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Unraveling the complex relationship between career success and career crafting: Exploring nonlinearity and the moderating role of learning value of the job

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ABSTRACT

While scholars have devoted considerable attention to proactive career behaviors, little is known about the drivers behind these behaviors. In this study, we build on conservation of resources theory to study nonlinearity in the relationship between (objective and subjective) career success and career crafting behaviors (i.e., proactive career reflection and proactive career construction) using a sample of 702 teaching staff. Both low and high levels of subjective career success related to higher levels of proactive career reflection (i.e., U-shaped relationship), whereas only high levels of subjective career success related to higher levels of proactive career construction (i.e., strengthening quadratic relationship). Moreover, learning value of the job moderated the relationship between subjective career success and both dimensions of career crafting. Our findings indicate that educational institutions should monitor and act on the perceived career success and learning value of their teaching staff to foster their career proactivity.

1. Introduction

As a result of increasingly dynamic work environments, careers have evolved from a one-time occupational choice to an ongoing process of career crafting (De Vos et al., 2019; Savickas et al., 2009), in which employees and employers carry a shared responsibility for career management (Forrier et al., 2018; Van der Heijden et al., 2020). Analogously, organizations face rapidly changing environments, and therefore expect their employees to be proactive (Parker et al., 2017). In light of these developments, a wide body of research has shown the importance of proactive career behaviors in achieving and fostering a long-term sustainable career (Akkermans & Tims, 2017; Seibert et al., 2001; Sylva et al., 2019). Tims and Akkermans (2020) conceptualized career-oriented proactive career behaviors as *career crafting*, defined as the "proactive behaviors that individuals perform to self-manage their career and that are aimed

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at attaining optimal person-career fit" (pp. 175–176).

Yet, we still know very little about the drivers behind these proactive career behaviors, nor about the role of one's work context in shaping these behaviors. This is problematic because of two main reasons. First, so far, it is largely unclear how organizations and managers can foster proactive career behaviors (Sylva et al., 2019). As workers increasingly benefit from proactively shaping their career paths (Akkermans & Tims, 2017), a lack of knowledge regarding *how* to promote proactive career behaviors is likely to widen the gap between more proactive and less proactive workers (Bolino et al., 2010). Second, a tunnel-vision focus on positive outcomes of agentic, proactive career behaviors largely overlooks the fact that engaging in proactive behaviors also requires the investment of resources like time and effort (Bolino et al., 2010; Pingel et al., 2019) and the contextual constraints individuals may face in their career trajectories (King, 2004). Considering that engaging in proactive career behaviors requires resource investment, we argue that career success, as a personal resource and a reflection of resource attainment, relates to career crafting. Moreover, we argue that the work context, in the form of the learning value of one's job, moderates the relationship between career success and career crafting.

The first aim of this research is, therefore, to study the relationship between career success and career crafting from the perspective of COR theory. This theory suggests that the relationship between career success and career crafting may be explained through two competing motives (i.e., resource conservation and resource acquisition). We argue that the resource acquisition motive drives career crafting and is the most salient at both low and high levels of career success. At low levels of career success, we expect that individuals are motivated to acquire resources to improve their situation. At high levels of career success, individuals likely perceive abundant resources to acquire even more resources through career crafting. We thereby expect that the relationship between career success and career crafting takes a nonlinear, U-shaped form. Prior research resulted in inconsistent findings regarding the relationship between career success and proactive career behaviors (cf. De Vos et al., 2009a; De Vos & Soens, 2008; Verbruggen et al., 2007). We argue that inconsistency in these findings may have been caused by a lack of consideration of potential nonlinear relationships (Cohen et al., 2003). By exploring nonlinearity in the relationship under study, we aim to show that the relationship between career success and proactive career behaviors may be more complex than assumed in previous research. We thereby present an alternative view and challenge the conventional presumption that career success can solely be conceptualized as a career outcome (cf. Spurk et al., 2019).

Our second aim is to examine the role of the job context in the relationship between career success and career crafting by incorporating learning value of the job as a possible moderator. Despite the importance of job characteristics for attaining career goals (Fried et al., 2007; Hall & Heras, 2010), research integrating job design and career outcomes has been scarce (Parker et al., 2017). The learning value of one's job comprises the perceived value of a job as a nutrient for the employee's further professional development and refers to the extent to which occupational knowledge and skills can be used and expanded in one's job (Boerlijst et al., 1993; Van der Heijden & Bakker, 2011). The learning value in one's job may be perceived as an opportunity, and even as a necessity, for further career development (Van der Heijden & Spurk, 2019). By incorporating learning value of the job as a moderator, we add to research on the role of the organizational context in contemporary careers (De Vos et al., 2020) and follow suggestions by scholars that proactivity at work can best be understood through an interactionist lens (Van der Heijden & Spurk, 2019).

We conducted our research among a sample of teaching staff in upper secondary vocational education and training (VET) institutions in the Netherlands. These institutions prepare students for the labor market by providing a combination of school-based and work-based learning. This is a particularly relevant context to study proactive career behaviors because of three main reasons: (1) teaching staff may especially benefit from crafting their career paths as formalized career progression is limited (cf. Runhaar et al., 2019); (2) vocational teaching staff members need to constantly update their knowledge and skills throughout their career to foster a good connection between provided education and the changing labor market (Van der Klink & Streumer, 2017); and (3) vocational teaching staff members are expected to be role models and to stimulate proactive career behaviors of their students (Meijers et al., 2017). As formalized career progression is limited in the vocational education sector, subjective career success indicators may play a larger role in predicting behaviors than objective career success indicators (Spurk & Abele, 2014). We thereby examine the relative importance of both objective career success (i.e., hierarchical career success) and subjective career success (i.e., career satisfaction) in predicting career crafting.

2. Theory

2.1. Career success as predictor of career crafting

As contemporary careers are no longer linear, stable and within one organization, individuals need to proactively shape, or craft, their career paths to build a long-term fulfilling career (Akkermans & Tims, 2017; De Vos et al., 2019). To capture the proactive behaviors aimed at shaping one's career, Tims and Akkermans (2020) introduced the concept of career crafting. This concept refers to proactive behaviors to enhance person-career fit, and is based on a synthesis of literature on job crafting (Tims et al., 2012), proactive career behaviors (e.g., De Vos & Soens, 2008), and career competencies (Akkermans et al., 2013). First, job crafting and career crafting are both proactive behaviors. However, job crafting refers to "the changes that employees may make to balance their job demands and job resources with their personal abilities and needs" (Tims et al., 2012, p. 174). It is thereby aimed at enhancing person-job fit. Career crafting focuses on person-career fit and, hence, one's overarching career (Tims & Akkermans, 2020). Second, in line with previous conceptualizations of proactive career behaviors, career crafting consists of a cognitive and a behavioral component (De Vos & Soens, 2008). Importantly, while the literature on proactive career behaviors uses the terms 'cognitive' and 'behavioral', both refer to proactive self-managing behaviors. The cognitive component comprises proactive anticipation and planning, whereas the behavioral component refers to activities such as building a network and creating career opportunities. Yet, the proactive career behaviors literature focuses mainly on specific behaviors, whereas career crafting is a more general approach to proactive career management

(cf. Tims & Akkermans, 2020). Finally, career crafting is based on the notion of career competencies, which, similar to the literature on proactive career behaviors and career crafting, entails reflective, communicative, and behavioral career competencies (Akkermans et al., 2013). However, career competencies are knowledge, skills, and abilities; career crafting is proactive behavior.

Based on their synthesis of the literature on job crafting, proactive career behaviors, and career competencies, Tims and Akkermans (2020) presented a two-dimensional model of career crafting. This model consists of *proactive career reflection* and *proactive career construction*. First, proactive career reflection concerns proactive behaviors that focus on exploring and assessing career-related motivations, values, and goals. This dimension connects with the notions of cognitive job crafting (Wrzesniewski & Dutton, 2001), cognitive career self-management (De Vos & Soens, 2008), and reflective career competencies (Akkermans et al., 2013). Second, proactive career construction comprises proactive behaviors related to career-related networking, self-profiling, and goal striving. This dimension builds on the notions of structural and social job crafting (Tims et al., 2012), behavioral career self-management (De Vos & Soens, 2008), and communicative and behavioral career competencies (Akkermans et al., 2013).

Integrating career crafting with COR theory (Hobfoll, 1989, 2001), we view career crafting as *proactive resource management behaviors* aimed at using, maintaining, and acquiring career resources to achieve career goals (De Vos et al., 2020; Hirschi & Koen, 2021; Koen & Parker, 2020). Through proactive career reflection, individuals can explore their available career resources and how they can be utilized to reach their career goals. Moreover, it enables them to gain and maintain insight into their career aspirations (i.e., career insight, Greco & Kraimer, 2020). Moreover, through showing others one's strengths and goal striving (i.e., proactive career construction) individuals can use and maintain their career networks, create career opportunities, and gain career support (Hirschi et al., 2018). Hence, by engaging in career crafting, individuals manage their resources, aiding them in attaining career goals (Hirschi & Koen, 2021).

In line with COR theory (Hobfoll, 1989, 2001) and a resource perspective on career success (Spurk et al., 2019), we contend that both objective and subjective career success function as resources that are related to the two distinguished dimensions of career crafting in a nonlinear, U-shaped fashion. Career success refers to "the real or perceived achievements individuals have accumulated as a result of their work experiences" (Judge et al., 1999, p. 622). Building on this definition, career success is typically conceptualized as objective and subjective career success (Spurk et al., 2019). Objective career success concerns indicators that can directly and objectively be observed by others, like salary, formal promotions (Heslin, 2005) and substantial increases in job scope and/or responsibilities (Van der Heijden et al., 2009a,b). Subjective career success concerns an internal, subjective experience to evaluate one's career attainments (Spurk et al., 2019). Though subjective career success is a multi-faceted construct (cf. Briscoe et al., 2021; Shockley et al., 2016), in the vast majority of empirical studies the construct has been operationalized in the form of career satisfaction (Akkermans & Kubasch, 2017; Spurk et al., 2019). Recently introduced multi-faceted approaches to subjective career success still emphasize the critical role of satisfaction with one's career (Shockley et al., 2016). Therefore, in this study, we follow prior research by studying subjective career success through the lens of career satisfaction.

Career success can function as a resource in itself and reflects the attainment of other valued career resources (Bargsted et al., 2021; Grebner et al., 2010; Spurk et al., 2019). Moreover, indicators of career success are perceived by other individuals. Therefore, successful individuals may be treated differently by relevant individuals in their work environment and be provided with additional resources (Spurk et al., 2019). Specifically, workers in higher hierarchical positions (i.e., objective career success) typically have more access to career development resources like career opportunities and mentoring support, facilitating their further attainment of career goals (Singh et al., 2009; Stumpf & Tymon, 2012). Similarly, individuals who positively evaluate their career (i.e., subjective career success) develop more psychological resources throughout their careers, such as self-efficacy (Spurk & Abele, 2014) and career commitment (Shockley et al., 2016). These resources can help and motivate them to attain further career goals.

From the perspective of COR theory (Hobfoll, 1989), two competing motives can play a role in the relationship between career success as a resource and career crafting. First, as individuals are averse to resource loss and as the latter has a larger impact than resource gain, they are motivated to conserve their resources through resource conservation (Halbesleben et al., 2014; Hobfoll, 2001). While career crafting may have desirable results in the form of attaining career resources, engaging in such proactive behaviors also costs effort and resources (Bolino et al., 2010; Pingel et al., 2019). Individuals who lack resources are more vulnerable to resource loss, while individuals with more resources are in a better position for further resource gain (Hobfoll et al., 2018). Hence, from a resource conservation perspective, less successful people (i.e., those with low levels of career resources) will strive to conserve their remaining resources and engage less in career crafting. In contrast, more successful people (i.e., those with high levels of career resources) will be less motivated to conserve their existing resources as they have a richer resource reserve to fall back on. Therefore, more successful people may be more readily motivated to invest resources in career crafting. In other words, from the perspective of the resource conservation motive, the relationship between career success and career crafting will be positive.

However, as a second mechanism, individuals are motivated to acquire new resources through resource acquisition, to protect against resource loss, recover from resource loss, and attain resources in their own right to reach goals (Hobfoll, 2001). Related to this resource acquisition motive is the gain paradox principle, which implies that acquiring resources becomes more salient when individuals experience low levels of resources (Hobfoll et al., 2018). As career crafting aims to use, maintain, and acquire career resources (Hirschi & Koen, 2021), we expect that a perceived lack of resources promotes engagement in career crafting. Therefore, from a resource acquisition perspective, low levels of career success will relate to high levels of career crafting, and the relationship between career success and career crafting will be negative.

We argue that both competing motives play a role in the relationship between career success and career crafting and expect to find a non-linear, U-shaped relationship. At low levels of career success, we expect that individuals perceive a lack of resources to reach their career goals. When individuals perceive low levels of resources, gaining resources will increase in salience, herewith promoting the resource acquisition motive (Hobfoll, 2001; Hobfoll et al., 2018; Lim et al., 2020). As individuals gain more resources, as reflected in

their experienced career success, resource acquisition decreases in salience, hampering their career crafting. Simultaneously, however, as individuals gain more resources, they also improve their position for further resource gain. As such, they are less vulnerable to resource loss (Halbesleben et al., 2014), again increasing the salience of resource acquisition and decreasing the salience of resource conservation (Lim et al., 2020). We, therefore, expect that a tipping point exists in the relationship between career success and career crafting, where the resource acquisition motive increasingly starts to outweigh the resource conservation motive again. Finally, at high levels of career success, we expect that individuals perceive ample resources to reach their career goals. Those people who possess more resources are generally in a better position for further resource gain and are less affected by resource loss (Halbesleben et al., 2014), and therefore more readily prioritize resource acquisition over resource conservation (Lim et al., 2020).

To go into more detail, we expect that individuals who have low levels of objective career success perceive a relative lack of career resources in comparison to more successful peers (Heslin, 2005; Spurk et al., 2019) and therefore seek additional resources to signal their competence and attain career goals. At high levels of objective career success, we expect that individuals perceive ample resources in their work environment to engage in career crafting. Next, at low levels of subjective career success, individuals likely perceive low levels of psychological resources in their work, like self-efficacy (Spurk and Abele, 2014) and career commitment (Shockley et al., 2016). Therefore, we expect that individuals who perceive low levels of subjective career success are motivated to engage in career crafting to improve their work situation. Moreover, subjective career success is an evaluation of attaining career goals (Greco & Kraimer, 2020; Greenhaus et al., 1990). Individuals who negatively evaluate their attainment of career goals may feel that they should reflect on their career goals, eventually readjust them (Seibert et al., 2013) and acquire the necessary resources to attain these goals through career crafting. Again, at high levels of subjective career success, we expect individuals to perceive ample resources to engage in career crafting. Moreover, through the subjective experience of success, successful individuals may be reinforced in their self-efficacy and motivation to set and achieve new career goals (Hirschi & Koen, 2021), further motivating career crafting.

In support of our expectations, previous research showed the relevance of the competing resource conservation and resource acquisition motives in understanding employee proactive behaviors (i.e., voice; Ng & Feldman, 2012) and indicated that the relationship between perceived resource status and employee proactive behaviors can take a U-shaped form (Qin et al., 2014). Altogether, we hypothesize a nonlinear, U-shaped relationship between career success and career crafting. Specifically, individuals will engage more in career crafting at low and high levels of career success than at moderate levels of career success.

Hypothesis 1a. Objective career success and career crafting are related in a nonlinear, U-shaped form. The highest levels of career crafting will be found at low and high levels of objective career success.

Hypothesis 1b. Subjective career success and career crafting are related in a nonlinear, U-shaped form. The highest levels of career crafting will be found at low and high levels of subjective career success.

2.2. The moderating role of the learning value of the job

Next, we posit that learning value of the job moderates the relationship between career success and career crafting. The learning value of the job refers to individual perceptions of "the extent to which occupational knowledge and skills can be used and expanded in one's job position" (Boerlijst et al., 1993; Van der Heijden & Bakker, 2011, p. 234). It is determined by the nature of one's job assignments, responsibilities, and autonomy (Van der Heijden et al., 2016). To develop a long-term fulfilling career, employees benefit from perceiving ample learning opportunities in their current job, allowing them to utilize their skills and knowledge (Hall & Heras, 2010; Van der Heijden et al., 2016; Van der Heijden & Bakker, 2011). As a result, jobs that allow individuals to display and further develop their skills and knowledge act as resources that can aid in achieving career goals (Hirschi et al., 2018; Van der Heijden et al., 2016; Van der Heijden & Spurk, 2019). In other words, jobs with a high learning value can be used to attain and practice the necessary knowledge and skills needed for further career growth.

Our expectation of an interaction between career success and the learning value of the job is built upon the complementarity issue in COR theory (Halbesleben et al., 2014). The value an individual attaches to a resource depends on the extent to which an individual perceives a resource to aid in attaining one's goals. Moreover, as individuals who have more resources are also better positioned to capitalize on their resources, resources have more value when they complement one's existing resources (Halbesleben et al., 2014). Different resources can thus complement their respective value toward goal attainment. Individuals who perceive ample learning opportunities in their jobs may see more value in their career success to engage in career crafting than individuals who perceive low learning opportunities (Fried et al., 2007; Vandenberghe & Panaccio, 2012).

When individuals perceive low levels of learning value in their job, perceptions of career success may have low value for attaining career goals, as individuals perceive limited career growth potential in their current jobs (Vandenberghe & Panaccio, 2012). However, when individuals perceive high levels of learning value in their jobs, perceptions of career success likely aid them in attaining career resources and career goals as they perceive career growth potential and the resources to capitalize on this potential. Furthermore, when learning and development opportunities are combined with psychological resources like career success perceptions, individuals perceive a sense of progress and growth, promoting further resource acquisition (Porath et al., 2012). To illustrate, individuals who perceive great learning value in their job and who perceive career success likely feel effective and committed to conquering the challenges in their job to develop themselves further, set new goals, and acquire more career resources. All in all, we expect the learning value of the job to strengthen the positive relationship between career success and career crafting at moderate to high levels of career success (i.e., in the presence of career success as a resource) by increasing the value of career success as a resource for career crafting. Based on the overview given above, we hypothesize:

Hypothesis 2a. Learning value of the job moderates the U-shaped relationship between objective career success and career crafting, such that at moderate to high levels of objective career success, learning value of the job will strengthen this relationship.

Hypothesis 2b. Learning value of the job moderates the U-shaped relationship between subjective career success and career crafting, such that at moderate to high levels of subjective career success, learning value of the job will strengthen this relationship.

3. Method

3.1. Study context

We conducted our study among teaching staff of upper secondary vocational education and training (VET) institutions in the Netherlands. Upper secondary VET institutions in the Netherlands prepare students aged 16 and above who have already followed primary and lower secondary education for a wide range of vocational careers. Study programs typically last two to four years, consist of both school- and work-based learning, and are divided among agriculture, technology, economy and business, and health and welfare (Cedefop, 2016). In 2015, the 67 upper secondary VET institutions in the Netherlands provided education to roughly 480.000 students (CBS Statline, 2021).

The formal career trajectories of teaching staff in upper secondary VET institutions in the Netherlands are bound to formalized, collective function titles and pay scales. However, institutions and teams are free to decide on the tasks and responsibilities of functions and staff members. Upper secondary VET institutions in the Netherlands have considerable autonomy and decision-making authority regarding their organizational policies and the content of their study programs (Thomsen et al., 2015). Institutions are obliged to provide competence-based education but have decision freedom regarding *how* competencies are developed (Sturing et al., 2011). The teaching staff is, in general, organized in teacher teams that are responsible for the provision and development of a specific study program, as well as the administrative tasks related to the study program, such as planning. Teacher teams can decide how tasks within the teams are distributed among team members (Thomsen et al., 2015). In general, most teaching staff members, therefore, have both teaching tasks and other leadership, coordination and administration tasks (Thomsen et al., 2015).

3.2. Sample and procedure

We collected self-report survey data in 2015 in the context of a study focused on the careers of teaching staff working in partly government-funded secondary VET institutions in the Netherlands. Teaching staff was approached and invited to participate, either directly when permitted by the institution or indirectly through newsletters of participating educational institutions and professional associations. Surveys were administered online. The online survey was open during a time window of three months. Survey duration was approximately 20 min. To minimize social desirability bias, we informed respondents that responses would be treated confidentially and that anonymity was guaranteed at all times (Podsakoff et al., 2012).

We excluded respondents with missing values on study variables from further analysis (i.e., listwise deletion) as Little's MCAR test indicated that the data was missing completely at random ($p > .05$; Little, 1988). After listwise deletion, we manually screened the study data for careless responding based on response patterns. We found no indications of careless responding. Moreover, careless responding was likely not a substantial issue in our survey, as participants were not provided with an incentive for participating and

Table 1
Demographics of study participants.

Variable	Male (n = 391)	Female (n = 311)	Total (n = 702)
	M (SD)	*M (SD)*	*M (SD)*
Age	54.43 (8.93)	51.33 (10.03)	53.06 (9.55)
Working hours	37.61 (4.70)	31.36 (6.87)	34.85 (6.55)
	Frequency (percentage)	Frequency (percentage)	Frequency (percentage)
Function			
Instructor	15 (3.8%)	10 (3.2%)	25 (3.6%)
Other educational support functions with teaching role	7 (1.8%)	8 (2.6%)	15 (2.1%)
Teacher without leadership duties	286 (73.1%)	215 (69.1%)	501 (71.4%)
Teacher with leadership duties	49 (12.5%)	30 (9.6%)	79 (11.3%)
Miscellaneous, but with teaching role	34 (8.7%)	48 (15.4%)	82 (11.7%)
Educational level			
Lower secondary education	16 (4.1%)	5 (1.6%)	21 (3%)
Higher secondary vocational education	30 (7.7%)	13 (4.2%)	43 (6.1%)
Associate degree	5 (1.3%)	4 (1.3%)	9 (1.3%)
Bachelor	210 (53.7%)	178 (57.2%)	388 (55.3%)
Master	126 (32.2%)	110 (35.4%)	236 (33.6%)
Doctorate	2 (0.5%)	0 (0%)	2 (0.3%)
None of the above	2 (0.5%)	1 (0.3%)	3 (0.4%)

were therefore likely intrinsically motivated to participate (Goldammer et al., 2020). We identified no univariate outliers for the study variables. The final sample for data analysis consisted of 702 full responses across 49 partly government-funded secondary vocational education institutions, comprising 73% out of the total of 67 government-funded vocational education institutions in the Netherlands. Participants fulfilled a wide range of functions but were all directly involved in teaching. We categorized the range of functions participants fulfilled into five groups: (1) Instructors, (2) Other educational support functions with teaching roles (3) Teachers without leadership duties, (4) Teachers with leadership duties, and (5) Miscellaneous but with teaching role. Instructors and other educational support functions support teachers in the provision of education and primarily provide practice-based education under the responsibility of a teacher. Teachers have a broader array of tasks and are responsible for the development, maintenance, and execution of education programs, as well as the guidance of students. An overview of the demographics of the study participants is given in Table 1. As gender may relate to one's hierarchical position (Ng et al., 2005), we have provided separate demographics for men and women.

3.3. Measures

All of the adopted measurement instruments in this study have been thoroughly validated in previous research. The surveys were administered in Dutch.

Objective career success was conceptualized as hierarchical career success, and measured with two items (Gattiker & Larwood, 1988; Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009). The first item measured *organization-specific promotions* and was defined as "How many promotions (every increase in hierarchical level and/or significant increase in job responsibilities or job scope) have you experienced since joining your current employer?". The second item measured *overall promotions* and was defined as "How many promotions (every increase in hierarchical level and/or significant increase in job responsibilities or job scope) have you experienced in your overall career?". As noted before, formalized career progression was limited in our study context. However, educational staff may nonetheless grow in job responsibilities or job scope by, for example, gaining leadership duties in an education team. We, therefore, posit that the hierarchical career success measure is a valid operationalization of objective career success in our study context. While previous research also frequently conceptualized objective career success as salary level (Ng et al., 2005; Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009), we chose not to include salary as an indicator of objective career success since the salaries in our study context were fixed within collective pay scales which predominantly augmented based on tenure (see Haelermans et al., 2012).

Subjective career success was measured using the five-item Career Satisfaction Scale developed by Greenhaus et al. (1990). This scale was widely used in previous research to measure subjective career success (Ng et al., 2005; Spurk et al., 2019) and was validated in the Dutch context (Semeijn et al., 2020). Two example items for this scale were: "I am satisfied with the success I have achieved in my career" and "I am satisfied with the progress I have made towards meeting my goals for the development of new skills". Items were scored on a 5-point Likert scale (1 = very unsatisfied, 5 = very satisfied). The scale reliability in our sample ($\alpha = 0.84$) was good and comparable to the scale reliabilities found in previous research (e.g., Spurk et al., 2011, average α across time = 0.84; Semeijn et al., 2020, $\alpha = 0.79$).

Learning value of the job was measured using an instrument consisting of six items (Van der Heijden & Bakker, 2011). Previous research found significant relationships between learning value of the job and the enhancement of employability (e.g., Van der Heijden et al., 2009a; Van der Heijden et al., 2016; Van der Heijden & Spurk, 2019), showing the predictive validity of the construct. Two example items for this scale were: "The experience I gain in my job encourages me to develop new capabilities" and "In my work I can completely utilize my capabilities". Items were scored on a 6-point Likert scale (1 = strongly disagree, 6 = strongly agree). The scale reliability in our sample ($\alpha = 0.90$) was good and comparable to the scale reliabilities found in previous research (Van der Heijden et al. (2009a), $\alpha = 0.89$; Van der Heijden et al. (2016), $\alpha = 0.81$).

Career crafting was measured using the Career Crafting Survey by Tims and Akkermans (2020). In three empirical studies, Tims and Akkermans (2020) demonstrated the discriminant and factorial validity of this instrument and showed that career crafting accounted for incremental variance in predicting perceived employability, over and above organizational career management (i.e., incremental validity). This instrument consists of two dimensions: proactive career reflection and proactive career construction. Two example items for the proactive career reflection dimension were: "I spend time reflecting on my passions in my work and career" and "I explore the possibilities available to me to continue developing myself". Two example items for the proactive career construction dimension were: "I make sure that significant persons in my work are up to date about my performance and results" and "I deliberately show others what I am good at". Both dimensions were measured with four items scored on a 6-point Likert scale (1 = never, 6 = always), measuring the frequency of engagement in the specific behavior reflected by the item. The scale reliabilities of the proactive career

Table 2
Confirmatory factor analysis results.

Model	$\chi 2$	*df*	*p*	CFI	TLI	RMSEA [90% CI]
Hypothesized four-factor model: one item removed for subjective career success	485.11	129	.000	0.953	0.938	0.063 [0.057, 0.069]
Hypothesized four-factor model	608.49	146	.000	0.941	0.924	0.067 [0.062, 0.073]
Three-factor model: combines career crafting dimensions in one factor	952.168	149	.000	0.898	0.870	0.088 [0.082, 0.093]
One factor model (CMB): all latent variables on a single factor	4569.05	152	.000	0.441	0.301	0.204 [0.199, 0.209]

Note. CMB = common method bias.

reflection subscale (α = 0.88) and the proactive career construction subscale (α = 0.86) were good and comparable to the scale reliabilities found in previous research (Tims & Akkermans, 2020, α = 0.80 and α = 0.85 respectively). A confirmatory factor analysis confirmed the dimensionality of the career crafting construct (see Table 2).

3.4. Control variables

We controlled for gender, age (in years), and weekly working hours to account for potential non-response bias and spuriousness of the study results. Previous research indicates gender and age may be related with the predictor variables learning value of the job (Van der Heijden et al., 2016) and objective career success (Ng et al., 2005), and that age may be negatively related with the outcome variable career crafting (i.e., proactive career behaviors; Strauss et al., 2012). Moreover, we assumed that weekly working hours may be related to our antecedent variable career success (see also Ng et al., 2005). Lastly, gender, age and weekly working hours may be related to career goals and the extent to which individuals prioritize their careers, hereby possibly influencing the relationship between career success and career crafting (Jung & Takeuchi, 2018; Sturges & Guest, 2004).

3.5. Instrument validation & common-method bias

Confirmatory Factor Analysis (CFA) was performed in AMOS 27 to validate the factor structure of the hypothesized measurement model. We followed the guidelines proposed by Brown (2015) to evaluate model fit (CFI and TLI close to 0.95 or higher and RMSEA close to 0.06 or below). Based upon the outcomes of the CFA and model fit testing, we decided to remove one item of the subjective career success scale, "I am satisfied with the progress I have made toward meeting my goals for income", as the factor loading was relatively low (λ < 0.6) and removal of this item improved model fit. Moreover, the empirical support for removing the item is supported from a contextual point of view. The salary level/evolution is fixed in our study's professional context (Haelermans et al., 2012), making an item referring to income change, depending on meeting income goals, less relevant in the framework of our specific study. The Cronbach's alpha of the scale did not change after item deletion (α = 0.84). The hypothesized six-factor measurement model with one item removed of the subjective career success scale showed the best fit with the data and entailed acceptable fit indexes (χ^2 [129] = 485.11, χ^2/df = 3.761, CFI = 0.953, TLI = 0.938, RMSEA = 0.063 [90% CI: 0.057, 0.069]). The model fit indexes of the three tested alternative measurement models can be found in Table 2.

Because we used single-source, cross-sectional survey data to test our hypotheses, our study design was prone to common method bias (CMB). We therefore implemented the procedural CMB remedies as proposed by Podsakoff et al. (2012), where possible, by: (1) incorporating an objective measure for the predictor objective career success; (2) using existing, thoroughly validated scales; (3) proximally separating the items measuring the predictor and outcome variables; and (4) using different Likert scales and scale points. Our choice for single-source survey data was further justified by three arguments as stated by George and Pandey (2017). First, our study focused on individual, self-perceptual constructs, herewith inhibiting the use of other-source data. Second, Harman's one-factor test and the correlations between the study variables did not indicate severe CMB issues caused by common method variance. A principal components analysis showed that 33.672% of the variance of the items making up the study constructs could be explained through a single factor, indicating the absence of biasing levels of common method variance (Fuller et al., 2016). Third, our hypotheses only included quadratic and interaction effects which cannot be spurious products of CMB (Siemsen et al., 2010).

3.6. Data analysis strategy

We tested our hypotheses using hierarchical multiple regression analysis in SPSS 27. The control variables age and working hours, the predictor subjective career success and the moderator learning value were mean-centered before data analysis to improve interpretation of the study results, as these variables did not have meaningful zero-values (Dalal & Zickar, 2012).

To test Hypotheses 1a and 1b, we tested for a U-shaped relationship between career success and career crafting following the three steps proposed by Lind and Mehlum (2010). As a further robustness test, we performed an interrupted regression analysis in which we estimated two separate regression slopes of the relationship between X and Y; one for values of X below the turning point[1] of the U-shaped relationship and one for values of X above the turning point (see Simonsohn, 2018). To test Hypotheses 2a and 2b, we tested for a turning point shift moderation following the steps proposed by Haans et al. (2016) and tested whether the interaction term composed of the linear term of X (career success) and the moderator (learning value of the job) was significant.

4. Results

4.1. Descriptive statistics

Ranges, means, standard deviations, correlations and reliabilities of all study variables are reported in Table 3. All scales showed satisfactory reliability. The correlations between the predictor variables indicated no severe multicollinearity issues (Cohen et al., 2003). Examination of the correlations in Table 3 indicated all of the control variables have one or more substantive correlations (r =

[1] The turning point (i.e., inflection point) of a U-shaped relationship between X and Y is the value of X at which the slope changes direction from negative to positive.

Table 3
Ranges, means (*M*), standard deviations (*SD*) and bivariate correlations of the study variables.

Variable (range)	*M*	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Gender (0 = male, 1 = female)	[56% M]	n.a.	–								
2. Age (23–75)	53.06	9.55	−0.162**	–							
3. Working hours (20–48)	34.84	6.55	−0.475**	0.052	–						
4. Organization-specific promotions (0–8)	0.95	1.19	0.032	0.056	0.154**	–					
5. Overall promotions (0–10)	2.32	2.31	−0.041	0.050	0.155**	0.511**	–				
6. Subjective career success (1.25–5)	3.49	0.74	−0.029	−0.016	0.041	0.199**	0.204**	(α = 0.84)			
7. Learning value (1–6)	4.21	0.94	0.043	−0.090*	0.082*	0.088*	0.076*	0.372**	(α = 0.90)		
8. Proactive career reflection (1–6)	3.90	0.99	0.169**	−0.239**	−0.001	0.042	0.161**	0.111**	0.267**	(α = 0.88)	
9. Proactive career construction (1–6)	3.21	1.05	0.067	−0.175**	0.049	0.059	0.142**	0.116**	0.272**	0.662**	(α = 0.86)

Note. N = 702. M = male. * = $p < .05$, ** = $p < .01$.

0.10) with our study variables (Carlson & Wu, 2012). We therefore included all the control variables in our further data analysis.

4.2. Hypotheses testing

Table 4 shows the results of the hierarchical regression analysis of objective career success and learning value of the job on career crafting. The results of the hierarchical regression analysis of subjective career success and learning value on career crafting are reported in Table 5.

H1a assumed that objective career success would be related to career crafting in a nonlinear, U-shaped fashion. The quadratic terms of organization-specific promotions and overall promotions were not significant for both career crafting dimensions. Only overall promotions were positively and linearly associated with proactive career reflection ($B = 0.073$, $p < .001$) and with proactive career construction ($B = 0.065$, $p < .001$). H1a was not supported by these outcomes.

H1b predicted that subjective career success would be related to both dimensions of career crafting in a nonlinear, U-shaped fashion. The regression coefficient of the quadratic term of subjective career success was significant and positive for proactive career reflection ($B = 0.213$, $p < .001$). The slopes of the relationship between subjective career success and proactive career reflection at the lower end (−2*SD*, $B = -0.395$, 95%CI [−0.656, −0.134]) and at the higher end of the data range (+2*SD*, $B = 0.871$, 95%CI [0.534, 1.208]) of subjective career success were both significant and in the expected direction. The turning point (X* = 2.94) fell within the data range. Finally, we estimated two separate regression lines for subjective career success values beneath the turning point (X < X*) and for subjective career success values above the turning point (X* > X).[2] Both regression lines were significant and in the expected direction (X < X*, $B = -0.377$, $p = .0475$; X > X*, $B = 0.416$, $p < .001$). As an extra robustness check, we evaluated whether a model including a cubic term (X^3) fitted the data better, indicating an S-shaped relationship. The cubic term was not significant and, therefore, the model including the cubic term did not fit the data better. Taken together, our results show support for a U-shaped relationship between subjective career success and proactive career reflection. A plot of this relationship is shown in Fig. 1.

The regression coefficient of the quadratic term of subjective career success was also significant for proactive career construction ($B = 0.188$, $p < .001$). Again, the slopes at the lower end (-2*SD*; $B = -0.319$, 95%CI [−0.579, −0.058]) and at the higher end of the data range (+2*SD*; $B = 0.797$, 95%CI [0.460, 1.133]) were significant and in the expected direction. The turning point also fell within the data range (X* = 2.85). However, an interrupted regression analysis showed that the regression line for subjective career success values beneath the turning point was not significant (X > X*, $B = -0.216$, $p = .274$), while the regression line for subjective career success values above the turning point was significant and in the expected direction (X > X*, $B = 0.381$, $p < .001$). Taken together, these results did not show support for a U-shaped relationship between subjective career success and proactive career construction. Rather, the relationship between subjective career success and proactive career construction took the form of a strengthening quadratic effect, in which the slope increases at higher values of subjective career success but does not change direction (Gardner et al., 2017). In conclusion, H1b was partially supported.

H2a predicted that learning value of the job would moderate the hypothesized U-shaped relationships between objective career success and career crafting. We found no support for these hypothesized relationships and the interaction terms of objective career success and learning value were not significant for both career crafting dimensions ($p > .05$). H2a was therefore not supported in our study data.

H2b predicted that learning value of the job would moderate the hypothesized U-shaped relationship between subjective career

[2] A dummy variable was computed in which X ≤ 2.75 was coded as 0 and X ≥ 3.00 was coded as 1. Due to the use of Likert scales and thereby the coarseness of the variable, the turning point could not be approached more precisely.

Table 4
Hierarchical regression analysis results for objective career success.

Variables	Proactive career reflection				Proactive career construction			
	B	*β*	R^2	ΔR^2	*B*	*β*	R^2	ΔR^2
Model 1: organization-specific promotions	Model 1a				Model 1b			
Step 1			0.081	–			0.040	–
Gender	0.358**	0.179**			0.183*	0.087*		
Age	−0.022**	−0.215**			−0.018**	−0.167**		
Working hours	0.014**	0.095*			0.016*	0.098*		
Step 2			0.082	0.001			0.042	0.003
Gender	0.348**	0.174**			0.167	0.079		
Age	−0.023**	−0.217**			−0.019**	−0.170**		
Working hours	0.013**	0.087*			0.014	0.087		
Organization-specific promotions	0.029	0.034			0.046	0.052		
Step 3			0.137	0.054**			0.103	0.060**
Gender	0.310**	0.155**			0.124	0.059		
Age	−0.020**	−0.196**			−0.016**	−0.148**		
Working hours	0.009	0.060			0.009	0.059		
Organization-specific promotions	0.014	0.017			0.030	0.034		
Learning value	0.249**	0.236**			0.277**	0.249**		

Variables	Proactive career reflection				Proactive career construction			
	B	*β*	R^2	ΔR^2	*B*	*β*	R^2	ΔR^2
Model 2: overall promotions	Model 2a				Model 2b			
Step 1 (see above)								
Step 2			0.109	0.028**			0.060	0.020**
Gender	0.341**	0.170**			0.168	0.080		
Age	−0.023**	−0.223**			−0.019**	−0.173**		
Working hours	0.010	0.065			0.012	0.073		
Overall promotions	0.073**	0.169**			0.065**	0.143**		
Step 3			0.159	0.050**			0.117	0.057**
Gender	0.301**	,150**			0.123	0.058		
Age	−0.021**	−0.203**			−0.017**	−0.153**		
Working hours	0.006	0.038			0.007	0.045		
Overall promotions	0.066**	0.154**			0.057**	0.127**		
Learning value	0.240**	0.227**			0.270**	0.243**		

Note. N = 702. *B* = unstandardized coefficient, *β* = standardized coefficient. * = $p < .05$, ** = $p < .01$. All significance tests are two-tailed. Reported *p*-value of ΔR^2 concerns corresponding F-test.

success and career crafting. The interaction term composed of the linear term of subjective career success and the linear term of learning value of the job was significant and positive ($B = 0.129$, $p = .005$) for proactive career reflection, indicating a significant moderating effect. The moderating effect of learning value of the job on the relationship between subjective career success and proactive career reflection is shown in Fig. 2. Learning value of the job strengthened the relationship between subjective career success and proactive career reflection at moderate to higher levels of subjective career success.

However, as we did not find the hypothesized, U-shaped relationship between subjective career success and proactive career construction, our results consequently did not support H2b regarding the moderating influence of learning value of the job on this relationship. However, learning value of the job did moderate the relationship between subjective career success and proactive career construction (see Model 3b; $B = 0.180$, $p < .001$). At moderate to higher levels of subjective career success, learning value of the job strengthened the relationship between subjective career success and proactive career construction. Taken together, H2b was partly supported in this study.

5. Discussion

In this study, we aimed to explore nonlinearity in the relationship between career success and engagement in proactive career crafting behaviors among teachers in the Dutch upper secondary vocational education context. We conceptualized career success as objective career success (i.e., organization-specific promotions and overall promotions) and subjective career success (i.e., career satisfaction), and conceptualized career crafting as proactive career reflection and proactive career construction (Tims & Akkermans, 2020). Our findings show partial support for our expectation of a U-shaped relationship between career success and career crafting, as we found the highest levels of proactive career reflection at low and high levels of subjective career success. Contrary to our expectations, we found a strengthening quadratic relationship between subjective career success and proactive career construction and a positive linear relationship between objective career success (overall promotions) and both career crafting dimensions. Moreover, we found that learning value of the job strengthened the relationship between subjective career success and proactive career reflection at moderate to high levels of subjective career success, suggesting that subjective career success and learning value of the job strengthen

Table 5
Hierarchical regression analysis results for subjective career success.

Variables	Proactive career reflection				Proactive career construction			
	B	*β*	R^2	ΔR^2	*B*	*β*	R^2	ΔR^2
Model 3: subjective career success	Model 3a				Model 3b			
Step 1			0.081	–			0.040	–
Gender	0.358**	0.179**			0.183*	0.087*		
Age	−0.022**	−0.215**			−0.018**	−0.167**		
Working hours	0.014*	0.095**			0.016*	0.098*		
Step 2			0.093	0.012**			0.052	0.013**
Gender	0.361**	0.181**			0.187*	0.089*		
Age	−0.022**	−0.212**			−0.018**	−0.164**		
Working hours	0.014*	0.091*			0.015*	0.095*		
Subjective career success	0.147**	0.110**			0.158**	0.112**		
Step 3			0.122	0.029**			0.073	0.020**
Gender	0.334**	0.167**			0.162	0.077		
Age	−0.022**	−0.210**			−0.018**	−0.163**		
Working hours	0.010	0.067			0.012	0.074		
Subjective career success	0.239**	0.179**			0.240**	0.170**		
Subjective career success squared	0.213**	0.185**			0.188**	0.155**		
Step 4			0.160	0.038**			0.117	0.044**
Gender	0.295**	0.148**			0.118	0.056		
Age	−0.020**	−0.195**			−0.016**	−0.146**		
Working hours	0.007	0.044			0.008	0.050		
Subjective career success	0.125**	0.093**			0.109	0.077		
Subjective career success squared	0.191**	0.165**			0.162**	0.134**		
Learning value	0.224**	0.212**			0.256**	0.230**		
Step 5			0.170	0.010**			0.134	0.017**
Gender	0.278**	0.139**			0.094	0.045		
Age	−0.020**	−0.190**			−0.015**	−0.139**		
Working hours	0.007	0.047			0.009	0.054		
Subjective career success	0.097	0.072			0.071	0.050		
Subjective career success squared	0.133**	0.115**			0.082	0.068		
Learning value	0.249**	0.236**			0.290**	0.261**		
Subjective career success x Learning value	0.129**	0.110**			0.180**	0.145**		

Note. N = 702. *B* = unstandardized coefficient, *β* = standardized coefficient. * = $p < .05$, ** = $p < .01$. All significance tests are two-tailed. Reported *p*-value of ΔR^2 concerns corresponding F-test.

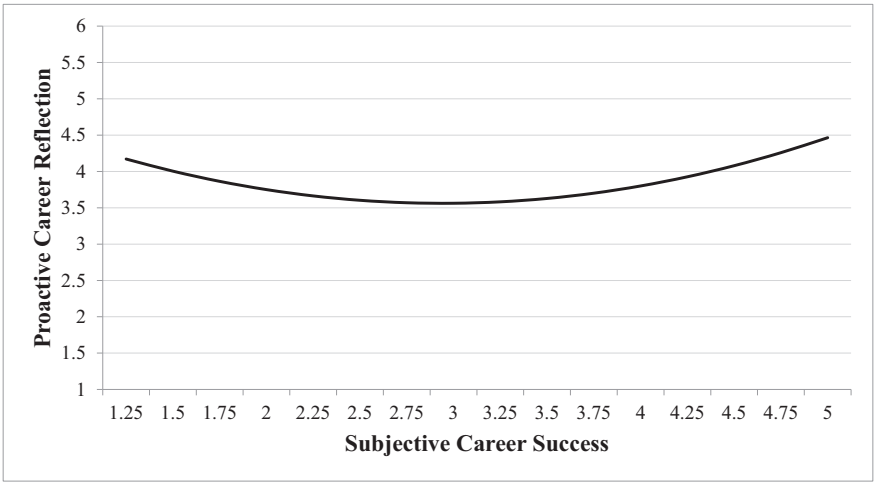

Fig. 1. Plot of the relationship between subjective career success and proactive career reflection.

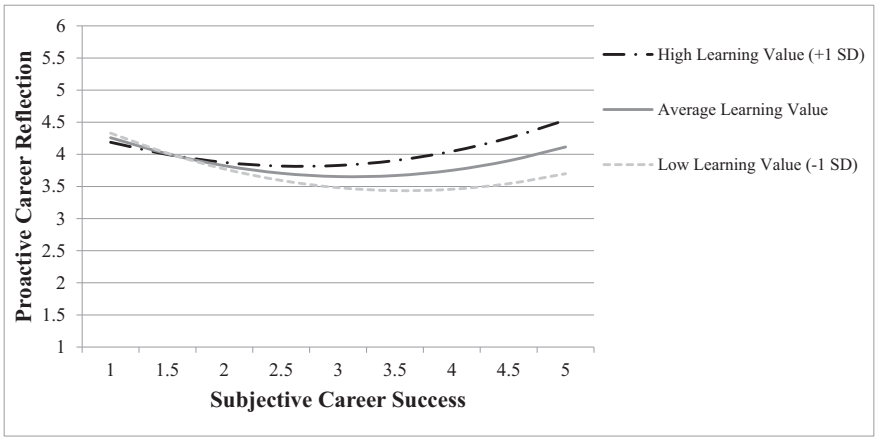

Fig. 2. Plot of the moderating influence of learning value of the job on the relationship between subjective career success and proactive career reflection.

each other's respective value as a resource for career crafting. Together, these findings show the relevance of career success and learning value of the job for career crafting.

5.1. Theoretical contributions

Our article makes two main contributions to the scholarly literature.

First, we add to the scarce literature on career crafting by examining the relationship between career success indicators and career crafting. Our results support the conceptualization of both objective career success (in the form of the number of promotions in one's overall career) and subjective career success as resources (Hobfoll, 1989, 2001) related to career crafting. These results add to findings by Tims and Akkermans (2020) regarding linear relationships between career crafting and employability. Moreover, our findings show that the relationship between career success and career crafting can take a nonlinear shape. In line with the competing resource acquisition and resource conservation motives of COR theory (Hobfoll, 1989, 2001), these findings show support for our expectation that individuals are most strongly motivated to engage in proactive career reflection when they perceive either low or high levels of available career resources, as reflected by their subjective career success. Interestingly, we only found support for the hypothesized U-shaped relationship between subjective career success and proactive career *reflection*, but not for proactive career *construction*. Specifically, individuals who reported low and individuals who reported high levels of subjective career success were more likely to engage in proactive behaviors that focus on exploring and assessing career-related motivations, values, and goals (i.e., U-shaped relationship). Yet, only individuals with high levels of subjective career success were more likely to engage in proactive behaviors related to career-related networking, self-profiling, and goal striving (i.e., strengthening quadratic effect). These findings suggest that individuals who are dissatisfied with their career seem to reflect on their career aspirations through proactive career reflection but lack the resources to initiate actions through proactive career construction. The cognitive element (i.e., proactive career reflection) of proactive career behaviors usually precedes the behavioral element (i.e., proactive career construction) of proactive career behaviors (De Vos et al., 2009a). Hence, for those low in career resources (i.e., subjective career success), engaging in proactive career reflection may deplete resources required to initiate subsequent actions to engage in networking, self-profiling, and goal striving (cf. Bindl et al., 2012; Hobfoll, 1989). These findings warrant further research on the role of resource conservation in proactive career behaviors from a process perspective on proactivity (Bindl et al., 2012).

To our surprise, we did not find support for the expected U-shaped relationship between objective career success and career crafting. Low levels of objective career success were not related to higher levels of career crafting in comparison with the linkage of moderate levels of objective career success. COR theory describes that the extent to which individuals are motivated to acquire a resource depends on the value that is placed on this resource and the perceived likelihood of acquiring the resource (Halbesleben et al., 2014; Lim et al., 2020). First, objective indicators of career success, like hierarchical career success in our study, may not be universally valued by all types of workers and in all occupational sectors (Heslin, 2005). Second, in occupational contexts where formalized career progression is limited (i.e., the studied context), individuals may perceive they have limited influence on their objective career success (see Spurk & Abele, 2014). However, the number of overall promotions was positively, but linearly, related to both career crafting dimensions, indicating objective career success may nonetheless have value as a resource and relate to career crafting.

Our second contribution pertains to the role of the work context in promoting proactive career behaviors. In line with our theorizing, the learning value of one's job strengthened the relationship between subjective career success and both career crafting dimensions at moderate to high levels of career success. Individuals who perceive ample opportunities in their job to use and expand their knowledge and skills and who positively evaluate their career progress likely perceive the strongest expectancy that engaging in career crafting will be worth the invested resources. These findings are in line with earlier empirical work on the learning value of the job (Van der Heijden et al., 2016; Van der Heijden & Bakker, 2011; Van der Heijden & Spurk, 2019), which showed the relevance of

this contextual factor for the enhancement of one's employability. Adding to this line of research, our results indicate the learning value of one's job may also be an important factor in shaping proactive career behaviors. These findings shed new light on the shared responsibility of employees and employers for career management, as employers may promote employee career management by providing challenging jobs (Forrier et al., 2018; Van der Heijden et al., 2020).

5.2. Limitations and future research

First, our cross-sectional research design inhibits the ability to draw causal conclusions. Proactive career behaviors, such as career crafting, may also influence the attainment of career success, as acquired and mobilized career resources may facilitate further career success (i.e., reverse causality; De Vos et al., 2009a; Seibert et al., 2001). Future research is needed to disentangle the temporal order of the relationship between career success and engagement in proactive career behaviors and explore possible reciprocal effects (Hirschi & Koen, 2021) through longitudinal study designs. At the same time, the use of a cross-sectional research design in the present study is partly justified by the fact that the time frame and temporal order of the effects of career success on career crafting are still unexplored, making the design of longitudinal studies fallible (Spector, 2019). Therefore, future research is also warranted to explore *when* and at what time frame career success perceptions affect the engagement in career crafting, for example through a qualitative retrospective design examining critical career incidents (Spector, 2019).

Second, our study design relies on self-report data only, which is prone to common-method bias (Podsakoff et al., 2012). However, none of our hypothesized relationships could have been artifacts of common-method bias, as we only hypothesized quadratic effects and quadratic-by-linear interaction effects (George & Pandey, 2017). Eventual common method bias has likely deflated our hypothesized relationships instead, herewith further strengthening the robustness of our observed nonlinear and interaction effects (Siemsen et al., 2010).

Third, our study sample was confined to a single occupational context in which the variance of objective career success was limited and wherein salary scales were fixed. Future research is needed to investigate whether our findings regarding objective career success can be generalized to other occupational contexts with more variance in objective career success. Moreover, career satisfaction as a measure of subjective career success may not hold the same meaning and value across occupational groups (Spurk et al., 2015) and between men and women (Hofmans et al., 2008). It would be a worthwhile avenue for future research to assess between-group differences among occupational contexts and men and women in the relationships between subjective career success and behavioral outcomes. Furthermore, future research needs to assess whether our study findings can be replicated using other more elaborate subjective career success measures (e.g., Briscoe et al., 2021; Shockley et al., 2016).

5.3. Practical implications

Our study also has substantial practical implications for educational institutions. As formalized career progression is limited in the educational context, teaching staff members may particularly benefit from proactively exploring and utilizing other more informal career opportunities through career crafting. While proactive career behaviors are by nature self-initiated, educational institutions nonetheless play a crucial role in stimulating and facilitating these behaviors by providing resources in the form of organizational career management and challenging jobs (De Vos et al., 2009b; De Vos et al., 2020). Educational institutions may fear that stimulating employee career development may be a bad investment and lead to turnover. However, recent empirical research shows that these fears are unfounded, as investing in career development may just as well benefit employers (e.g., Rodrigues et al., 2020). First, our findings suggest that educational institutions should monitor and act on the perceived career success of their employees, as favorable career success perceptions may foster proactive career behaviors. Career success perceptions could, for example, be incorporated in formalized HRM practices like performance management and progress reviews, as well as in informal feedback sessions. Second, teaching staff members who evaluate their career negatively may reflect on their career aspirations, but perceive a lack of resources or opportunities to initiate actions to manage their career proactively. Managers and HR practitioners of educational institutions may alleviate this situation by discussing employee perceptions of career opportunities and providing resources through organizational career management (Verbruggen & De Vos, 2020). Teaching staff members who are dissatisfied with their career but perceive a lack of resources to improve their situation may benefit from seeking support through career counseling. Career counselors may help these individuals by discussing the path to their career desires and (re)evaluating associated resource costs and gains (Verbruggen & De Vos, 2020). Third, our findings indicate that perceptions of learning value within one's job play an essential role in stimulating proactive career behaviors. Managers and HR practitioners of educational institutions can foster learning value perceptions by exploring learning opportunities with teaching staff members and providing challenging assignments (Van der Heijden & Bakker, 2011).

CRediT authorship contribution statement

Elias Janssen: Conceptualization, Formal Analysis, Methodology, Theorizing, Writing - Original Draft, Writing – Review & Editing. **Beatrice van der Heijden:** Conceptualization, Investigation, Methodology, Supervision, Theorizing, Writing – Review & Editing. **Jos Akkermans:** Conceptualization, Methodology, Theorizing, Writing – Review & Editing. **Mieke Audenaert:** Conceptualization, Funding acquisition, Methodology, Supervision, Theorizing, Writing – Review & Editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

Akkermans, J., Brenninkmeijer, V., Huibers, M., & Blonk, R. W. B. (2013). Competencies for the contemporary career: Development and preliminary validation of the career competencies questionnaire. *Journal of Career Development, 40*(3), 245–267. https://doi.org/10.1177/0894845312467501.

Akkermans, J., & Kubasch, S. (2017). #Trending topics in careers: A review and future research agenda. *Career Development International, 22*(6), 586–627. https://doi.org/10.1108/CDI-08-2017-0143.

Akkermans, J., & Tims, M. (2017). Crafting your career: How career competencies relate to career success via job crafting. *Applied Psychology, 66*(1), 168–195. https://doi.org/10.1111/apps.12082.

Bargsted, M., Yeves, J., Merino, C., & Venegas-Muggli, J. I. (2021). Career success is not always an outcome: Its mediating role between competence employability model and perceived employability. *Career Development International*. https://doi.org/10.1108/CDI-06-2020-0141. Advance online publication.

Bindl, U. K., Parker, S. K., Totterdell, P., & Hagger-Johnson, G. (2012). Fuel of the self-starter: How mood relates to proactive goal regulation. *Journal of Applied Psychology, 97*(1), 134–150. https://doi.org/10.1037/a0024368.

Boerlijst, J. G., Van der Heijden, B. I. J. M., & Van Assen, A. (1993). *Veertigplussers in de onderneming [over-forties in the organization]. Van Gorcum/Stichting Management Studies*.

Bolino, M., Valcea, S., & Harvey, J. (2010). Employee, manage thyself: The potentially negative implications of expecting employees to behave proactively. *Journal of Occupational and Organizational Psychology, 83*(2), 325–345. https://doi.org/10.1348/096317910X493134.

Briscoe, J. P., Kaše, R., Dries, N., Dysvik, A., Unite, J. A., Adeleye, I., & Zikic, J. (2021). Here, there, & everywhere: Development and validation of a cross-culturally representative measure of subjective career success. *Journal of Vocational Behavior*. https://doi.org/10.1016/j.jvb.2021.103612. Advance online publication.

Brown, T. (2015). *Confirmatory factor analysis for applied research*. The Guilford Press.

Carlson, K. D., & Wu, J. (2012). The illusion of statistical control: Control variable practice in management research. *Organizational Research Methods, 15*(3), 413–435. https://doi.org/10.1177/1094428111428817.

CBS Statline. (2021). Leerlingen, deelnemers en studenten; onderwijssoort, woonregio. 2015/2016 [Pupils, participants and students: education type, residential region. 2015/2016]. https://opendata.cbs.nl/statline/#/CBS/nl/dataset/71450ned/table?dl=551A1.

Cedefop. (2016). *Vocational education and training in the Netherlands: Short description*. Publications Office of the European Union. https://doi.org/10.2801/476727.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Lawrence Erlbaum.

Dalal, D. K., & Zickar, M. J. (2012). Some common myths about centering predictor variables in moderated multiple regression and polynomial regression. *Organizational Research Methods, 15*(3), 339–362. https://doi.org/10.1177/1094428111430540.

De Vos, A., Akkermans, J., & Van der Heijden, B. I. J. M. (2019). From occupational choice to career crafting. In H. Gunz, M. Lazarova, & W. Mayrhofer (Eds.), *The Routledge companion to career studies* (pp. 128–142). Routledge. https://doi.org/10.4324/9781315674704-11.

De Vos, A., De Clippeleer, I., & Dewilde, T. (2009a). Proactive career behaviours and career success during the early career. *Journal of Occupational and Organizational Psychology, 82*(4), 761–777. https://doi.org/10.1348/096317909X471013.

De Vos, A., Dewettinck, K., & Buyens, D. (2009b). The professional career on the right track: A study on the interaction between career self-management and organizational career management in explaining employee outcomes. *European Journal of Work and Organizational Psychology, 18*(1), 55–80. https://doi.org/10.1080/13594320801966257.

De Vos, A., & Soens, N. (2008). Protean attitude and career success: The mediating role of self-management. *Journal of Vocational Behavior, 73*(3), 449–456. https://doi.org/10.1016/j.jvb.2008.08.007.

De Vos, A., Van der Heijden, B. I. J. M., & Akkermans, J. (2020). Sustainable careers: Towards a conceptual model. *Journal of Vocational Behavior, 117*, Article 103196. https://doi.org/10.1016/j.jvb.2018.06.011.

Forrier, A., De Cuyper, N., & Akkermans, J. (2018). The winner takes it all, the loser has to fall: Provoking the agency perspective in employability research. *Human Resource Management Journal, 28*(4), 511–523. https://doi.org/10.1111/1748-8583.12206.

Fried, Y., Grant, A. M., Levi, A. S., Hadani, M., & Slowik, L. H. (2007). Job design in temporal context: A career dynamics perspective. *Journal of Organizational Behavior, 28*(7), 911–927. https://doi.org/10.1002/job.486.

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research, 69*(8), 3192–3198. https://doi.org/10.1016/j.jbusres.2015.12.008.

Gardner, R. G., Harris, T. B., Li, N., Kirkman, B. L., & Mathieu, J. E. (2017). Understanding "it depends" in organizational research: A theory-based taxonomy, review, and future research agenda concerning interactive and quadratic relationships. *Organizational Research Methods, 20*(4), 610–638. https://doi.org/10.1177/1094428117708856.

Gattiker, U. E., & Larwood, L. (1988). Predictors for managers' career mobility, success, and satisfaction. *Human Relations, 41*(8), 569–591. https://doi.org/10.1177/001872678804100801.

George, B., & Pandey, S. K. (2017). We know the Yin—But where is the Yang? Toward a balanced approach on common source bias in public administration scholarship. *Review of Public Personnel Administration, 37*(2), 245–270. https://doi.org/10.1177/0734371X17698189.

Grebner, S., Elfering, A., & Semmer, N. K. (2010). The success resource model of job stress. In P. L. Perrewé, & D. C. Ganster (Eds.), *Research in occupational stress and well-being. New developments in theoretical and conceptual approaches to job stress* (pp. 61–108). Emerald Group Publishing Limited. https://doi.org/10.1108/S1479-3555(2010)0000008005.

Greco, L. M., & Kraimer, M. L. (2020). Goal-setting in the career management process: An identity theory perspective. *Journal of Applied Psychology, 105*(1), 40–57. https://doi.org/10.1037/apl0000424.

Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of Management Journal, 33*(1), 64–86. https://doi.org/10.5465/256352.

Goldammer, P., Annen, H., Stöckli, P. L., & Jonas, K. (2020). Careless responding in questionnaire measures: Detection, impact, and remedies. *The Leadership Quarterly, 31*(4), Article 101384. https://doi.org/10.1016/j.leaqua.2020.101384.

Haans, R. F., Pieters, C., & He, Z. L. (2016). Thinking about U: Theorizing and testing U-and inverted U-shaped relationships in strategy research. *Strategic Management Journal, 37*(7), 1177–1195. https://doi.org/10.1002/smj.2399.

Haelermans, C., De Witte, K., & Blank, J. L. (2012). On the allocation of resources for secondary schools. *Economics of Education Review, 31*(5), 575–586. https://doi.org/10.1016/j.econedurev.2012.02.007.

Halbesleben, J. R., Neveu, J. P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the "COR" understanding the role of resources in conservation of resources theory. *Journal of Management, 40*(5), 1334–1364. https://doi.org/10.1177/0149206314527130.

Hall, D. T., & Heras, M. L. (2010). Reintegrating job design and career theory: Creating not just good jobs but" smart" jobs. *Journal of Organizational Behavior, 31*(2/3), 448–462. https://doi.org/10.1002/job.613.
Heslin, P. A. (2005). Conceptualizing and evaluating career success. *Journal of Organizational Behavior, 26*(2), 113–136. https://doi.org/10.1002/job.270.
Hirschi, A., & Koen, J. (2021). Contemporary career orientations and career self-management: A review and integration. *Journal of Vocational Behavior, 126*, Article 103505. https://doi.org/10.1016/j.jvb.2020.103505.
Hirschi, A., Nagy, N., Baumeler, F., Johnston, C. S., & Spurk, D. (2018). Assessing key predictors of career success: Development and validation of the career resources questionnaire. *Journal of Career Assessment, 26*(2), 338–358. https://doi.org/10.1177/1069072717695584.
Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*(3), 513–524. https://doi.org/10.1037/0003-066X.44.3.513.
Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology, 50*(3), 337–421. https://doi.org/10.1111/1464-0597.00062.
Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior, 5*, 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640.
Hofmans, J., Dries, N., & Pepermans, R. (2008). The career satisfaction scale: Response bias among men and women. *Journal of Vocational Behavior, 73*(3), 397–403. https://doi.org/10.1016/j.jvb.2008.08.001.
Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology, 52*(3), 621–652. https://doi.org/10.1111/j.1744-6570.1999.tb00174.x.
Jung, Y., & Takeuchi, N. (2018). A lifespan perspective for understanding career self-management and satisfaction: The role of developmental human resource practices and organizational support. *Human Relations, 71*(1), 73–102. https://doi.org/10.1177/0018726717715075.
King, Z. (2004). Career self-management: Its nature, causes and consequences. *Journal of Vocational Behavior, 65*(1), 112–133. https://doi.org/10.1016/S0001-8791(03)00052-6.
Koen, J., & Parker, S. K. (2020). In the eye of the beholder: How proactive coping alters perceptions of insecurity. *Journal of Occupational Health Psychology, 25*(6), 385–400. https://doi.org/10.1037/ocp0000198.
Lim, J. H., Tai, K., Bamberger, P. A., & Morrison, E. W. (2020). Soliciting resources from others: An integrative review. *Academy of Management Annals, 14*(1), 122–159. https://doi.org/10.5465/annals.2018.0034.
Lind, J. T., & Mehlum, H. (2010). With or without U? The appropriate test for a U-shaped relationship. *Oxford Bulletin of Economics and Statistics, 72*(1), 109–118. https://doi.org/10.1111/j.1468-0084.2009.00569.x.
Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*(404), 1198–1202. https://doi.org/10.2307/2290157.
Meijers, F., Lengelle, R., Winters, A., & Kuijpers, M. (2017). A dialogue worth having: Vocational competence, career identity and a learning environment for twenty-first century success at work. In E. De Bruijn, S. Billett, & J. Onstenk (Eds.), *Enhancing teaching and learning in the Dutch vocational education system*. Springer. https://doi.org/10.1007/978-3-319-50734-7_7.
Ng, T. W., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology, 58*(2), 367–408. https://doi.org/10.1111/j.1744-6570.2005.00515.x.
Ng, T. W., & Feldman, D. C. (2012). Employee voice behavior: A meta-analytic test of the conservation of resources framework. *Journal of Organizational Behavior, 33*(2), 216–234. https://doi.org/10.1002/job.754.
Parker, S. K., Morgeson, F. P., & Johns, G. (2017). One hundred years of work design research: Looking back and looking forward. *Journal of Applied Psychology, 102*(3), 403–420. https://doi.org/10.1037/apl0000106.
Pingel, R., Fay, D., & Urbach, T. (2019). A resources perspective on when and how proactive work behaviour leads to employee withdrawal. *Journal of Occupational and Organizational Psychology, 92*(2), 410–435. https://doi.org/10.1111/joop.12254.
Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63*, 539–569. https://doi.org/10.1146/annurev-psych-120710-100452.
Porath, C., Spreitzer, G., Gibson, C., & Garnett, F. G. (2012). Thriving at work: Toward its measurement, construct validation, and theoretical refinement. *Journal of Organizational Behavior, 33*(2), 250–275. https://doi.org/10.1002/job.756.
Qin, X., DiRenzo, M. S., Xu, M., & Duan, Y. (2014). When do emotionally exhausted employees speak up? Exploring the potential curvilinear relationship between emotional exhaustion and voice. *Journal of Organizational Behavior, 35*(7), 1018–1041. https://doi.org/10.1002/job.1948.
Rodrigues, R., Butler, C. L., & Guest, D. (2020). Evaluating the employability paradox: When does organizational investment in human capital pay off? *The International Journal of Human Resource Management, 31*(9), 1134–1156. https://doi.org/10.1080/09585192.2019.1704825.
Runhaar, P., Bouwmans, M., & Vermeulen, M. (2019). Exploring teachers' career self-management. Considering the roles of organizational career management, occupational self-efficacy, and learning goal orientation. *Human Resource Development International, 22*(4), 364–384. https://doi.org/10.1080/13678868.2019.1607675.
Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J. P., Duarte, M. E., Guichard, J., & Van Vianen, A. E. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior, 75*(3), 239–250. https://doi.org/10.1016/j.jvb.2009.04.004.
Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology, 54*(4), 845–874. https://doi.org/10.1111/j.1744-6570.2001.tb00234.x.
Seibert, S. E., Kraimer, M. L., Holtom, B. C., & Pierotti, A. J. (2013). Even the best laid plans sometimes go askew: Career self-management processes, career shocks, and the decision to pursue graduate education. *Journal of Applied Psychology, 98*(1), 169–182. https://doi.org/10.1037/a0030882.
Semeijn, J. H., Van der Heijden, B. I. J. M., & De Beuckelaer, A. (2020). Personality traits and types in relation to career success: An empirical comparison using the big five. *Applied Psychology, 69*(2), 538–556. https://doi.org/10.1111/apps.12174.
Shockley, K. M., Ureksoy, H., Rodopman, O. B., Poteat, L. F., & Dullaghan, T. R. (2016). Development of a new scale to measure subjective career success: A mixed-methods study. *Journal of Organizational Behavior, 37*(1), 128–153. https://doi.org/10.1002/job.2046.
Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods, 13*(3), 456–476. https://doi.org/10.1177/1094428109351241.
Simonsohn, U. (2018). Two lines: A valid alternative to the invalid testing of U-shaped relationships with quadratic regressions. *Advances in Methods and Practices in Psychological Science, 1*(4), 538–555. https://doi.org/10.1177/2515245918805755.
Singh, R., Ragins, B. R., & Tharenou, P. (2009). Who gets a mentor? A longitudinal assessment of the rising star hypothesis. *Journal of Vocational Behavior, 74*(1), 11–17. https://doi.org/10.1016/j.jvb.2008.09.009.
Spector, P. E. (2019). Do not cross me: Optimizing the use of cross-sectional designs. *Journal of Business and Psychology, 34*(2), 125–137. https://doi.org/10.1007/s10869-018-09613-8.
Spurk, D., & Abele, A. E. (2014). Synchronous and time-lagged effects between occupational self-efficacy and objective and subjective career success: Findings from a four-wave and 9-year longitudinal study. *Journal of Vocational Behavior, 84*(2), 119–132. https://doi.org/10.1016/j.jvb.2013.12.002.
Spurk, D., Abele, A. E., & Volmer, J. (2011). The career satisfaction scale: Longitudinal measurement invariance and latent growth analysis. *Journal of Occupational and Organizational Psychology, 84*(2), 315–326. https://doi.org/10.1111/j.2044-8325.2011.02028.x.
Spurk, D., Abele, A. E., & Volmer, J. (2015). The career satisfaction scale in context: A test for measurement invariance across four occupational groups. *Journal of Career Assessment, 23*(2), 191–209. https://doi.org/10.1177/1069072714535019.
Spurk, D., Hirschi, A., & Dries, N. (2019). Antecedents and outcomes of objective versus subjective career success: Competing perspectives and future directions. *Journal of Management, 45*(1), 35–69. https://doi.org/10.1177/0149206318786563.
Strauss, K., Griffin, M. A., & Parker, S. K. (2012). Future work selves: How salient hoped-for identities motivate proactive career behaviors. *Journal of Applied Psychology, 97*(3), 580–598. https://doi.org/10.1037/a0026423.

Stumpf, S. A., & Tymon, W. G., Jr. (2012). The effects of objective career success on subsequent subjective career success. *Journal of Vocational Behavior, 81*(3), 345–353. https://doi.org/10.1016/j.jvb.2012.09.001.

Sturges, J., & Guest, D. (2004). Working to live or living to work? Work/life balance early in the career. *Human Resource Management Journal, 14*(4), 5–20. https://doi.org/10.1111/j.1748-8583.2004.tb00130.x.

Sturing, L., Biemans, H. J., Mulder, M., & De Bruijn, E. (2011). The nature of study programmes in vocational education: Evaluation of the model for comprehensive competence-based vocational education in the Netherlands. *Vocations and Learning, 4*(3), 191–210. https://doi.org/10.1007/s12186-011-9059-4.

Sylva, H., Mol, S. T., Den Hartog, D. N., & Dorenbosch, L. (2019). Person-job fit and proactive career behaviour: A dynamic approach. *European Journal of Work and Organizational Psychology, 28*(5), 631–645. https://doi.org/10.1080/1359432X.2019.1580309.

Thomsen, M., Karsten, S., & Oort, F. J. (2015). Social exchange in Dutch schools for vocational education and training: The role of teachers' trust in colleagues, the supervisor and higher management. *Educational Management Administration & Leadership, 43*(5), 755–771. https://doi.org/10.1177/1741143214535737.

Tims, M., & Akkermans, J. (2020). Job and career crafting to fulfill individual career pathways. In G. Carter, & J. Hedge (Eds.), *Career pathways–School to retirement and beyond* (pp. 165–190). Oxford University Press. https://doi.org/10.1093/oso/9780190907785.003.0010.

Tims, M., Bakker, A. B., & Derks, D. (2012). Development and validation of the Job Crafting Scale. *Journal of Vocational Behavior, 80*(1), 173–186. https://doi.org/10.1016/j.jvb.2011.05.009.

Vandenberghe, C., & Panaccio, A. (2012). Perceived sacrifice and few alternatives commitments: The motivational underpinnings of continuance commitment's subdimensions. *Journal of Vocational Behavior, 81*(1), 59–72. https://doi.org/10.1016/j.jvb.2012.05.002.

Van der Heijden, B. I. J. M., & Bakker, A. B. (2011). Toward a mediation model of employability enhancement: A study of employee-supervisor pairs in the building sector. *The Career Development Quarterly, 59*(3), 232–248. https://doi.org/10.1002/j.2161-0045.2011.tb00066.x.

Van der Heijden, B. I. J. M., Boon, J., Van der Klink, M., & Meijs, E. (2009a). Employability enhancement through formal and informal learning: An empirical study among Dutch non-academic university staff members. *International Journal of Training and Development, 13*(1), 19–37. https://doi.org/10.1111/j.1468-2419.2008.00313.x.

Van der Heijden, B. I. J. M., De Lange, A. H., Demerouti, E., & Van der Heijde, C. M. (2009b). Age effects on the employability–career success relationship. *Journal of Vocational Behavior, 74*(2), 156–164. https://doi.org/10.1016/j.jvb.2008.12.009.

Van der Heijden, B. I. J. M., De Vos, A., Akkermans, J., Spurk, D., Semeijn, J., Van der Veldek, M., & Fugate, M. (2020). Sustainable careers across the lifespan: Moving the field forward. *Journal of Vocational Behavior, 117*. https://doi.org/10.1016/j.jvb.2019.103344.

Van der Heijden, B. I. J. M., Gorgievski, M. J., & De Lange, A. H. (2016). Learning at the workplace and sustainable employability: A multi-source model moderated by age. *European Journal of Work and Organizational Psychology, 25*(1), 13–30. https://doi.org/10.1080/1359432X.2015.1007130.

Van der Heijden, B. I. J. M., & Spurk, D. (2019). Moderating role of LMX and proactive coping in the relationship between learning value of the job and employability enhancement among academic staff employees. *Career Development International, 24*(2), 163–186. https://doi.org/10.1108/CDI-09-2018-0246.

Van der Klink, M., & Streumer, J. (2017). Professional development of teachers in vocational education. In E. De Bruijn, S. Billett, & J. Onstenk (Eds.), *Enhancing teaching and learning in the Dutch vocational education system*. Springer. https://doi.org/10.1007/978-3-319-50734-7_6.

Verbruggen, M., & De Vos, A. (2020). When people don't realize their career desires: Toward a theory of career inaction. *Academy of Management Review, 45*(2), 376–394. https://doi.org/10.5465/amr.2017.0196.

Verbruggen, M., Sels, L., & Forrier, A. (2007). Unraveling the relationship between organizational career management and the need for external career counseling. *Journal of Vocational Behavior, 71*(1), 69–83. https://doi.org/10.1016/j.jvb.2007.03.003.

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. https://doi.org/10.5465/amr.2001.4378011.