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Age, employability and the role of learning activities and their motivational antecedents: a conceptual model

Dominik E. Froehlich^{a*}, Simon A.J. Beusaert^{a,b} and Mien S.R. Segers^a

^a*Department of Educational Research and Development, Maastricht University, Maastricht, The Netherlands;* ^b*Faculty of Psychology and Educational Sciences, Université Catholique de Louvain-la-Neuve, Louvain-la-Neuve, Belgium*

In today's time of demographic change and rapid innovation, age and employability as well as the role of learning and development are high on the agenda of human resource managers and chief learning officers. However, existing research has failed to integrate these concepts in a clear model and offers little explanation of how the concepts may be linked exactly. In this conceptual paper we show how chronological age, despite its poor characteristics as a predictor, might still affect employability indirectly. Specifically, we propose that employees' motivation – in terms of future time perspective and goal orientation – and formal and informal learning activities need to be considered. Since an individual's chronological age cannot be changed, it is important to recognize these mediating variables, which may be targeted more easily by human resource development or age management initiatives.

Keywords: age; employability; feedback; future time perspective; goal orientation; workplace learning

The populations of many countries are aging and a reversal of this trend seems unlikely (OECD, 2012). Inevitably, people need to stay longer in the workforce: to sustain national welfare systems, to help organizations thrive and to pay their own bills. Consequently, governments all over the world revise their retirement policies to encourage longer working lives (Billett, 2011) – for instance, the changed default retirement age in Great Britain (Department for Business Innovation and Skills, 2011). Similarly, organizations adapt their employment and retention policies (Colley, 2013) to combat the brain drain caused by the large number of senior workers retiring in the upcoming 5–10 years and to keep on top of the ever-increasing pace of innovation and changing demands. Eventually, the proportion of older, experienced workers in the active workforce will increase. This puts employability on the agenda of both politics and business. Governments seek to maintain the social welfare systems and call for better integration of older people in the active workforce (Razin & Sadka, 2005; Walker & Maltby, 2012). Businesses struggle to retain and attract experienced employees (Midtsundstad, 2011; Midtsundstad & Bogen, 2014).

Employability means the 'continuous fulfilling, acquiring or creating of work [by employees] through the optimal use of competences' (Van der Heijde & Van der Heijden, 2006, p. 435). Employable employees identify and realize career opportunities (Fugate, Kinicki, & Ashforth, 2004). To do so, they need diverse competences such as expertise, adaptability to changes, active monitoring of the work environment, balance between

*Corresponding author. Email: d.frohlich@maastrichtuniversity.nl

employee and employer interests and identification with the employing organization (Van der Heijde & Van der Heijden, 2006).

Despite the pivotal importance of lifelong employability, we still do not sufficiently understand how it can be sustained in higher ages. It is argued that learning activities are needed to develop competences and, in turn, improve individuals' employability (Van der Heijden, Boon, Van der Klink, & Meijs, 2009) and careers (Maurer & Chapman, 2013). However, research on the relationship between learning and employability is scarce (De Vos, De Hauw, & Van der Heijden, 2011). Moreover, to the best of our knowledge, no existing model of employability explicitly discusses the effects of chronological age (cf. Clarke, 2008). The physical and mental changes during the process of aging (e.g. Bassey, 1998; Schaie, 1984) and the stereotypes about older workers (Malinen & Johnston, 2013), however, can hardly be ignored (Ilmarinen, 2001; Segal, Qualls, & Smyer, 2011).

Assuming a direct relationship between age and employability – as often suggested by the higher unemployment rates for older age groups (European Commission, 2010) – is, we believe, too simplistic. Moreover, such a simple model offers little guidance on how older workers may remain employable. Current research, however, neglects to look into potential mediators of the relationship between age and employability. In summary, despite the practical urgency and importance of the topic, we lack the necessary knowledge to give advice about how to manage employees to sustain their employability during the process of aging.

In this conceptual article, we present a model of how chronological age, learning activities and their motivational antecedents may explain older employees' employability. Specifically, we consider future time perspective (Lang & Carstensen, 2002), goal orientation (Elliot & McGregor, 2001) and formal and informal learning activities (see Figure 1). Such a focus on individuals' attributes is warranted, as previous studies of employability have largely ignored individual differences and focused on contextual variables, such as the organizational culture and job demands (e.g. Evers, Kreijns, Van der Heijden, & Gerrichhauzen, 2011; Thijssen, Van der Heijden, & Rocco, 2008; Van der Heijden & Bakker, 2011; Van der Heijden, Boon, et al., 2009; Van Emmerik, Schreurs, De Cuyper, Jawahar, & Peeters, 2012; Wittekind, Raeder, & Grote, 2010). The focus on psychological and behavioral factors provides alternative explanations of how employability is shaped during the aging process and extends current models (e.g. Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009).

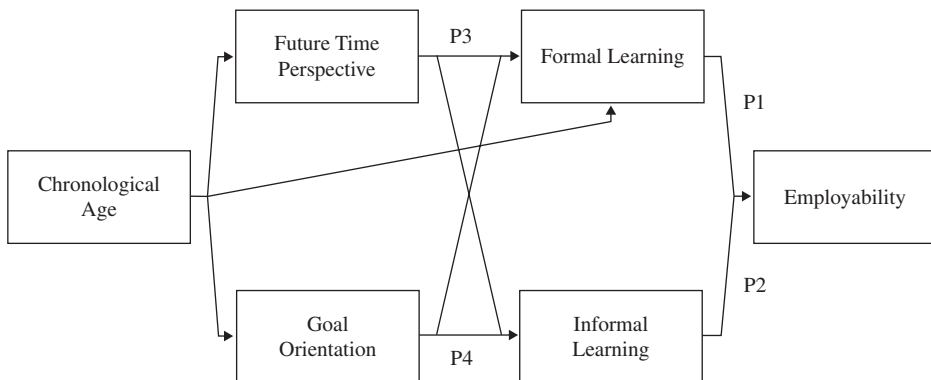


Figure 1. Conceptual model depicting the propositions (P1–P4).

1. Employability: a competence-based perspective

Gazier (2001) identifies three waves of employability research, in which the concept was adapted to the labor market situation. Early in the twentieth century, an absolute definition of employability based on whether one was able and willing to work was introduced. In the 1950s, research gradually also considered the labor market demand. Since the 1990s, employability research has focused on three areas: labor market outcomes, individuals' responsibility to develop transferable skills due to increasingly interorganizational careers and employability's relativity in terms of supply and demand on the labor market.

The accelerating rate of innovation makes it increasingly inappropriate to frame employability in terms of specific labor market demands. Instead, we define being employable as having a set of competences that enables people to fulfill, acquire or create work (Van der Heijde & Van der Heijden, 2006). For that, a broad package of competences (Wright & Snell, 1998) that includes social and adaptive competences (Rodriguez, Patel, Bright, Gregory, & Gowing, 2002) on top of technical domain knowledge needs to be taken into account. Van der Heijde and Van der Heijden (2006) include *occupational expertise* as an important prerequisite for employability, but note that other factors also weigh heavily. Proactive, self-initiated screening and preparation for potential changes in job and career requirements and conditions (*anticipation and optimization*) and reactive adaptation and resilience to them (*personal flexibility*) are needed in today's fast-moving business world. Furthermore, identification with the organization's goals and the ability to work together with others are needed (*corporate sense*). Last, *balance*, the ability to appropriately weigh employer's interests against own interests, was identified as a key competence of employability.

Previous research has found that self-ratings of employability are more important than potential employers' ratings, since employees act on the basis of their own perceptions (Fugate et al., 2004; Van den Broeck et al., 2013; Van Emmerik et al., 2012). Similarly, Kinnunen, Mäkikangas, Mauno, Siponen, and Nätti (2011) derive the importance of self-perceived employability from Lazarus and Folkman's (1984) transactional stress theory: employees who perceive themselves as employable feel less threatened by the environment, experience less strain (Berntson & Marklund, 2007) and perform better. Therefore, we focus on the employees' own perceptions of their employability in our model.

2. Age

Age is a very broad concept that may be viewed from different perspectives (Diehl et al., 2014; Schalk et al., 2010); for instance: *functional age*, which is based on the ability of a person to perform certain tasks on a daily basis (Sharkey, 1987), *psychological age*, which refers to how old a person feels subjectively (Stephan, Demulier, & Terracciano, 2012), *organizational age*, which is based on the tenure in the same organization, *life span age*, which considers biological and societal factors in an integrative way and focuses on the roles people take during their lives (Schulz & Heckhausen, 1996), or *chronological age*, which measures the time passed since birth.

Both in research and practice, chronological age is used most prominently. This is also true in research about employability, where chronological age is often included in the analyses – at least as a covariate. Previous studies predominantly find negative relationships between age and employability (De Cuyper, Mauno, Kinnunen, & Mäkikangas, 2011; Nauta, De Vroome, Cox, Korver, & Kraan, 2005; Raemdonck, Tillema, De Grip, Valcke, & Segers, 2012; Rothwell & Arnold, 2007; Van der Heijden, 2002; Van Vuuren, Caniels, & Semeijn, 2011; Wittekind et al., 2010) and related concepts,

such as workability (Nielsen, 1999) and career opportunities (Van Veldhoven & Dorenbosch, 2008). We found only one study that does not show a significant relationship at all (Van der Heijden, Boon, et al., 2009).

Despite these consistent findings, it is difficult to derive implications from them. This is because chronological age is a proxy measure for many changes related to aging: physical and mental changes, ageism, effects of the period of time or the cohort (Hall, Mairesse, & Turner, 2007). It is difficult to disentangle those different effects from each other. A second problem is that the older people get and the more experience they accumulate, the more heterogeneous they become (Carstensen, 2006; Staudinger & Bowen, 2011). Consequently, the predictive value of chronological age diminishes. Additionally, it is questionable which recommendations should be given to decision-makers in organizations and policy. After all, individuals' chronological age may not be altered. Despite these shortcomings, both practitioners and researchers often use chronological age as an easy way to measure proxy for the physical, cognitive, social and emotional changes associated with human development (Pitt-Catsouphes, Matz-Costa, & Besen, 2009).

3. Formal and informal learning activities

Both formal and informal learning may help to develop the necessary competences to stay employable. Formal learning means all the learning inside a structure deliberately created for that purpose (CEDEFOP, 2008), for instance in seminars and workshops. It received the majority of attention by human resource development (HRD) researchers and practitioners in the past, but is increasingly challenged for its often insufficient transfer to the workplace (Blume, Ford, Baldwin, & Huang, 2010; Ford & Weissbein, 1997). Nevertheless, it is an important measure for HRD, since it is arguably easier to plan and observe than informal learning.

Informal learning is less structured, more in control of the learner, embedded in daily working activities and may happen unconsciously (cf. Livingstone, 2001; Marsick & Watkins, 2001). Eraut (2007) identifies encounters and relationships at work as well as opportunities for receiving feedback and support as important factors for learning at work. Additionally, he mentions participation in group activities, work alongside others and consultations among the activities most conducive for learning. This indicates a high importance of the social component of workplace learning. Therefore, we focus on learning from others for the remainder of this article. Eraut (2007) and Van der Heijden, Boon, et al. (2009) suggest that informal learning is needed to optimize overall learning efficiency; Cross (2007) finds informal learning as being superior in terms of efficiency and effectiveness.

Any given learning situation is always a mixture of formal and informal learning, but to varying degrees (Eraut, 2004). Consequently, we take both types of learning into account simultaneously, but separately. This extends the study of De Vos et al. (2011), which found positive effects of participation in competency development initiatives on self-perceived employability. There, both formal and informal learning activities were included, but were not separated from each other in the analyses. In general, both formal and informal learning activities may enhance individuals' competences and thereby contribute to their employability (Forrier & Sels, 2003).

3.1. Formal learning activities, age and employability

With respect to the relation between *age and formal learning*, most studies indicate that older people are less interested in attending formal trainings (Kanfer & Ackerman, 2004;

Livingstone, 1999; Warr, 2001; Warr & Birdi, 1998) and also are offered fewer opportunities to do so (Beck, 2012; Grima, 2011; Urwin, 2006; Van Vianen, Dalhoeven, & De Pater, 2011). On the one hand, this negative relationship between age and formal learning activity may be explained by mental changes associated with the process of aging. For instance, research has found that cognitive processing slows down (Salthouse, 1996) and that the working memory declines (Reuter-Lorenz et al., 2000; Salthouse & Babcock, 1991). This deterioration of abilities may discourage participation in formal trainings (Zwick, 2011). On the other hand, we need to consider negative stereotypes against older workers (Maurer, Wrenn, & Weiss, 2003; Wrenn & Maurer, 2004). Employees' chronological age does play a large role in how they are perceived by others. Eventually, this also shapes their own attitudes toward learning, and they become less motivated to participate in trainings (Lawrence, 1988).

Empirical research finds that *formal learning* contributes to one's *employability*. For instance, Groot and Van den Brink (2000) find positive effects of education and training on employability among Dutch employees. Sanders and De Grip (2004) study low-skilled workers and confirm a positive effect of formal training on intra-firm employability, but they do not find any effect of training on external employability. Van der Heijden, De Lange, et al. (2009) note positive relationships between formal learning and three subdimensions of employability: occupational expertise, anticipation and optimization, and corporate sense. Froehlich, Beusaert, Segers, and Gerken (2014) report that the number of hours spent in formal learning activities positively affects anticipation and optimization. These consistent findings suggest formal learning to positively affect employability.

Previous research found positive relationships between formal learning and employability and negative relationships between chronological age and formal learning. Therefore, we propose that formal learning enhances employability. At the same time, we propose that chronological age affects employability indirectly via formal learning.

Proposition 1: Formal learning positively affects employability and partially mediates the negative relationship between chronological age and employability.

3.2. Informal learning activities, age and employability

Findings of studies researching a link between *chronological age and informal learning* are inconclusive. Specifically, while Tikkanen (2002) and Gupta, Govindarajan, and Malhotra (1999) find a decreased use of informal learning and feedback seeking among older workers and Van der Heijden, De Lange, et al. (2009) note decreasing networking activity with increasing age, Livingstone (1999) finds, 'that [older people] spend nearly as much time on informal learning as middle-aged adults' (p. 64). Schulz and Stamov-Roßnagel (2010), too, find no significant difference between different ages in their sample of 470 employees of a German mail-order firm and argue that '[i]nformal learning might offer more opportunities to compensate for cognitive ageing effects so that negative age differences might disappear' (p. 395). Indeed, Berg and Chyung (2008) find a positive correlation between age and engagement in informal learning when surveying 125 professionals in the field of workplace learning and performance improvement. Kyndt, Dochy, and Nijs (2009) find that younger employees (20–29 years) receive the fewest opportunities for feedback and knowledge acquisition (e.g. from work groups, project teams, guest speakers). Conversely, middle-aged employees (30–39 years) get the most opportunities for feedback and knowledge acquisition. Interestingly, when it comes to

acquiring information, the oldest employees score higher and the middle-aged employees score the lowest.

It appears that in pursuing informal learning in terms of information and feedback seeking, individuals are more in control of their own learning effort (Marsick & Watkins, 2001) and less dependent on their employers' resources or others' stereotypes. Thereby, they are also more independent of the negative age effects mentioned above. Moreover, informal learning is often not even perceived as learning by the learners themselves (Eraut, 2004, p. 249), and thus negative self-perceptions of one's intellectual capabilities might be circumvented.

This is important because informal learning may enhance employability. For instance, by receiving feedback, employees become aware of their development needs. Similarly, seeking for information reduces uncertainty. New employees may focus especially on information that helps them to fit in the new organization (Morrison, 1993, 2002). Later, they may seek information needed to perform better and to develop their career. Employability is a broad concept that includes both of these goals. Being integrated in the organization and being knowledgeable about the domain of work are two of the dimensions of employability.

The relationship between *informal learning and employability* has hardly been studied empirically. Most notably, Van der Heijden, De Lange, et al. (2009) have researched this relationship among nonacademic university employees. They found networking within and outside their own organization (Bozionelos, 2003) to positively affect all five dimensions of employability. Moreover, interaction with one's supervisor had positive effects on balance and corporate sense. Van der Rijt, Van den Bossche, Van de Wiel, Segers and Gijssels (2012) find feedback seeking to affect perceived career development positively among employees in the financial sector in an early career stage. Froehlich et al. (2014) report several forms of informal learning – feedback seeking, help seeking and help giving – to positively affect occupational expertise, anticipation and optimization, and personal flexibility. Aligned with our general assumption that actual learning behavior is needed to develop the competences to maintain employability, we propose a positive effect of informal learning on employability.

Proposition 2: Informal learning positively affects employability.

3.3. Motivational antecedents of learning activities: socioemotional selectivity and goal orientation

We strive to understand the development of competences needed for employability through three lenses: age, motivation and learning activity. Two theories appear especially suitable and offer insights concerning the antecedents of learning activities: socioemotional selectivity theory – and the associated concept of future time perspective – and goal orientation theory.

3.4. Socioemotional selectivity theory and future time perspective

Socioemotional selectivity theory posits that individuals select and pursue their goals in alignment with their (working) life's time horizon (Carstensen, Isaacowitz, & Charles, 1999). Specifically, when people have a limited future time perspective they seek emotional well-being and short-term benefits. Conversely, when they view time as open-ended, goals to acquire knowledge, experience novelty, etc. become more important (Carstensen, 2006;

Seijts, 1998). This unidimensionality of the construct was later questioned by Cate and John (2007), who found that a two-factor solution fits the data better. Accordingly, they suggest investigating two separate constructs: focus on opportunities and focus on limitations.

Socioemotional selectivity theory predicts that older people perceive their remaining time and opportunities as more limited, as they are closer to life expectancy. Empirical studies report that older people see more limitations and less opportunities for their future life (Cate & John, 2007; De Lange, Bal, Van der Heijden, De Jong, & Schaufeli, 2011; Lang & Carstensen, 2002; Zacher & Frese, 2011). We maintain that similar effects will be observable the closer employees get to retirement age and the end of their working life.

Socioemotional selectivity theory suggests that people who perceive many opportunities for themselves in the future are more motivated to learn. While there is little empirical evidence for work-related formal and informal learning, we know from educational psychology literature that an extensive future time perspective is associated with, for instance, an increased likelihood of actually completing tasks (Bembunty & Karabenick, 2004), increased persistence to study (Horstmanshof & Zimitat, 2007) and better academic performance (De Volder & Lens, 1982). In a similar vein, Janeiro and Marques (2010) find future time orientation to be positively related to career attitudes among Portuguese pupils (Creager, 2011). In a more general sense, Lang and Carstensen (2002) report effects of future time perspective on the composition of one's social network. Specifically, while individuals perceiving the future as limited prefer emotional goals and thus relatives and formal partners, individuals who have an expansive perception of the future prefer to interact with acquaintances and knowledgeable or controversial partners to fulfill their desire for growth. This is attributable to the different goals associated with different perceptions of future time and might indicate an influence of future time perspective on the undertaking of learning activities. In combination with the strong correlations found between chronological age and future time perspective, this suggests that chronological age affects the undertaking of learning activities indirectly via future time perspective. The relationship between focus on opportunities and limitations and learning activity has not been researched in detail yet. We therefore assume similar effects for formal and informal learning activities.

Proposition 3: A focus on opportunities positively affects the undertaking of formal and informal learning activities and partially mediates the negative relationships between chronological age and formal and informal learning activities. The opposite is true for a focus on limitations.

3.5. Life span development theory and the changes in goal orientation

Goal orientation research investigates how people interpret and handle achievement situations (Brett & VandeWalle, 1999). There, two factors are important: the definition and valence of competence. One's competence is either defined against an absolute standard, own past performance or others' performance. The former two share many similarities and both contribute to a mastery orientation, while the latter contributes to a performance orientation. Individuals with a dominant mastery goal orientation view ability as an attribute that can be expanded with effort. Conversely, performance-oriented people see ability as a fixed attribute, effort as a lack of ability and feedback as judgmental (Elliott & Dweck, 1988). The valence ascribed to competence determines whether success is approached or failure avoided. For instance, an employee may attempt to perform better than her colleagues (approach orientation) or attempt to circumvent mistakes (avoid

orientation). Depending on the definition and valence of competence, four goal orientations can be distinguished (Janssen & Prins, 2007). People may aim to develop competences and skills (*mastery approach orientation*), avoid deterioration and loss of competences and skills (*mastery avoid orientation*), demonstrate competences to get favorable judgments (*performance approach orientation*) or avoid demonstration of lack of competences to eschew negative judgments (*performance avoid orientation*).

Goal orientation has been conceptualized as a rather stable concept (Steele-Johnson, Beaugard, Hoover, & Schmidt, 2000). However, life span developmental theory maintains that people experience more losses and less gains as they age (Baltes, 1987). For instance, this includes the deterioration of cognitive and physical functioning (Bassey, 1998; Schaie, 1984). As a consequence, individuals adjust their goals. If enhancement is not possible (approach orientation), they may try to at least maintain the status quo (avoid orientation) (Baltes & Baltes, 1990). This makes maintenance goals – and an avoid orientation – more likely.

Empirical research confirms that older people increasingly focus on maintenance goals (Ebner, Freund, & Baltes, 2006; Ogilvie, Rose, & Heppen, 2010; Zwick, 2011). Put differently, the valence ascribed to competence may change from an approach orientation to an avoid orientation during the process of aging (De Lange, Van Yperen, Van der Heijden, & Bal, 2010).

Previous research pointed out the importance of goal orientation for employees' learning and development. Several studies find mastery approach orientation to be beneficial to one's engagement in formal and informal learning (Fisher & Ford, 1998; Janssen & Prins, 2007; Payne, Youngcourt, & Beaubien, 2007). For mastery and performance avoid orientations, findings show mostly negative effects on learning (Karabenick, 2004; Payne et al., 2007; Van Yperen, Elliot, & Anseel, 2009; VandeWalle & Cummings, 1997). Both positive and negative effects have been found for a performance approach orientation. Studies conducted among students find negative effects of a performance approach orientation on information, feedback and help seeking (Janssen & Prins, 2007; Karabenick, 2004; VandeWalle & Cummings, 1997). Conversely, Van der Rijt et al. (2012) report positive effects of a performance approach orientation on feedback seeking among financial experts, which we consider a more adequate sample also for our model. In summary, previous evidence suggests links of goal orientation with both chronological age and formal and informal learning. We propose that chronological age affects the undertaking of formal and informal learning activities indirectly via both approach and avoid goal orientations (cf. Propositions 1 and 2).

Proposition 4: Approach goal orientations increase the undertaking of formal and informal learning activities. The opposite is the case for avoid goal orientations. Both partially mediate the positive relationships between chronological age and formal and informal learning activities.

4. Discussion and implications

In this conceptual paper, we proposed a model of how chronological age, motivational antecedents and learning activities may influence employability. We developed the model based on theories and empirical evidence in the fields of HRD, psychology and educational sciences. Given the demographic shift in most societies of the world and the fast rate of change and innovation, a model of employability that considers employees' age is highly warranted. Former models on employability and workplace learning mostly

ignored the factor of age, or at least did not provide hypotheses on how chronological age may have effects. We offer explanations of how chronological age, despite its poor characteristics as a predictor, might still affect employability indirectly. Specifically, we proposed that motivation – in terms of future time perspective and goal orientation – and formal and informal learning activities need to be considered. Since an individual's chronological age cannot be changed, it is important to recognize these mediating variables, which may be targeted more easily by HRD or age management initiatives. Thus, the model may not only guide future research in this field but also provide a framework to advise human resource managers about how to sustain older employees' employability.

Similar to our model, Van der Heijde, De Lange, et al. (2009) conceptualized how employee characteristics, such as chronological age, and organizational factors affect formal and informal job-related learning and, in turn, employability. However, this model does not attempt to explain how chronological age actually affects the undertaking of formal and informal learning activities. Relying on socioemotional selectivity and goal orientation theory, we offer an explanation for this relationship. This line of reasoning may also inform future empirical studies concerned with chronological age. Researchers need to be aware of the complexity of age and be cautious when measuring it. It might be a fruitful approach to consider future time perspective as an alternative measure next to chronological age.

The conceptual model presented in this article may serve as a framework for further research at the intersection of employability, learning and age management. It brings to attention the importance of studying these concepts in an integrated way, rather than in isolation, as was mostly done in previous research. While the propositions were mainly formulated on the basis of previous empirical evidence, especially the proposed mediating effects have not been empirically tested before and warrant closer empirical examination and validation.

We developed a model of employability based on three perspectives: age, motivation and learning activity. This constrained view is necessary to limit the complexity of the model and to focus on what research shows may be the most important influences. At the same time, this may preclude the discussion of other concepts, and may be regarded as a limitation of the current model. First, our conceptualization of informal learning was quite narrow and focused on learning from others only. Future research may extend the model to include also other forms of learning, for example the learning value of the job itself (Van der Heijden & Bakker, 2011; Van der Heijden, Boon, et al., 2009). At the same time, further research is needed to formulate more specific hypotheses for each dimension of employability. We do not sufficiently understand which kind of learning activity or learning content enhances which dimension of employability. Second, as we conceptualized our model on the level of an individual employee, we focused on personal attributes that influence older employees' employability. Nevertheless, contextual variables on the task, job and organizational level may influence the relationships proposed in the model. Future research therefore needs to test the model in different settings and consider contextual factors such as task complexity and variety (Hackman & Oldham, 1975), rate of change (McCauley, Ruderman, Ohlott, & Morrow, 1994), stereotypes in the workplace (John, 2013; Kim & Mo, 2014) and learning culture (Marsick, 2013; Marsick & Watkins, 2003). Third, we assumed employability as the *raison d'être* of work-related learning. However, especially with an increasing chronological age, people may have different goals in mind when learning, as proposed by socioemotional selectivity theory (e.g. one employee may pursue emotional or social

goals and therefore strives to connect to other employees, while another employee is more concerned with his/her financial situation and therefore puts an emphasis on developing the necessary competences to remain employable). Fourth, the domain of this model is clearly set in a workplace setting. However, the actions set outside of one's work may influence employability as well (Gorard, Fevre, & Rees, 1999). The system of Recognition of Acquired Competences, which is established in many countries, supports this thought. This system acknowledges that competences might stem from experiences outside the training or classroom or even the workplace. For instance, they may have been acquired during volunteer work, in the sports club or through a private course (Joosten-Ten Brinke, Sluijsmans, Brand-Gruwel, & Jochems, 2008).

The proposed model may inform HRD practice when designing interventions to enhance work-related learning of the older workforce, as it explicates the learning process and major antecedents of it. For example, the proposed effects of future time perspective and goal orientation may suggest to clarify the instrumentality of learning activities for future success (Simons, Vansteenkiste, Lens, & Lacante, 2004), to facilitate long-term planning (Gellert, Ziegelmann, Lippke, & Schwarzer, 2012) or to implement personal development plans that span over several years (Beausaert, Segers, Van der Rijt, & Gijsselaers, 2011). Managers are advised to take into account the agenda of age management and HRD in a more integrated fashion. Furthermore, the use of chronological age as a basis for management decision needs to be carefully assessed and revised. Instead, individual differences both in motivation and behavior need to be considered. While the generation of these data is certainly more expensive than relying on chronological age as a measure, this allows more considerate decision-making.

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