



Resources to Increase Older Workers' Motivation and Intention to Learn

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Abstract

Two important and current trends in the domain of work are the aging workforce and the high and increasing requirement for work-related learning due to the rate of technological advancement and innovation. Together, they create a precarious situation, as many theories suggest a decline in motivation to learn as people age. This study investigates antecedents of motivation and intention to learn in older employees in the financial sector. Specifically, we research how learning motivation is affected by personal and job resources and how these translate into intentions to learn. Data was collected via a quantitative survey of 870 employees aged 50 or older. The data is analyzed by the means of structural equation modelling (SEM). The results show positive relationships between proactive personality and motivation (subjective task value and learning self-efficacy) and negative relationships between institutionalized negative age stereotypes and motivation. This, in turn, affects older employees' intention to learn. Finally, in contrast to supervisor support, organizational support for professional development raised utility value in the respondents. The findings suggest that organizations might want to recruit employees who are high in pro-active personality. Also, trainings may be fruitful to educate against the negative stereotypes that often associate old age with an inability to learn. Finally, supervisors and trainers should explain the utility and interest of the learning activities since it makes employees motivated to learn.

Keywords Expectancy-value · Learning · Motivation · Older workers · Proactive personality · Stereotypes · Support

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In today's economy, financial organizations are facing various challenges such as rapid technological advances, changing market demands due to innovations in the field, increased competition and internalization, and new ways of working, leading to less jobs (e.g., Bakens et al., 2021; Scully-Russ & Torraco, 2020). Simultaneously, the workforce is aging, for example because of the introduction of a higher pension age for safeguarding the social security system (Mc Kee & Eraut, 2012; Nauta et al., 2009; Van der Heijden et al., 2016, 2018). Reconciling these trends is an important challenge for policymakers, companies, and (older) individuals and puts learning high on the agenda.

Earlier research has explored the relationship between age, learning activities, and the acquired competencies (Froehlich, 2017; Maurer et al., 2003a, b; Van der Heijden et al., 2009) — and even further-reaching outcomes, such as individuals' capacity to innovate (Gerken et al., 2018), but the conclusion of most of these studies is that no obvious (negative) link between age and learning exists. Still, multiple theories suggest a decline in motivation to learn (for work) as people become older (Froehlich et al., 2016; Raemdonck et al., 2015). For instance, socioemotional selectivity theory (Carstensen et al., 1999; Lang & Carstensen, 2002) suggests that a narrower future timeframe decreases the motivation to learn. Goal orientation theory, to name another example, suggests that individuals' goals may change from learning to proving that one does not achieve at lower levels than others (Elliot & Dweck, 2005; Elliott & Dweck, 1988; VandeWalle, 1997). Informed by expectancy-value theory (Eccles & Wigfield, 2002), we set out to complement these views. Specifically, and in line with the job demands resources model (Bakker et al., 2007), it is important to include both personal and job resources (Billett, 2001, 2004) for their motivational potential in relation to personal growth and development (Xanthopoulou et al., 2009). Therefore, we study personal resources, such as past learning activities and proactive personality, and job resources, such as supervisor and organizational support and the absence of perceived age stereotypes, and how they translate into intentions to learn. We approach this topic by analyzing data of 870 older employees (aged 50 or older). When using the term "older worker", we refer to individuals who are between 50 and 65 years of age. The definition of what constitutes "age" has been actively discussed in literature (Weiss et al., 2022). Various age ranges and thresholds have been put forward, but there is no specific chronological age to define an older worker (Truxillo et al., 2015). We focused on workers aged 50 and older since this is the age at which people become vulnerable to the labor market (Marchant, 2013). We use structural equation modelling to test (a) direct effects of motivation to learn on intention to learn, (b) direct effects of personal resources and job resources on motivation to learn, and (c) direct and indirect effects of personal resources and job resources on intention to learn.

This study has at least three important features that aid our research goal. First, our sample is comprised of exclusively older employees. Previous research about the effects of age has often treated chronological age just as a continuous variable across the full age spectrum (e.g., Froehlich et al., 2014a). But this is problematic, as the effects might not be linear across age: Being five years older may not make a difference in your twenties, but they will do so in your fifties. Also, we draw a sample from the finance sector, which has been found to be a challenging sector

for older employees due to the tremendous regulatory and technological change it went through in the last decade (Froehlich, 2017; Pagliari, 2015). Second, we focus on employees' intentions to learn and not their actual learning activities. This is important, as it deemphasizes the offering of learning opportunities, which potentially confounds others' research results. Third, we study a host of different antecedents, more specifically resources (Bakker et al., 2007). We take in account personal resources, that is proactive personality and previous formal (i.e., training) and informal learning activities, and job resources, that include perceived negative age stereotypes in the workplace and support for professional development received at different levels. In sum, this study is innovative since it studies both personal and contextual antecedents. What is more, we study the interrelations between those antecedents by the means of mediation analysis.

Theoretical Background

Intention and Motivation to Learn

Earlier psychological research, starting from the Rubicon Model of Action Phases (H. Heckhausen & Gollwitzer, 1987), studied intentions to learn because it has been found that behavioral intentions are the most proximal predictors of actual behavior. Maurer et al. (2003a, b), for example, found that the intention for participating in learning activities was a robust predictor of actual learning participation. Kyndt et al. (2011, p. 215) define intentions to learn as “a readiness or even a plan to undertake a concrete action to neutralize an experienced discrepancy, and to reach a desired situation by means of training and education”. Here, we understand training and education to include both informal and more formal approaches to learning, a distinction generally made in workplace learning literature (Froehlich et al., 2019). Formal learning happens within structured environments deliberately designed for that purpose, for example, in seminars and workshops. Contrary to formal learning, informal learning is predominantly unstructured, embedded in daily job-related activities and may happen unconsciously.

The Rubicon Model of Action Phases (Achtziger & Gollwitzer, 2018; Heckhausen & Gollwitzer, 1987) describes successful goal pursuit from an action perspective starting with a person's desires and ending with the evaluation of the action outcomes achieved. The model posits four distinct phases of goal pursuit: the predecisional phase, the preactional phase, the actional phase, and, finally, the postactional phase. In the predecisional phase, or motivational phase, a goal is set. In this phase, the psychological processes are specified in more detail using the expectancy-value theory (Heckhausen & Gollwitzer, 1987). It emerges when people start thinking about which of their many wishes to pursue and transforming them into goals. The preactional phase, or volitional phase, entails consideration of when and how to act for the purpose of implementing the intended course of action. These plans are called implementation intentions (Achtziger & Gollwitzer, 2018). The intentions are indicative for motivation, that is how hard people are willing to try and how much effort they are planning to execute the goal-directed action. The stronger the

intention to engage in a particular action (volitional strength), the more likely the action is executed in the actional phase. Consequently, researchers in educational psychology have been studying the relation between the motivation to learn, and the intentions to learn and the learning action. Learning motivation has been defined as the “direction, intensity and persistence of a learning-related behavior” (LePine et al., 2004, p. 884). We study this phenomenon through the lens of expectancy-value theory (Eccles & Wigfield, 2002), as this framework is used in the Rubicon model for examining the predecisional phase or motivational phase and is relevant for examining learning motivation in older workers. Therefore, two aspects need to be discussed: expectancy and value. However, as concerns expectancy, the concept has been found to have significant overlap with the concept of *self-efficacy* that is “people’s judgements of their capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p. 391). Although the relation between self-efficacy and outcome expectancy remains unclear (Williams, 2010), empirical studies demonstrate that self-efficacy has higher predictive value than outcome expectancy (Kochoian et al., 2016). Therefore, the present study considers the concept of learning self-efficacy next to learning value.

Self-Efficacy

Several researchers have shown that self-efficacy is a powerful determinant for learners’ acquisition of knowledge and skills (Richardson et al., 2012; Spitzer, 2000). Learners with a strong sense of self-efficacy engage more in learning activities and have better performance than learners who doubt their capabilities to learn or to perform well (Jacot et al., 2015). In the organizational literature, it was found that employees with a stronger perceived capability to learn and develop are more likely to be interested and take part in development activities (Maurer et al., 2003a, b), have a higher pre-training motivation (Noe & Wilk, 1993), and have stronger intentions to participate in training programs (Sadri & Robertson, 1993). In the context of an aging workforce, self-efficacy might be affected by a decline in cognitive functions and memory (Gegenfurtner & Vauras, 2012) or the belief that cognitive capacity decreases (Maurer et al., 2008).

Subjective Task Value

The second facet of expectancy-value theory, *subjective task value*, refers to the individual’s subjective perception of how they can profit from a task (Jacot et al., 2018). If a task is perceived as valuable, the more this leads to positive motivational outcomes (Shechter et al., 2011). Previous research found that subjective task value predicts the intention to engage and persist in a learning task (e.g., Bong, 2001; Tharenou, 2001) and is also relevant for motivation and actions related to achievement in organizational and educational learning contexts (Gorges & Kandler, 2012; Zaniboni et al., 2011). Eccles and colleagues (Eccles et al., 1983) define three types of subjective task value: *intrinsic value* (the enjoyment one can gain from performing the task or the subjective interest in the content of the task), *utility value* (the extent in which an activity is useful for accomplishing future goals) and *attainment*

value (the importance of doing well in the task or the extent to which the task will allow individuals to confirm central and positive components of their self-concept). Studies examining the three components of subjective task value found that especially utility and intrinsic values are related to course enrollment decisions and utility value is associated with performance (Bong, 2001; Durik et al., 2006; Hulleman et al., 2010). Therefore, we focus on these two components in this study.

In the context of an aging workforce, the value of learning might be questioned by older workers due to a narrowing future time perspective (Kanfer & Ackerman, 2004). When older workers are approaching retirement, they perceive the time left at work as limited and are less focused on opportunities and, therefore, investment in learning will be less valued. Moreover, people only put effort into tasks in case it leads to performance improvement or if they are rewarded. Older workers have lower effort-performance expectations because they might have attained the highest possible career level, for example and thus perceive less external rewards (Kanfer & Ackerman, 2004). Also, they have to show more effort in order to attain the same performance level as their younger colleagues (Gegenfurtner & Vauras, 2012).

Hypothesis 1: Older employees' motivation in terms of (a) learning self-efficacy, (b) intrinsic value, and (c) utility value is positively associated with their intention to learn.

Resources of Older Employees' Learning Motivation

While previous theoretical and empirical research suggests a relation between motivation to learn and learning intention (Achtziger & Gollwitzer, 2018), research has also demonstrated that learning motivation in older workers is influenced by both personal and contextual variables (Colquitt et al., 2000; Tynjälä, 2008). Therefore, we consider personal and contextual factors to examine learning motivation and intention to learn. More specifically, and following the Job Demands Resources model, we focus on personal and job resources for their motivational role in relation to personal growth and development (Bakker & Demerouti, 2007). Personal resources are aspects of the self that are linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully (Xanthopoulou et al., 2007, pp. 123–124). Job resources at different levels (organizational, interpersonal or task level), due to their (intrinsic and extrinsic) motivational potential, foster employees to meet their goals and to stimulate personal growth and development. Specifically, we will focus on areas that have been found to be of most importance in past research, including proactive personality (also cf. self-directedness; Raemdonck, 2006) and past learning activities (Froehlich et al., 2019; Froehlich, 2017), perceived negative age stereotypes in the workplace (Froehlich et al., 2021; Froehlich et al., 2015b; Maurer et al., 2003b), and the support received from the supervisor and the organization (Armstrong-Stassen & Schlosser, 2008; Froehlich et al., 2017; Macneil, 2001). For all the following hypotheses involving personal (Hypotheses 2 and 3) and job resources (Hypotheses 4 to 6), the central theoretical argument is the same: These resources, in line with the definition of the

Job Demands Resources Model (Bakker & Demerouti, 2007), are not only necessary to cope with specific demands of a given job. Instead, “they also are important in their own right” (p. 312). A central tenet of the Job Demands Resources Model is that resources stimulate learning and development (Schaufeli, 2004), and this is also echoed by other theories (e.g., conservation of resources theory by Hobfoll, 1989).

Personal Resources of Learning Motivation and Learning Intention

One major group of predictors of future behavior is past behavior and the relatively stable traits such as one’s personality (Ajzen & Fishbein, 2000). In line with this, we focus on one personality trait—proactive personality—and the past learning activities undertaken as major predictors of individuals’ motivation to learn. Personality characteristics are likely to be related to learning motivation (Ariani, 2013) and an important indicator is proactive personality (Bateman & Crant, 1993). A proactive personality is considered a disposition to take personal action in a variety of activities and situations (Seibert et al., 1999).

As proactive personality points at someone who actively shapes the situations in which they find themselves, we expect proactive personality to predict higher levels of learning motivation. Indeed, proactive personality has been found to be positively related to learning oriented outcomes such as self-efficacy, learning motivation, perceived mastery, and development activity (Harwood & Froehlich, 2017; Major et al., 2006; Parker & Sprigg, 1999; Roberts et al., 2018). Moreover, a positive relation was found by Setti and colleagues (Setti et al., 2015) between proactive personality and training motivation in a sample of older workers. Bertolino et al. (2011) also found a positive relation between proactive personality and training motivation, although the effect was weaker for older workers. Proactivity is more important for older workers, as research findings show that HR practices and organizational climate offer fewer opportunities and support for learning when it concerns older workers (Armstrong-Stassen, 2008; Armstrong-Stassen & Schlosser, 2008; Froehlich et al, 2015b), although the effect is also shown with younger workers, such as trainees (Roberts et al., 2018).

Hypothesis 2: Proactive personality in older workers is positively associated with (a) learning self-efficacy, (b) intrinsic value, (c) utility value and, indirectly, (d) intention to learn.

Past formal and informal workplace learning have been found to predict intentions to learn and future learning actions (Raemdonck et al., 2012). For example, Maurer and colleagues (Maurer et al., 2003a, b) studied 800 employees from across the US in a longitudinal study and found that prior participation in learning and development activities was a good predictor of subsequent intentions and participation. Other studies showed that the participation in formal trainings stimulated employees to engage in informal learning activities (e.g., Choi & Jacobs, 2011). Similarly, Raemdonck and colleagues (Raemdonck et al., 2012) found a significant positive relation between past learning initiative and self-directed learning when analyzing lowly qualified workers of all ages.

Hypothesis 3: Past learning activities are positively associated with (a) learning self-efficacy, (b) intrinsic value, (c) utility value and, (in)directly, (d) intention to learn.

Job Resources for Learning Motivation and Intentions to Learn

The job context may support or inhibit individuals' learning intentions and actions. When it comes to older employees, a major inhibiting factor are the predominantly negative stereotypes about the elderly's capacities for learning (Froehlich et al., 2015a; Minichiello et al., 2000) that exist on an organizational level. In other words, perceived negative age stereotypes can be considered as a reduction in resources. Furthermore, the organization or the individuals' supervisor may play a decisive role in encouraging learning no matter the age (Armstrong-Stassen & Schlosser, 2008).

Age Stereotypes

Workplace *age stereotypes* are beliefs and expectations within an organization about workers based on their age (Hamilton & Sherman, 1994). These opinions are mostly negative and inaccurate (Fiske & Neuberg, 1990). Research on age stereotypes indicates that older workers are perceived as being less motivated and having less ability to work, learn, and develop. It is perceived that older workers are waiting for their retirement, resistant to using innovative technologies and to be less employable (Raemdonck et al., 2015). In addition, it is believed that they have difficulties with dealing with new challenges in a flexible and creative way (Gaillard & Desmette, 2010). Also, in relation to learning and development, older workers are thought of as less able and willing to learn and develop at work. It is believed that they learn less quickly and consequently have difficulties remaining up to date (Warr & Pennington, 1993). Because of these age-related, often institutionalized stereotypes in the organization, older workers might act accordingly and lose their self-efficacy in their ability to learn and perceive learning at work as less valuable. In experimental studies, negative relations have been found by Bensadon (2015) between age-stereotypes and memory self-efficacy and by Gaillard and Desmette (2010) between age-stereotypes and motivation to learn and develop.

Hypothesis 4: Perceived institutionalized negative stereotypes in older workers is negatively associated with motivation in terms of (a) learning self-efficacy, (b) intrinsic value, (c) utility value in older employees and, (in)directly, (d) intention to learn.

Organizational and Supervisor Support

According to the social exchange theory, the relation employees have with their organization is based on implicit obligations and trust. It is argued that employees are willing to exchange work performance for additional, less tangible values, such as feelings of being valued and supported (Eisenberger et al., 2001). Within this framework, the notion of perceived support for employee development was introduced

(Tsui et al., 1997). Perceived support for employee development concerns employees' perceptions of the contextual support they receive from their organization in their professional development. It refers to employees' evaluation of their organizations' dedication to support them in acquiring new skills and knowledge (Koster et al., 2011). To understand learning support, literature makes a distinction between supervisor and organizational support since organizations and supervisors represent distinct but related resources of support for learning and development (Maurer et al., 2008). While supervisors are supposed to embody the organizational support for learning, they might demonstrate much less supportive behavior as envisioned by the organization. This is especially true when it comes to older workers: Particularly older workers are suffering from low organizational and supervisor support for learning. Maurer et al. (2003a, b) found that older employees receive less support for development. More specifically, Maurer et al. (2008) found that workers of age 40 and older receive less social support and encouragement from direct leader and colleagues and less opportunities to exchange. Older workers are also less likely to be offered training opportunities than their younger colleagues due to employer decision-making (Sterns & Harrington, 2019; Taylor & Urwin, 2001) and rarely do they receive on the job training (Armstrong-Stassen, 2008). Furthermore, Zwick (2011) concluded that companies do not offer appropriate learning and development programs that take into account the preferences and needs of older employees.

This stands in stark contrast to lifespan development theories that suggest that social support at work even increases in importance with age because of the increased importance of emotion-related goals over the lifespan (Carstensen, 2006). Support for learning may allow for increased opportunities to share accumulated experiences and knowledge between coworkers which might fulfill older workers' need to maintain meaningful relationships (Cadiz et al., 2019). Furthermore, Birdi and colleagues (Birdi & Zapf, 1997; Birdi et al., 1997) found that older workers reacted more strongly to negative feedback than their younger colleagues and might therefore benefit more from positive social support. Truxillo et al. (2012, p. 351) stated that the relational aspects of receiving social support should be especially attractive to older workers. On basis of these insights, Cadiz et al. (2019) highlight that research should further investigate the relationship between age and social support as until now the role of social characteristics did not receive much attention.

Organizational support refers to the programs, processes and assistance provided by the organization to support and enhance employees' career success (Ng & Sorensen, 2008). Research reveals a positive impact of the perceived organizational support on a variety of employees' attitudes and behaviors. A supportive organizational work environment that values, appreciates, and helps employees is considered as a resource and facilitator for their learning and development (Eraut, 2004; Nikolova et al., 2014). Noe and Wilk (1993), for example, found that organizations could motivate employees to learn by providing them with appropriate working conditions, realistic choices and information regarding development activities. Lancaster and Di Milia (2014) also found positive effects on employees' learning when organizations paid attention to providing high-quality relevant development programs and ensured that course content was aligned with organizations' strategy and employees' work. Maurer and colleagues (Maurer et al., 2003a, b), for example,

found a significant indirect and positive relationship between work support and intentions to participate in learning and development.

Various (meta-analytical) review studies have been bringing together research on the relation between organizational support and training transfer, and the role of motivation within that relationship. Blume and colleagues (Blume et al., 2010), for example, studied 89 empirical studies that explored the impact of predictive factors such as organizational support on the transfer of training and the role of motivation. Results confirmed the important role of a supportive work environment and participants' motivation. Next, previous research *found* perceived organizational support to be linked with job involvement, and with affective commitment with samples of dairy workers in Ireland and New Zealand (O'Driscoll & Randall, 1999). Colakoglu et al., (2010) conducted a multivariate data analysis on a sample taken from the hotel industry. They found that perceived organizational support had a significant positive effect on job satisfaction, affective, normative, and continuous commitment.

Hypothesis 5: Organizational support for professional development is positively associated with motivation in terms of (a) learning self-efficacy, (b) intrinsic value, and (c) utility value in older employees and, (in)directly, (d) intention to learn.

Supervisor support is defined as the extent to which supervisors reinforce the use of learning on the job, especially in terms of setting goals to use learning, giving assistance and offering positive feedback (Govaerts et al., 2018; Holton et al., 1997; Lancaster & Di Milia, 2014; Park et al., 2018). Supervisors help employees learn by encouraging, reinforcing, and providing opportunities to practice newly learned skills (Burke & Hutchins, 2007). Literature shows evidence for the importance of supervisor support for employees' motivational learning related outcomes (Kirwan & Birchall, 2006; Leitl & Zempel-Dohmen, 2006; Park et al., 2018). For example, Noe and Wilk (1993) found that employees are more likely to engage in developmental activities such as training when they have supervisors who are supporting their employees' efforts. Also, previous research found evidence for a positive relation between supervisor support and motivation (for learning) or affective commitment, in various settings (e.g., Al-Eisa et al., 2009; Kuvaas & Dysvik, 2010; Park et al., 2018). Similarly, within the context of training, Govaerts and colleagues (Govaerts et al., 2018) found that learners who received higher supervisor support demonstrated a significantly higher level of learning transfer.

Supervisor support, often seen as part of organizational support, affects several work-related outcomes, including motivational variables. Different scholars showed a positive correlation between supervisor support and motivation to learn (e.g., Switzer et al., 2005). Employees are not only more motivated to learn when they feel supported by their supervisor, they also present higher levels of training self-efficacy, motivation to transfer, learning goal orientation and transfer (Al-Eisa et al., 2009; Chiaburu et al., 2010; Lancaster & Di Milia, 2014; Van Der Klink et al., 2001). Studying both supervisor support and organizational support in 735 workers, Gillet and colleagues (Gillet et al., 2013) found that work motivation was

significantly related to both intra-individual (global motivation) and contextual factors (organizational support and supervisor autonomy support).

Hypothesis 6: Supervisor support for professional development is positively associated with motivation in terms of (a) learning self-efficacy, (b) intrinsic value, and (c) utility value in older employees and, indirectly, (d) intention to learn.

The Complete Model

Based on the theoretical and empirical arguments presented above, we arrive at the conceptual model outlined in Fig. 1.

Methods

Sample and Procedure

Given the challenges the financial sector faces (digitalization, aging workforce, restructuring because of financial crisis, ...), we contacted the Belgian Financial Sector Federation to find volunteering organizations to test the hypothesized model. Two large banks accepted to participate in the study. Of these banks, all employees aged 50 or older were invited to participate in an online survey (available in Dutch and French) by their respective Human Resource departments. Before starting the questionnaire, the participants indicated their agreement on the informed consent. A reminder message was sent two weeks after the invitation. A total of 870 older employees responded. Five-hundred and forty-one (62%) of the respondents were male, 329 (38%) were female. 56% of the participants were French-speaking, 44% Dutch-speaking. The average age was 54.54 years ($SD=3.32$ years). On average, they worked for 29.23 years ($SD=10.16$) in the current organization and for 10.29 years ($SD=10.32$ years) on the current job. Most of the respondents were

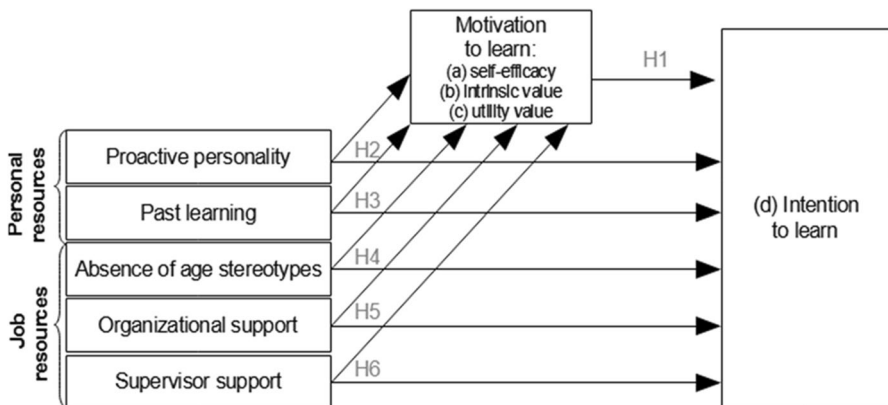


Fig. 1 Conceptual model

managers either at the top (45%) or the middle level (41%); 14% were employees without managerial functions.

Instruments

All scales used a Likert scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). *Intention to learn* was measured using Follenfant et al.’s (2003) six item scale, referring to both formal (Sample item: “In the coming year, I will enroll in a training course related to my work”) and informal learning activities (Sample item: “In the upcoming year, I will learn something new for my job via self-study (books, internet)”). Internal consistency of the scale was acceptable ($\alpha = 0.73$).

Learning Motivation Follenfant et al. (2003) also developed the scale measuring workers’ learning *self-efficacy* (Sample item: “When I have to learn something new, I am confident I will succeed”; $\alpha = 0.85$; nine items). The scales for *intrinsic value* (Sample item: “Learning new things is important to me at work”; $\alpha = 0.74$; three items) and *utility value* (Sample item: “Learning helps me to become more effective in my job”; $\alpha = 0.82$; six items) have been taken from Delobbe (2007).

Personal Resources *Proactive personality* was measured with the Proactive Personality Scale short version as used in the study by Seibert et al. (1999). The scale consists of ten items (Sample item: “No matter what the odds, if I believe in something I will make it happen”, $\alpha = 0.84$). The Dutch short version of the scale was validated by Pringels and Claes (2001). *Past learning initiative* was measured on basis of the average of two items by Delobbe (2007) and Guerrero and Sire (2001): Past informal learning initiative was measured with the item “The last two years I have learned new things by executing my work tasks” and past formal learning initiative via the item “The last two years I have participated in training related to my work”.

Job Resources We measured *perceived age stereotypes* using 18 items from Maurer et al. (2008) scale measuring institutionalized stereotypical beliefs in the organization. The items measure participants’ perception of certain beliefs about older workers’ ability and desire to participate in a variety of development activities circulating in the own company (Sample item: “Is the following idea circulating in your company: Older workers have a hard time learning new skills”; $\alpha = 0.91$). *Perceived organizational support* for professional development was gauged using twelve items from Van den Brande (2002) (Sample item: “In this organization I have the possibility to confer on my possible learning needs”; $\alpha = 0.84$) and the six-item scale from Baard et al. (2004) was used to measure *supervisor support* (Sample item: “Your manager has trust in your ability to do your job well”; $\alpha = 0.88$).

As covariates we measured gender (1 = male, 2 = female), number of years in the organization, number of years in the current job, and current job level (1 = employee, 2 = middle manager, 3 = senior manager). Despite age being a focal theme of this study, chronological age enters the model as a covariate only, given that the sampling

procedure ensured a highly homogeneous group of older workers (and there is no theory to expect differences within that homogeneous group).

Analysis

For the analysis, as presented in the results section, we first focus on basic descriptive indicators and bivariate Pearson correlations. We then use structure equation modelling for hypothesis testing. For all instruments containing more than five items, we used item parceling to define the measurement model. In this approach, the measured items of each scale (latent variable) are randomly assigned to three “parcels” that are then treated as manifest variables in the measurement model of the respective latent variable (Matsunaga, 2008). For example, the 18 items that inform the perceived age stereotypes scales (see above) were assigned to three parcels. Within each parcel, the items were aggregated, and this information was used to inform the measurement model of the perceived age stereotypes latent variable. Model fit was determined by looking at the model fit indices Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI), both of which should be above 0.90 (Byrne, 2010). Additionally, model fit was assessed by the means of the Root Mean Square Error of Approximation (RMSEA) and the Standardized Root Mean Square Residual (SRMR), which should be lower than 0.06 and 0.08, respectively (Hu & Bentler, 1999). The path coefficients of the structural model were then used to test the hypotheses.

Results

Descriptive Statistics and Correlations

Table 1 gives the descriptive information about the variables as well as the correlations between them.

Hypothesis Testing

All indicators of model fit suggest a very good fit of the hypothesized model to the data: CFI=0.94, TLI=0.92, RMSEA=0.05 ($p \geq 0.05$), SRMR=0.06. Additionally, the model explained substantial fractions of the intention to learn ($R^2=56\%$), learning self-efficacy ($R^2=45\%$), intrinsic value ($R^2=45\%$), and utility value ($R^2=28\%$).

Effects on Learning Motivation

For the clarity of presentation, we will first focus on the results predicting motivation to learn. Subsequently, we will discuss the direct and indirect effects on intention to learn. In Hypotheses 2-6a, we proposed relationships between learning *self-efficacy* and an array of personal and job resources. The data confirm a positive relationship of learning self-efficacy with proactive personality ($B=0.406$, $p \leq 0.01$)

Table 1 Descriptive statistics and correlations (reliability metrics in the diagonal in italics), * $p \leq 0.05$

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Int. learn	3.54	0.68													
2 Self-eff	3.78	0.59	0.35*												
3 Utility val	3.22	0.68	0.43*	0.36*											
4 Intrinsic val	4.23	0.60	0.39*	0.48*	0.36*										
5 Proact. pers	3.66	0.47	0.33*	0.50*	0.32*	0.46*									
6 Past learning	0.53	0.50	0.44*	0.17*	0.23*	0.13*	0.19*								
7 Stereotypes	2.55	0.64	-0.41*	-0.51*	-0.28*	-0.41*	-0.35*	-0.24*							
8 Org. support	3.52	0.55	0.49*	0.24*	0.32*	0.21*	0.23*	0.44*	-0.30*						
9 Sup. support	3.67	0.75	0.36*	0.22*	0.19*	0.16*	0.18*	0.34*	-0.21*	0.60*					
10 Sex	0.38	0.49	0.03	-0.04	-0.01	-0.02	-0.01	0.03	0.00	-0.02	-0.01				
11 Age	54.54	3.32	-0.29*	-0.12*	-0.16*	-0.08*	-0.02	-0.17*	0.12*	-0.13*	-0.09*	-0.03			
12 Exp. in org	29.23	1.16	-0.25*	-0.19*	-0.26*	-0.22*	-0.10*	-0.10*	0.17*	-0.03	0.03	0.07*	0.49*		
13 Exp. on job	10.29	1.32	-0.26*	-0.14*	-0.15*	-0.20*	-0.09*	-0.11*	0.10*	-0.10*	-0.05	0.12*	0.28*	0.33*	
14 Job level	2.31	0.70	-0.23*	-0.26*	-0.17*	-0.29*	-0.23*	-0.09*	0.19*	-0.18*	-0.10*	0.27*	0.13*	0.16*	0.27*

and support from the supervisor ($B = 0.069$, $p \leq 0.05$). A negative relationship exists with the negative stereotypes ($B = -0.409$, $p \leq 0.01$). This supports Hypotheses 2a, 4a, and 6a. No statistically significant evidence for the relationship between learning self-efficacy and past learning activities and organizational support for professional development exists. In addition, tenure in the organization ($B = -0.004$, $p \leq 0.05$) and the job level ($B = -0.074$, $p \leq 0.01$) showed a statistically significant effect on learning self-efficacy (but not gender, age, or the time on the current job).

In Hypotheses 2-6b, we proposed relationships between *utility value* and an array of personal and job resources. The data confirm a positive relationship of intrinsic value with proactive personality ($B = 0.347$, $p \leq 0.01$). A negative relationship exists with institutionalized negative stereotypes ($B = -0.241$, $p \leq 0.01$). This supports Hypotheses 2b and 4b. No evidence for the relationship between intrinsic value and past learning activities, organizational support for professional development, and supervisor support for professional development exists. In addition, age ($B = 0.009$, $p \leq 0.05$), tenure in the organization ($B = -0.006$, $p \leq 0.01$) and years on the same job ($B = -0.004$, $p \leq 0.01$), and the job level ($B = -0.089$, $p \leq 0.01$) showed a statistically significant effect on intrinsic value (but not gender).

In Hypotheses 2-6c, we proposed relationships between *utility value* and an array of personal and job resources. The data confirm a positive relationship of utility value with proactive personality ($B = 0.260$, $p \leq 0.01$) and organizational support for professional development ($B = 0.354$, $p \leq 0.01$). This supports Hypotheses 2c and 5c, respectively. No evidence for the relationship between utility value and past learning activities, perceived negative stereotypes, and supervisor support for professional development exists. In addition, the tenure in the organization showed a statistically significant effect on utility value ($B = -0.013$, $p \leq 0.01$), but neither gender, age, time on the job, or the job level made a difference.

Effects on Intention to Learn

In Hypotheses 1a-c, we proposed a positive relationship between intention to learn and learning self-efficacy, intrinsic value, and utility value. The data indeed show positive effects of utility value ($B = 0.158$, $p \leq 0.01$) and intrinsic value ($B = 0.350$, $p \leq 0.01$) on intention to learn. No such effect was visible for learning self-efficacy ($B = -0.022$, ns). This lends support to Hypotheses 1b and 1c. Of the covariates, only gender ($B = 0.071$, $p \leq 0.05$) and time on the job ($B = -0.005$, $p \leq 0.01$) showed statistically significant coefficients.

With Hypotheses 2-6d we tested for direct and indirect relationships between intention to learn and personal and job resources. The data only show such a direct link for past learning activities ($B = 0.464$, $p \leq 0.01$), which supports Hypothesis 3d. In addition, the respondents' age ($B = -0.024$, $p \leq 0.01$) and gender ($B = -0.071$, $p \leq 0.05$), as well as their tenure on the job ($B = -0.005$, $p \leq 0.05$) show statistically significant effects. However, the data also show indirect effects of proactive personality via utility value ($B = 0.041$, $p \leq 0.05$) and intrinsic value ($B = 0.121$, $p \leq 0.01$) on intention to learn. Additionally, the perceived negative stereotypes had a negative indirect relationship with intention to learn via intrinsic value ($B = -0.094$, $p \leq 0.05$).

Figure 2 gives an overview of the supported relationships.

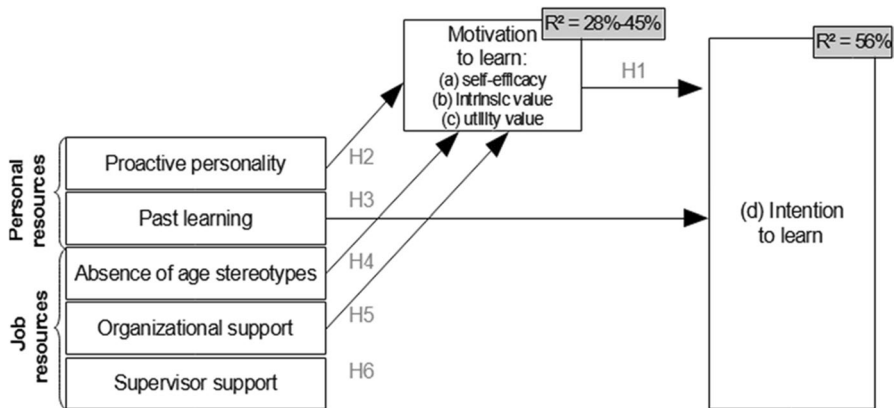


Fig. 2 Overview of the found relationships (only statistically significant relationships are shown (all are positive))

Discussion

This study extends theory with five important findings. First, in line with the Rubicon Model of Action Phases (Achtziger & Gollwitzer, 2018; H. Heckhausen & Gollwitzer, 1987) a positive relation was found between the motivational or predecisional phase and the volitional or preaction phase. More specifically, a significant relation was found between the intrinsic and utility value of learning and learning intention. Contrary to findings from previous research, no such relationship was found between learning self-efficacy and learning intention. The learning value fuels the motor for transitioning to the preaction phase which is clearly not the case for learning self-efficacy.

Second, the results show direct positive relationships between proactive personality and all dimensions of motivation studied and indirect positive relationship between proactive personality and learning intention through intrinsic and utility value. Older employees that are more proactively in general also show higher motivation for learning and indirectly higher learning intention through value. Given that the proactive personality is a relatively stable trait, this finding suggests that the level of motivation to learn may also be stable as individuals chronological age (Gegenfurtner & Vauras, 2012). This finding is corroborated by the data showing a direct link between past learning activity and the intention to learn. Interestingly, past learning activity does not seem to influence individuals' motivation for learning. This may indicate that the engagement in learning activities at some point becomes rather habitual if one continues to see the value of it; setting the intention for further learning does take little motivational effort. Future research may explore the hypothesis that there are formative years in one's career in terms of learning activity that sustainably influence an individual's learning future (Van Vuuren et al., 2011).

Third, the results indicate negative relationships between perceived negative stereotypes about older workers and learning motivation (in terms of learning self-efficacy and intrinsic value). This, in turn, affects older employees' intention to learn

positively. This supports our hypothesis and the empirical and theoretical work that led to it.

Fourth, in contrast to supervisor support, organizational support for professional development raised utility value among the respondents. Support for organization related learning and development helps employees to see the value of training and development and its instrumentality: to become more effective and meet career goals. No significant relation was found between support by the organization or supervisor and intrinsic learning value which is not surprising as the organization or supervisor will especially encourage learning for the completion of organizational goals and not because learning as such is interesting. Neither was there a relation between support by the organization or supervisor and learning self-efficacy which is not in line with previous research (e.g., Al-Eisa et al., 2009; Kuvaas & Dysvik, 2010; Park et al., 2018). In addition, we did not find evidence for the hypothesis that support by the organization or the immediate supervisor helps in setting older employees' intention to learn. Previous literature suggested that colleague support might play an even bigger role than supervisor support for employees' competence development (Froehlich et al., 2014a). An explanation for this could be that supervisor support is often an instrument to achieve shorter term goals (and longer-term development becomes somewhat less important). Future research could consider the support from colleagues as well and study in more detail the individual support relations an individual engages in. This also opens avenues for more qualitative research, as it might not be only the quantity of support received, but rather the nature of support, the delivery of support, etc. At the same time, other factors studied, such as institutionalized age stereotypes, showed positive relations with motivation (i.e., intrinsic value) and, subsequently, intention to learn, suggesting that employees might start behaving in accordance with these stereotypes when these are present. This finding is in line with Levy (1996), who showed that unconscious exposure to age-related stereotypes can introduce stereotype threat and reduced performance in older people. If these stereotypes are absent, there is room for intrinsically valuing learning for the sake of learning and this will in turn increase the intention to learn. On basis of previous research we can, therefore, advocate to minimize (age) stereotyping (Nelson, 2002; Reio & Sanders-Reio, 1999) and to build a positive age climate (Armstrong-Stassen & Schlosser, 2008).

Fifth, the covariates in the research model highlighted additional interesting relationships. Employees with a longer history at the same employer showed decreased levels of motivation (in terms of all dimensions measured). Especially for the sub-dimension of self-efficacy, this is surprising, as it could be argued that individuals with longer tenure feel more confident navigating their job environment (Zacher, 2015). However, the empirical finding may be explained by the overall job history of individual employees: Individuals staying in the same job for many years might have exhausted the job's learning potential; any further learning necessarily becomes very incremental, as the basics of the job have long been mastered (Coetzer, 2007). Another argument for this could be that longer-tenured employees, based on their longer experience, have higher levels of crystallized

intelligence, which allows them to handle their daily work tasks sufficiently well (Kanfer & Ackerman, 2004). This reduces the motivation for further learning (due to the relatively lower utility of any new competences learned). Additionally, females showed significantly lower intentions to learn. This may have various reasons, which future research may investigate. For instance, an interaction of negative age and gender stereotypes or a reduced career focus because of other commitments (e.g., looking after grandchildren) or health problems, which are more prevalent in women than in men (Casal, 2015). The positive relationship between intrinsic value and age is in line with socioemotional selectivity theory: older people tend to engage in learning for the sake of learning; interest in the content becomes more important with age (also see research on changing goals with age; e.g., Froehlich et al., 2020).

Limitations

While the large and focused sample of older employees is a strength of this paper, the sampling procedure might have introduced sampling bias. This is because Human Resource departments were asked to indicate interest in participating in this study—and organizations that are doing rather badly in terms of age climate might be inclined to decline. The results, therefore, are potentially skewed to be more positive than the average population. Also, within the participating organizations, the total sampling frame, and, therefore, the response rate, are unknown, which makes it difficult to assess potential biases. Another point regarding the data is measurement: due to the limitations of survey length, some concepts, especially past learning activities, was measured relatively superficially (in relation to other concepts of this study). Though, the items used were performing well in previous studies. Nevertheless, future research may utilize more fine-grained measurement instruments (e.g., Froehlich et al., 2017). Also, the multi-lingual context of the data collection needs to be emphasized. While we did not find statistically differences findings in our main dependent variable based on the language of the survey, we did note such differences in some of the measurement instruments of the predictors.

Old age is a relative construct; there is no absolute threshold that can be applied to any context. What can be considered an old employee in one setting might not be an old employee in another. This was not covered by our sampling procedure (and is rarely done in comparable studies), which was largely informed by national statistics and their definition of older employees. Future research may take the average age of a company into consideration when determining older employees.

Furthermore, we cannot say whether the results depict the results in a setting determined by old age or determined by a specific generation (baby boomers, in this case). A replication study that targets employees of the same age but of a different generation may help to clarify this. Especially longitudinal designs will be better able to distinguish these effects of age and generation and, quite generally, will give more confidence when it comes to the causality of effects.

Implications for Practice

The results point to several managerial implications. First, as proactive personality was found to be a major predictor of motivation to learn, it remains difficult to train employees in being proactive as this is a stable personality trait. However, companies can recruit and select employees with proactive personalities who will generally behave pro-actively regardless of the situation (McCormick et al., 2019). Despite of individual differences in proactive personality among employees, leaders can motivate and support employee pro-active behavior or cultivate a climate which fosters proactivity, for example, by giving leeway and autonomy for taking initiative and by motivating employees of all ages to explore opportunities for improvement (Froehlich & Messmann, 2017).

Second, trainings may be fruitful to educate against the negative stereotypes that often associate old age with an inability to learn. These beliefs are not helpful in keeping older workers interested in learning. However, the results also suggest an alternative solution to that challenge: learning activity builds momentum—it is easier to “keep learning” than to “start learning”, so employees at all ages should be encouraged to engage in developmental activities. This may be especially important for the middle age groups in the workplace, so that they consider themselves active learners as they enter the last third of their working lives. Of course, the learner has to take learning opportunities offered by the organization and make use of those, which might be dependent on the learner’s motivation for learning or how the individual looks at the future, seeing opportunities or rather limitations, for example (Carstensen, 2006).

Third, our findings show the importance of utility value and intrinsic value for intention to learn. When older employees perceive the learning activity as interesting and useful, they are more likely to have future intentions to learn. Supervisors and trainers should therefore explain the utility and interest of the learning activities.

Fourth, we found a consistent link between organizational tenure and demotivation which may be subject to the routine that sets in after working for several years in the same organization. In this respect, the task of the employer may be to offer new challenges at a consistent basis (e.g., by stimulating internal job mobility or by mentoring newcomers to the organization) and to provide the opportunities to learn deeply about them (Froehlich et al., 2014b).

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Data Availability Data cannot be made available due to the missing approval from the participating companies.

Declarations

Conflicts of Interests/Competing Interests The authors have report no conflicts of interest.

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