014). *The aging workforce: Leveraging the talents of mature employees*. SHRM Foundation's Effective Practice Guidelines Series. Retrieved from <http://www.shrm.org/about/foundation/products/Documents/Aging%20Workforce%20EPG-FINAL.pdf>
- Pitt-Catsouphes, M., & Matz-Costa, C. (2009). *Engaging the 21st century multi-generational workforce*. Retrieved September, 10, 2009 from [http://www.bc.edu/content/dam/files/research\\_sites/agingandwork/pdf/publications/IB20\\_Engagement.pdf](http://www.bc.edu/content/dam/files/research_sites/agingandwork/pdf/publications/IB20_Engagement.pdf)
- Posthuma, R. A., & Campion, M. A. (2009). Age stereotypes in the workplace: Common stereotypes, moderators, and future research directions. *Journal of Management*, 35, 158–188.
- Rice, N. E., Lang, I. A., Henley, W., & Melzer, D. (2011). Common health predictors of early retirement: Findings from the English longitudinal study of ageing. *Age and Ageing*, 40(1), 54–61. Retrieved from <http://doi.org/10.1093/ageing/afq153>
- Salthouse, T. A. (1984). Effects of age and skill in typing. *Journal of Experimental Psychology: General*, 113, 345–371.

- Sanders, M. J., & McCready, J. (2009). A qualitative study of two older workers' adaptation to physically demanding work. *Work: Journal of Prevention, Assessment & Rehabilitation*, 32(2), 111–122.
- Sharit, J., & Czaja, S. J. (2012). Job design and redesign for older workers. In J. W. Hedge & W. C. Borman (Eds.), *The Oxford handbook of work and aging*. New York, NY: Oxford University Press.
- Society for Human Resource Management. (2013). *SHRM workplace forecast: The top workplace trends according to HR professionals*. Retrieved from [http://www.shrm.org/research/futureworkplacetrends/documents/13-0146%20workplace\\_forecast\\_full\\_fnl.pdf](http://www.shrm.org/research/futureworkplacetrends/documents/13-0146%20workplace_forecast_full_fnl.pdf)
- Sterns, H. L. (1986). Training and retraining, adult and older workers. In J. E. Birren, P. K. Robinson, & J. E. Livingston (Eds.), *Age, health, and employment* (pp. 93-113). Englewood Cliffs, NJ: Prentice Hall.
- Sturman, M. C. (2003). Searching for the inverted u-shaped relationship between time and performance: Meta-analyses of the experience/performance, tenure/performance, and age/performance relationships. *Journal of Management*, 29, 609–640.
- Tishman, F. M., Van Looy, S., & Bruyère, S. M. (2012). *Employer strategies for responding to an aging workforce*. The NTAR Leadership Center, Rutgers, The State University of New Jersey. Retrieved from [http://www.dol.gov/odep/pdf/NTAR\\_Employer\\_Strategies\\_Report.pdf](http://www.dol.gov/odep/pdf/NTAR_Employer_Strategies_Report.pdf)
- The Economist (2011, March). *A silver opportunity: Rising longevity and its implications for business*. London: The Economist Intelligence Unit. Retrieved from [http://www.managementthinking.eiu.com/sites/default/files/downloads/EIU-Axa\\_Longevity\\_Web.pdf](http://www.managementthinking.eiu.com/sites/default/files/downloads/EIU-Axa_Longevity_Web.pdf)
- Toossi, M. (2012). Labor force projections to 2020: A more slowly growing workforce. *Monthly Lab. Rev.*, 135, 43.
- Waldman, D. A., & Avolio, B. J. (1986). A meta-analysis of age differences in job performance. *Journal of Applied Psychology*, 71, 33–38.
- Wegge, J., Roth, C., Neubach, B., Schmidt, K.-H., & Kanfer, R. (2008). Age and gender diversity as determinants of performance and health in a public organization: The role of task complexity and group size. *Journal of Applied Psychology*, 93(6), 1301–1313. Retrieved from <http://doi.org/10.1037/a0012680>

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, 26(2), 179–201. Retrieved from <http://doi.org/10.5465/AMR.2001.4378011>