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Initial employability development: introducing a conceptual model integrating signalling and social exchange mechanisms

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ABSTRACT

This article develops a conceptual understanding of initial employability development, specifically the transition into first career destinations. Substantial previous research focuses on the role of individuals in ensuring employment readiness and continued employability development. Studies also identify the importance of employers for sustained employability. However, the interdependence and interaction between employers and individuals are under-theorized. We integrate social exchange theory and signalling theory to conceptualize initial employability development. We propose a cyclical model that comprises interactive and reciprocal signalling and social exchange processes between employers and individuals. The model overcomes the limitations of linear conceptualizations and one-sided models that theorize employability as either the outcome of human capital resources deployed by individuals or as managed by employers in employability development processes. We extend the processual approach to employability by redirecting theoretical attention to the interaction of signalling and social exchange as fundamental to employability development. We conclude by discussing implications in relation to employability research and theory development.

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Employability; signalling theory; social exchange theory; careers; talent management

Introduction

The literature on employability has expanded considerably over the past decade and crosses multiple disciplinary boundaries, including careers, management, and education (Akkermans & Kubasch, 2017; Fugate et al., 2021; Van Harten et al., 2021). In this article, we focus attention specifically on initial employability achieved through the transition from education or training into first career organizational destinations. The concept of employability is differently defined across disciplinary literature streams, but a common theme concerns how individuals, both before they enter the labour market and during their career, are able to successfully attain and sustain employment for their own and the employer's advantage (cf. Fugate et al., 2021; Römgens et al., 2020). Sustained employability, whether with one employer or more, benefits individuals as it leads to productive career trajectories (De Vos et al., 2020). Furthermore, it also benefits organizations as labour replacement costs are reduced and, in addition, skills and capabilities necessary for organizational productivity and adaptability are retained (Anderson, 2019). Employability debates are contextualized around the risks and challenges presented by uncertainty and turbulence in contemporary global and local labour markets. A subtext is that individuals need to proactively take ownership of their employment destinies as the relationship between individuals and organizations has become less stable and more short-term (Forrier et al., 2018; Guan et al., 2019).

Employability challenges are evident throughout the employment "life-cycle" of individuals. However, the transition

from education or training into their first career destination represents a unique temporal process during which individuals must demonstrate appropriate "work-readiness" and employers must distinguish between graduates with similar skills and qualifications to make judgements about which graduates to employ (Anderson & Tomlinson, 2021). Furthermore, decisions taken by both parties in relation to initial employability development are consequential for subsequent employability and career trajectories (De Vos et al., 2019). In this paper, reconciling definitions from the graduate employability and workplace employability development literatures, we define initial employability development as *the process of enhancing an individual's initial employment potential and realization in the internal and/or external labour market* (see also Forrier & Sels, 2003; Rothwell & Arnold, 2007). We use the term "graduate" to mean those at the point of transitioning into career-directed employment, whether from vocational training or from further or higher education.

Employability research builds on a rich history (Forrier et al., 2015; Römgens et al., 2020), but recent studies and conceptualizations have emphasized the supply side, focusing on the agency of individuals in education, training, and their (early) career to proactively enhance their own workplace and career-directed employability (Forrier et al., 2018; Grosemans et al., 2017). This is problematic for four reasons. First, employers have a large role in employability-related decisions (Anderson & Tomlinson, 2021), such as who to hire and promote and how much professional training to invest in a new worker. Second, current attention places disproportionate responsibility for

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employability outcomes onto employees, potentially pathologising negative outcomes as a consequence of a deficit of workers' ability or agency (Forrier et al., 2018). Third, although employability is a multi-stakeholder issue, research examining the employer perspective on employability tends to disregard consideration of the employee perspective (Baruch & Vardi, 2016; Fugate et al., 2021). Fourth, employability is strongly influenced by demand-side factors, not least the state of local, national, and global labour markets and occupational sectors (Smith, 2010). These factors further determine the availability of suitable employment and career progression opportunities – for example, how flexible or regulated labour markets are, and their relationship to educational and training systems.

In this article, we address these analytical limitations, which direct attention primarily to individuals and, particularly in the case of transitioning into initial employment, to the education and training system (Bridgstock, 2009; Tomlinson, 2012). Responding to recent calls to better integrate the diverse streams of employability literature and different perspectives on employability issues (Akkermans & Kubasch, 2017; Fugate et al., 2021; Römgens et al., 2020; Van Harten et al., 2021), this article contributes a conceptual synthesis. Its aim is to develop a novel, integrated perspective on employability at the point of initial transition into employment to more adequately explain how employer and employee agency are interdependent and related.

To achieve this aim, we conceptualize interactive and reciprocal signalling and social exchange processes between employers and graduates to explain employability development during the transition into first career employment destinations. The model of initial employability we propose extends the ideas of Holmes (2013), who argued that employability research needs to move beyond the perspective of “possession” (i.e., specific sets of attributes determine employability) and “position” (i.e., social positioning determines employability) towards a processual approach. He argued, though, that relatively little employability research has examined the process of initial employability development. Therefore, our conceptualization of initial employability development adopts such a processual approach, thereby recognizing how employees and employers are interdependent and interactive actors in specific organizational, occupational, sectoral, and labour market settings (Forrier et al., 2018). It also builds on the cyclical approach to career development proposed by De Vos et al. (2019), who argued that the transition into initial employment destinations is no longer a one-off decision but, instead, an ongoing series of learning cycles that contribute to employability development. Finally, our model draws on Makarius and Stevens' (2019) depiction of drivers and movements of (employer and employee-initiated) human capital flow into and out of organisations. In all, adopting a processual and cyclical perspective on information and resource exchanges, we develop a conceptual model that incorporates a *pre-flow phase* before employees enter the labour market; an *in-flow phase* during selection and transition into employment relationship; and a *through-flow phase* focusing on initial socialization and employee development, all of which are also consequential for potential *out-flow* processes. For each of these phases, we conceptualize interactive, agentic, and

reciprocal information signalling and social and economic resource exchange processes between employers and graduates to explain the employability development process during the transition into first career employment destinations. We also consider potential contextual influences, such as job and labour market situations, in our theorizing.

Our article makes three important contributions to the literature on careers and employability. First, the process model of initial employability development we propose accommodates previous research findings in the careers, education, and management fields yet also resolves inconsistencies evident in research from these different fields. For example, whereas the higher education literature tends to focus primarily on the role of higher education institutions in preparing future graduates for the world of work, research in careers and management emphasizes the development of employability within workplaces. Although these processes are intricately linked and, together, form the transition from education to work, they have barely been connected thus far (Akkermans & Kubasch, 2017; Römgens et al., 2020). Second, we respond to previous critiques of employability research that identify its theoretical fragmentation (Forrier et al., 2018; Römgens et al., 2020) by integrating ideas from signalling theory and social exchange theory as a conceptual foundation for initial employability development. Third, this synthesis of graduates' agency with employers' demand side selection and talent development processes contributes a novel perspective that overcomes the limitations of linear conceptualizations that describe employability as a simple consequence of human capital development and deployment (Fugate et al., 2021).

Theoretical background

In this section, we examine signalling theory (Connelly et al., 2011; Spence, 1978, 2002) and social exchange theory (Blau, 1964; Cropanzano & Mitchell, 2005; Cropanzano et al., 2017) to inform our conceptualization of initial employability development. Specifically, we discuss employability development as the point of integration between employer and graduate signalling processes and social and economic exchange obligations and reciprocity.

Signalling theory

Signalling theory centres on the ways in which labour market actors respond to imperfect information about both job entrants' productive capacity and likely organizational “fit” (Connelly et al., 2011; Spence, 1978). Signalling theory is relevant to initial employability development for understanding how employers and graduates send and receive employability signals to each other. It draws attention to the imperfect information available to both employers and graduates during recruitment and selection processes and their consequent reliance on other indicators or signals through which both parties communicate (“signal”) information and how, in turn, each party chooses to interpret those signals. Our analysis focuses on how employers and graduates, who bring different information to the interaction, engage in communication (signalling) to

reduce information differences between them and infer the likelihood of a 'good match' between the qualities and characteristics of the graduate and the employment opportunities and priorities of the employer (Connelly et al., 2011; Stiglitz, 2000).

Signalling processes, on both sides, therefore, are important features of initial employability. On the one hand, employers screen the potential organizational value of candidates based on the information the candidates present through signals that include educational qualifications and other life or work experiences that may suggest desirable qualities, including, for example, cognitive ability and perseverance (Connelly et al., 2011). Signalling theory proposes that through tangible information (e.g., the nature and quality of qualifications) and less tangible information (e.g., personal qualities and work ethic signals) employers make finer-grained judgements about job seekers' employability which may include interpretations of their future productivity potential and organizational fit (Connelly et al., 2011). The majority of employability studies focus on signals that are sent out by job seekers with the aim of enhancing their employment prospects. However, signalling theory indicates the two-party process of signalling and signal interpretation (Connelly et al., 2011). Importantly, employers provide signals about their employer image (Lievens & Slaughter, 2016) to potential employees which communicates the qualities they value and the expectations their future employees can anticipate (Rodrigues et al., 2020). Therefore, graduates do not only send signals but also engage in the interpretation of signals communicated by potential employers, for example, through their employer branding activities and public profiles (Keppeler & Papenfuß, 2021; Saini & Jawahar, 2019) to infer whether they consider employment in the organization to be both feasible and attractive to their employability and career priorities.

Research further indicates that context is a significant reference point for signal evaluation, as factors within organizations' environments, including rules, norms, cultures, and behaviours of incumbent members, are important for framing and interpretation of communicative signals (Cai, 2013). Context, therefore, plays a role in how graduates and employers interpret each other's signals about employability opportunities and potential. For example, employer branding signals focused on individual excellence may be effective for graduates from individualistic cultural backgrounds, but less effective for those from a collectivistic background. Similarly, graduates' signals about their employability potential may be inspected more carefully in a loose labour market situation but may be less critically evaluated in times of talent scarcity. Importantly, signalling is not confined to the initial job selection process; the interactional basis of signalling and interpretation by both parties is both present and future-directed. For example, employers will infer how employees' signals might translate into future organizational performance and employees will interpret employers' signals to infer future career and employability prospects (Highhouse et al., 2007; Jones et al., 2014; Tsai & Yang, 2010).

As *signalling interactivity* between employers and graduates is important, we propose that, for initial employability development, much rests on the clarity, frequency, intensity, and salience (see also Connelly et al., 2011) of the signals communicated by both

employers and those who are transitioning into first destination career-related employment. Signalling is likely to communicate value-laden information from which intrinsic expectations such as social fit and personal growth may be inferred as well as extrinsic or economic expectations related to career possibilities or financial rewards. In this way, signalling theory is directly relevant to initial employability development. It concerns employers' and graduates' signalling processes relating to recruiting decisions and subsequent transition into employment and career trajectory.

Social exchange theory

To complement the processes described by signalling theory and create a more complete understanding of the transition process into graduates' initial career destination and employment relationship, we argue that social exchange theory (Blau, 1964; Cropanzano & Mitchell, 2005; Cropanzano et al., 2017) offers a relevant perspective. Social exchange theory assumes that employment relationships comprise a series of sequential resource transactions between employers and employees, where the two parties engage in interactions that generate mutual and reciprocal obligations (Bordia et al., 2017; Cook et al., 2013). When beneficial resources are exchanged, this can lead to high-quality exchange relationships, which subsequently lead to beneficial and productive behaviours (Blau, 1964; Cropanzano & Mitchell, 2005).

Within social exchange theory, much attention is given to the norm of reciprocity, an exchange rule dictating that when one party initiates the exchange of a benefit for the other party, the latter should reply in kind, thus creating interdependent interpersonal transactions (Cropanzano et al., 2017). For example, when an employer provides developmental opportunities, the employee is likely to respond with higher performance and commitment. This creates a high-quality exchange relationship with mutual obligations, where the two interdependent parties reciprocate beneficial behaviours (Cook et al., 2013).

Social exchange theory also proposes that people and organizations can exchange different types of resources. Foa's and Foa (1980) foundational work argues that there are six types of resources: information, status, money, services, goods, and love. They argue that resources can be analysed based on (1) how universally something is valued (e.g., money has a rather constant value), and (2) how concrete the resource is (e.g., a financial incentive is highly tangible and objective, whereas a promise for future development maybe less tangible and more symbolic). These dimensions are often categorized into two types of resources: economic and socioemotional (Cropanzano & Mitchell, 2005). Both of these are consequential for initial employability development as employers will offer both tangible economic resources, such as the promise of advantageous financial rewards, and less tangible socioemotional resources, such as trust and opportunities for development. These subsequently may be reciprocated by employees with commitment, enhanced performance, and loyalty to the employer (Akkermans et al., 2019; Philippaers et al., 2017).

We argue that the notion of reciprocity, so central to social exchange theory, together with signalling processes by both employees and employers, is key to understanding the interdependent and interactive features of initial employability.

Employability-related signals comprise intrinsic as well as economic or extrinsic features, and social exchange theory indicates the interactive and interdependent reciprocity of resource exchange that underpins the employability relationships between graduates and employers.

Initial employability development as a process of information and resource exchanges

In crafting our model of initial employability development, we propose that signalling theory and social exchange theory complement each other in explaining the process by which employability is constructed through the transition from education or training into initial career destinations. Both theories focus on exchanges between parties, with signalling theory primarily focusing on informational communication processes, and social exchange theory focusing on reciprocity of economic and socio-emotional resource exchanges. Furthermore, both theories emphasize the interdependencies between parties, either to reduce imperfect, asymmetrical information, or to engage in reciprocity as a feature of high-quality employability relations (Connelly et al., 2011; Cook et al., 2013). Third, both theoretical perspectives emphasize that alignment between the two parties is crucial. To illustrate, signalling mismatches may lead to diminished effectiveness of HR practices (Guest et al., 2021), and social exchange mismatches to psychological contract breach (Dries et al., 2014). As such, both theories focus on similar phenomena, yet from different perspectives. We argue that they are compatible and even mutually reinforcing. Effective signalling by the employer without actual follow-up with resource exchange fulfilment aligned to expectations generated through signal interpretation by employees, will ultimately lead to resource transaction disappointment and,

potentially, to diminished employability commitment by individuals. At the same time, job seekers whose signals are interpreted by employers as indicative of high workplace performance, yet do not “deliver” expected productive outcomes once they have transitioned into employment, will likely experience resource exchange failure if this leads employers to lessen their commitment to career development opportunities as a result of social exchange breakdown. Therefore, social exchanges involve setting initial signals into further motion and, as such, form the *actualization of information exchanges* beyond the initial promise. They entail the enactment of early signalling information potential, values, and social fit through job performance and their translation into organizationally situated information.

Hence, we argue that the key mechanism underlying effective initial employability development is alignment between employers’ and employees’ communication processes (signalling) and resource exchanges (social exchange). As we illustrate in Figure 1, there is a cyclical emphasis in the importance of signals and social exchanges when it comes to initial employability development. Specifically, before and during the formation of the employment relationship, signals sent between the employer and job seeker create a foundation for subsequent social exchange relationships. Whilst signalling processes never cease, social exchange reciprocity becomes increasingly important as the employment relationship takes a firmer shape. Both signalling processes and social exchange reciprocity between graduates and employers are consequential, either for further (internal) employability and career development or for employee out-flow from the organization.

Our proposed model complements the dominant graduates’ agency-focused discourse by considering initial employability as a contextual phenomenon (Tholen, 2015) where employers

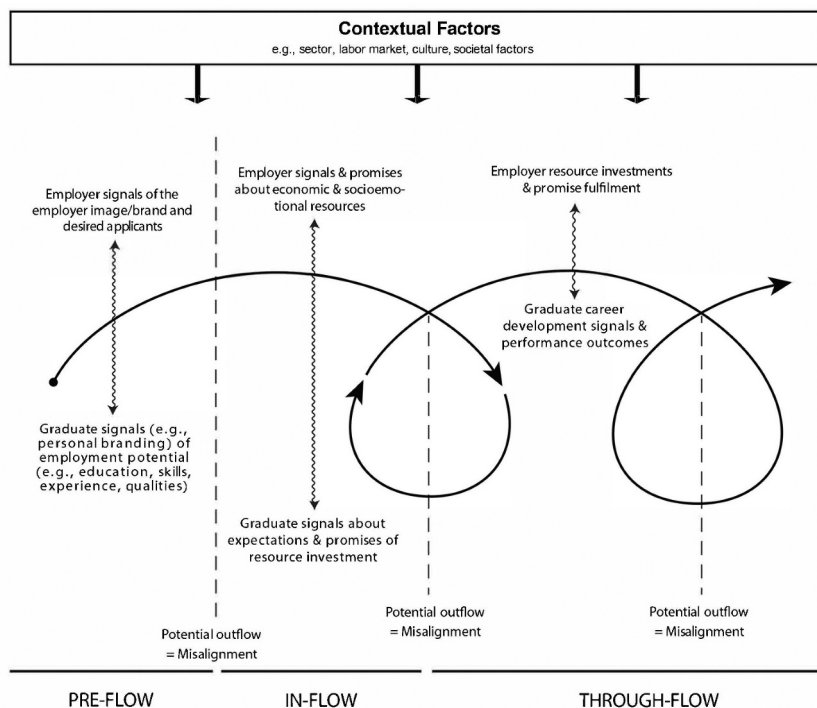


Figure 1. Conceptual model of initial employability development as a series of information and resource exchanges.

have varying degrees of agency (Forrier et al., 2018) in both their signalling processes and resource exchange decisions. However, it further conceives employers' social exchange decision-making agency and individuals' social, cultural, and behavioural signalling as important interactive features of individual employability development and organizational relationship and performance expectations. The process model we propose describes how this occurs within and across key phases encompassing employers' and individuals': (1) engagement and early pre-employment interactions (pre-flow); (2) signalling information and resource exchange promises informed by notions of individual-organizational fit and suitability (in-flow); (3) relational interactions and economic and socio-emotional resource exchange resulting from anticipation and expectation by both employer and employee through the process of socialization into workplaces and initial fulfilment of job roles (through-flow). The model we propose indicates the implications of this interactive cyclical process for potential employee out-flow leading either to lateral or hierarchical career advancement or to retention failure.

A process model of initial employability development

We now examine the interactive and relational features of employability development through different phases of the resource flow model. Figure 1 illustrates the interactive processes between graduates and employers that explain initial employability development as a combination of signalling processes and economic and socioemotional resource exchanges (i.e., social exchange). Each of the three phases in Figure 1 represents fluid boundaries in the employability development process within which significant employer-graduate interaction processes occur, rather than fixed stages from which employment outcomes are determined.

The initial phase includes the employability signalling relating to employment preparedness by graduates, for example, signals relating to relevant skills, a high fit with the organization, and more generic competencies like learning potential. It also includes employability signalling by employers, for example, signalling processes from which inferences can be made about employment benefits, working hours and locations, and training and advancement opportunities (Celani & Singh, 2011). This phase starts the first "loop" (which represents the developing employment relationship) in our model as initial signals are shared between the two parties. In subsequent phases, social exchange consequences of initial signaling interact with employers' talent identification processes as the signals about employability 'high potential' are appraised by employers in terms of how this will translate into workplace value and return. In turn, signalling by employers is interpreted by graduates in terms of their future resource expectations, both intrinsic, relating to their growth and development, and extrinsic, in relation to tangible economic reward. Resource exchange as well as continued signalling is then played out further as graduates transition into their initial job roles. Hence, once the in-flow phase starts, each of these phases forms a "loop" in the employment relationship where signals and promises are shared and, later on, fulfilled, thereby continuing into a new "loop" or breaking down and resulting in potential out-flow. In this latter

part of the process, career development processes involve resource exchanges (e.g., employees mobilize their competencies into high performance and employers reciprocate with opportunities for internal growth) and signalling (e.g., employees signal leadership potential whilst employers signal talent pipeline opportunities) relevant to career development, personal adaptability, organizational commitment, and individual performance. These ultimately generate a set of interactional outcomes that underpin agency by both parties resulting in continued employability development and career advancement within the organization. During this entire process, misalignment between signalling processes and resource exchanges are possible, which could lead to out-flow from the initial career destination.

Pre-flow phase

We define the pre-flow phase as *the phase before formal employment when employers and employees explore a potential fit*. Although most employability research focuses on signalling by graduates, the model we propose describes the often-overlooked pre-flow phase of initial employability development as important for substantial signalling by employers and signal interpretation by both parties. Importantly, signals travel both ways, but signal interpretation occurs independently, as at this stage there is relatively little interaction between the parties and their interdependencies are still low. As shown in Figure 1, the process may start when employers (often indirectly) engage in signalling processes through employer image and branding activities (Lievens & Slaughter, 2016). In some circumstances, graduates may encounter the employer in an education or work experience setting, before they enter formal employment. Furthermore, they can signal they are a desirable place to work through work placements, internships, summer placements, and college-level, work-integrated learning processes (Weiss et al., 2014). Employers also convey signals of what an employable graduate should "look like" (Ingram & Allen, 2019). Similarly, graduates engage in signalling towards potential employers, showcasing their employment potential through different signalling processes and personal branding efforts concerning their educational and overall profile (e.g., experience, skills, and personal qualities) that may be communicated through social media profiles, portfolio compilation and dissemination, or through networking and other events (e.g., Anderson & Tomlinson, 2021; Rodrigues et al., 2020; Tomlinson & Anderson, 2021). These signals may be communicated through proactive and targeted recruitment activities such as through information and advice sessions about future employment opportunities. Signalling may also occur through more dispersed ways such as leveraging networks, both in person and online, or through social media platforms and "blogging" activities (Khedher, 2019).

At this stage, therefore, signalling communicates information that the receivers (employer or graduate) may choose to interpret as part of their assessment of the potential fit between the two parties. Although this phase primarily comprises signalling communications involving both parties, in some circumstances it can also introduce initial resource exchanges. For example, internships and other forms of work

experience feature resource exchanges, including whether and how the employer in practice fulfils promises about interns' employability development and whether the interns actually deliver on initial signals about the unique skills and qualities they add to the organization. This process may move towards a further resource exchange process if either or both parties indicate their desire to engage in a longer-term employment relationship and interactivity will begin to converge as potential job candidates engage with the organization in recruitment processes. Hence, we argue that information asymmetry, so central to signalling theory (Connelly et al., 2011), is reduced by both employers and graduates as they invest in processes of signaling organisational fit.

Effective signalling and social exchange processes during this pre-flow phase benefit both employers and graduates. From the perspective of the graduate, employers' signalling informs how they approach the development of their employability resources, for example through work-related technical skills, applied knowledge, and career goal anticipation (Gault et al., 2010; Jackson & Wilton, 2017; Wilton, 2012). This phase further provides the basis for graduates' anticipation of personal, social, and organizational attributes and values that are expected (Handley, 2018; Ingram & Allen, 2019). Such signals are consequential for graduates' perceived career confidence, identity, and occupational or career crystallization that will form the basis of their subsequent employability signalling to assist their entry into employment in the next (in-flow) phase (Tomlinson, 2017; Wilton, 2012).

Despite variability in the reciprocity of signaling exchange information between graduates and employers (e.g., in cases where employers have not interacted with a graduate or their educational institution), this phase is crucial in the initial interaction between graduates and employers. This can cut across different types of graduates and companies. For instance, small or local companies may interact with diverse graduates in providing tailored information, or indeed real opportunities, in a similar way that established companies may strategically pre-recruit traditional graduates from higher-profile institutions.

Effective signalling and social exchange processes at this pre-flow stage also benefit employers. First, pre-employment signalling by graduates enables employers to identify and encourage individuals who they infer have potential value to the organization, and graduates' social and cultural capital signals are interpreted as suggestive of their potential value and productive capacity (Anderson & Tomlinson, 2021). Second, signalling processes in the pre-flow phase fulfil an important function by communicating specific organizational commitments towards occupational, professional, and career development that potential employees might expect. The graduate in turn is then able to adapt their signalling information to the employer in the job seeking process, including signals of self-image and identity. This can further influence how they present and begin articulating their early narratives about their potential value in a work organization setting and channel this through important signalling tools such as a job resume.

Hence, through a reduction of information asymmetry between employer and potential employees, the former can make provisional assessments about which candidates would

be the best fit in their organization and the latter can make inferences about the feasibility and desirability of employment in the organization. The clearer, more frequent, intense, and salient these signals are between both parties (see also Connelly et al., 2011; Guest et al., 2021), the higher the chance that they will move towards a mutually beneficial employability enhancing phase (i.e., in-flow).

Figure 1 indicates that, where signalling and resource exchange processes between organizations and individuals are aligned, the pre-flow phase can generate an advantage for graduates through informal and tacit knowledge resources concerning employability development opportunities. Employers also benefit through increased tacit and explicit knowledge relevant to graduates' productive or trainable potential. However, much rests on the quality of the signalling and the reciprocity of any resource exchange process. For example, studies suggest that employers' design and coordination of work-based pre-employment experiences can add value to graduates' early career development (McHugh, 2017; Silva et al., 2018) and at the same time enable productive "matching" at the pre-flow phase of transition into employment. However, where there are deficiencies in the signalling and resource exchange process, appropriately skilled and qualified graduates may self-select away from recruitment processes for reasons not specifically linked to their skill set or employability potential. This may apply to companies that have not extended the reach of their informational signals to broader groups of graduates. In such scenarios, organizations fail to leverage the benefits of pre-socialization of potentially productive members of their workforce (Connelly et al., 2011).

To summarize, we argue that the pre-flow phase consists mainly of signalling processes where employers and graduates infer information about their qualities, expectations, and fit. If the parties realize an aligned and salient signalling process, this likely feeds into resource exchanges that form the foundation for initial employability development.

In-flow phase

We define the in-flow phases *the phase when employers and employees enter a formal employment relationship, which comprises processes of employee selection and onboarding*. During this phase, the employer and graduate must further reduce information asymmetry and establish expectations of future resource exchanges as a feature of the formal employment relationship. Signaling processes about employability development, though their nature will change, become more salient and focused. To illustrate, employers will start signalling and promising certain economic and socioemotional resources. For instance, signals of organizational characteristics will be communicated through selection procedures and documentation. At this stage, graduates will start signaling their expectations and promises of resource investments. These can achieve salience and alignment, for example, through attention to specific organizational contextual settings, or through inference of qualities appropriate for specific occupational, professional, or labour market settings. In this in-flow phase, we argue that the balance between signalling processes and resource exchange (i.e., social exchange) starts to shift, and resource exchanges

become more prominent than signalling processes. Whereas the pre-flow phase mainly focused on signals by both parties with limited opportunities for interaction, the in-flow phase features the start of reciprocal and interdependent employer-employee exchange of economic and socioemotional resources (Cropanzano & Mitchell, 2005), supplemented by more salient and focused signalling processes.

As Figure 1 illustrates, our conceptualization of initial employability development considers recruitment as a feature of the pre-flow phase and as a prominent signaling opportunity (Celani & Singh, 2011) from which applicants may construe previously unknown organizational characteristics and organizational expectations of graduates concerning desired personality traits, values, personal skills, and qualities. Subsequently, in this in-flow phase, selection processes entail more of a lived social interaction. In this phase, initial interpretations of signals previously communicated by both graduates and employers become warranted or contested through actualized social and affective resource exchanges. For example, during selection processes, graduates must signal the skills and qualities they anticipate that employers expect during the post-selection stage and further warrant them during selection processes in order to trigger a hiring decision by the employer resulting in a series of social exchange processes to facilitate initial employment. However, signalling remains important as the basis for employers' assessments of performative potential during this phase.

A further feature of the in-flow phase of initial employability is talent identification which increasingly comprises an important feature of the in-flow phase (Barrick & Parks Leduc, 2019). The term "talent" is conceptually ambiguous, and a range of different talent philosophies are possible (Meyers et al., 2020). However, the term is increasingly applied to people deemed to have high organizational performance potential (Collings & Mellahi, 2009; Costea et al., 2012). Studies suggest that talent identification grounded in employers' ideas about exceptional levels of capability dominates contemporary graduate selection processes (McCracken et al., 2016). We propose that the process of talent identification represents an important point of integration between signalling theory and social exchange theory. Specifically, our conceptualization suggests that talent identification establishes social exchange expectations by graduates of status, prestige, and resource investment to support their career and organizational advancement. In exchange, organizations have substantial reciprocal performative expectations requiring commitment, flexibility, and deployment by graduates of the "talent" that has been signalled (Anderson & Tomlinson, 2021; Clarke & Scurry, 2020).

This integration of selection signalling processes and social exchange interaction processes through talent identification, between employers and graduates, means that much is promised and expected regarding economic (e.g., pay increase or promotion) and socioemotional (e.g., developmental opportunities or social support) resources (Cropanzano & Mitchell, 2005). However, there may be little clarity about how subjective qualities associated with signals interpreted by employers as "exceptional talent" convert to individual in-role performance as the basis for resource exchange in employment (McCracken et al., 2016). At this stage of the process, a consequence of

talent identification signalling is that social exchange is likely dominated by affective and relational resources, with a focus on "what a person is" rather than "what a person can do" (Gallardo-Gallardo et al., 2013). Therefore, for high-quality social exchange relationships, much depends on signalling and reciprocal exchange processes underpinning the transition into work roles.

However, as with the pre-flow phase, studies into employers' selection processes have identified potential dysfunctions. For example, employer selection processes, which form the basis for resource exchange in the in-flow phase may be skewed towards selection based on a pre-existing set of criteria focused on personal, social, and cultural expectations at the expense of other relevant criteria. In such instances, skilled and talented graduates with fewer social, economic, and cultural advantages, may be unsuccessful in the selection stage, thus restricting the diversity of graduate talent pools with both commercial and social justice consequences (Handley, 2018; Ingram & Allen, 2019). Hence, when signalling and resource exchange processes between the two parties are not aligned it may lead to early out-flow (via non-selection) of employees in the initial employability process.

To summarize, we contend that the in-flow process of initial employability represents an integration point for signalling and social exchange, whereby resource exchanges become increasingly important as a feature of onboarding and formalization of the employment relationship. Employers' signals warranted by resource commitments relating to, for example, career management and salary increasingly converge with graduates' signals of future performance potential, organizational commitment, and flexibility. Where signalling and resource exchanges between the two parties are aligned, initial employability development is strengthened and the employment relationship can move towards the through-flow phase. However, as indicated in Figure 1, misaligned interactions at this phase, which may arise as a result of signalling interpretation or lack of reciprocity in resource exchange between the two parties can result in out-flow and a failure to transition into further formalisation of the employment relationship.

Through-flow phase

We define the through-flow phase as *the phase when the employment relationship moves into a longer-term form, characterized by talent management and career development*. Early employment experiences comprise the through-flow phase. During this phase, employers focus on resource investments and promise fulfilment, whereas graduates signal further career development needs and can start fulfilling their own promises in terms of performance outcomes. Hence, signals that were communicated in prior phases, and resource exchanges enacted during onboarding, need to be further converted into more sustainable career outcomes. During this phase, the employment relationship takes a firmer shape, and further integration of signaling and social resource exchange processes occurs. Organisational signaling processes will likely focus on the characteristics of future leaders and the organisation's commitment to career development and may be communicated informally or through organizational internal

communications. New graduate employees' signals are likely to be more behaviourally communicated, for example, executing tasks to a high level, carrying out discretionary additional tasks, volunteering for working groups, and showing interest in colleagues' work insights – all of which may be inferred as more salient signs of personal adaptability, productivity potential and potential for growth.

During this phase, resource exchange involving employer provision of skills development and internal progression opportunities reciprocated by graduates' self-directed learning and development processes constitute an important phase in employability development and long-term career sustainability (De Vos et al., 2019, 2020). These exchanges provide an initial "alignment check" between signals and resource exchange. Reciprocity between graduates' discretionary behaviour, organizational commitment, role-based performance, and commitment to self-development and organizational delivery of anticipated status, pay and rewards, and opportunities for occupational or professional development and career advancement is consequential for the success of the employment relationship. Therefore, signalling may converge with important social exchange processes during the through-flow phase (Rodrigues et al., 2020), with implications for tangible resource investment by employers in graduates' career development and graduates' reciprocal delivery of promises of in-role performance, organizational fit, and productive value.

Alignment of signalling and social exchange between employers and graduates in this phase can lead to positive, reciprocal, and forward-looking interaction between the two interdependent parties (see Akkermans et al., 2019; Fugate et al., 2021; Philippaers et al., 2017). However, there are many processual challenges in this phase. For example, talent identification signalling by the organization during the in-flow phase may, in the through-flow phase, lead to graduates' expectations of organizational resources and support for their career acceleration that remain unmet. They might also result in complacency and unrealistic expectations by graduates for advancement (Dries & De Gieter, 2014). In addition, changing labour market characteristics may challenge alignment of signalling and exchange if factors such as job quality and local labour market characteristics affect the extent to which graduates are able to mobilize their career development resources and employers can reciprocate with organizational support and resources. A further challenge during this phase is the involvement of a wider range of stakeholders, which adds uncertainty to both signalling and resource exchange processes (Clarke, 2008; Forrier et al., 2018) as line managers and other experienced workers are involved in signal interpretation and resource exchange decisions that comprise this phase of the employability development process (Akkermans et al., 2019; Dess & Shaw, 2001; Nelissen et al., 2017; Van der Heijden et al., 2016).

Alignment of signalling and social exchange processes during the through-flow phase, resulting in forward-looking developments related to career development trajectories has benefits for both graduates and organizations. However, where a signalling or social exchange misalignment occurs between the two interdependent parties, for example, where expected career support does not materialize or a graduate fails

to live up to their designation as "a talent" (Collings & Mellahi, 2009), exchange processes may falter resulting in decreased motivation, inhibited self-development, and graduates' turnover (i.e., potential out-flow) intentions (Sumelius et al., 2020). This extends to employer decisions concerning career support incentives and opportunities for internal career development, as well as decisions about contract extension and promotion (or lack of promotion) likelihood. Moreover, misalignment between information and resource exchanges and, ultimately, potential out-flow of talent also harms employers as their resource investments in these graduates do not "pay off" in terms of productivity and commitment, hence leading to firm resource losses.

Our conceptualization goes some way towards explaining the important employability management paradox identified in the career studies field (De Cuyper & De Witte, 2011; Forrier et al., 2018). The employability management paradox indicates the potentially contradictory outcomes of resource exchange as well as signalling inconsistencies with regard to graduates' post-recruitment growth and development. Although investment in graduate recruitment, talent identification, and graduate development schemes can yield substantial benefits to the organization, employer narratives also reflect fearfulness about graduate retention (out-flow) if their skill set – and, by extension, their external employability – is substantially enhanced (Akkermans et al., 2019; Philippaers et al., 2017). Our conceptualization of initial employability development explains graduate retention as a consequence of dynamic and interactive signalling and resource exchange through the through-flow process. Signalling and resource exchange misalignment between the two parties can result in voluntary or involuntary out-flow from the organization and its potential costs for employers and employees (McCracken et al., 2016) rather than progression within the through-flow phase. Of course, demand-side factors also come into play in this process. For example, in labour market situations with more demand for talented graduates than supply, even with high-quality information and resource exchanges, graduates may leave when another opportunity presents itself that offers an even better career development perspective (e.g., a higher salary or more internal mobility opportunities). However, in general, our conceptual model proposes that when information and resource exchanges align and are of high quality, it is more likely that (internal) employability development will benefit.

Discussion

Despite a recent surge in employability research (Akkermans & Kubasch, 2017; Van Harten et al., 2021), the interdependence and interactions between employers and graduates in initial employability are under-theorized (Forrier et al., 2018; Fugate et al., 2021). We argue that the point of transition from education or training into an initial career-related work role is consequential for subsequent understanding of employability and career development trajectories. Therefore, in this conceptual article, we focus specifically on initial employability development and propose an integration of signalling theory and social exchange theory to better explain employability outcomes through processes of interdependent signalling and resource

exchange between employers and employees. In bringing together literatures from careers, graduate employability, and management fields, our conceptualization contributes to a synthesis of so far disconnected perspectives and explanations for employability development. In this section, we further identify the value and implications of our conceptualization and suggest directions for future research.

Main contributions and implications

First, our conceptualization addresses the limitations of one-sided models of initial employability which emphasize individuals' supply-side agency and which potentially pathologize negative employability outcomes as a deficit of workers' ability or agency. These models underestimate the relational features of employability development and the importance of contextually located settings. By conceptualizing the processual interdependence of employers and employees, we recognize that individual agency is important, yet propose an interactive processual explanation of employability development. Specifically, employability development is contextually influenced by labour market conditions and environmental processes but is continuously negotiated and enacted by employers and employees through different temporal phases (cf. Forrier et al., 2018; Fugate et al., 2021). The model is, therefore, contextually-sensitive and applicable to diverse types of employers and graduates who will engage with a broad range of signalling and resource exchanges in the employability process.

A second contribution of the paper is the integration of signalling (Connelly et al., 2011) and social exchange (Cropanzano et al., 2017) theories. We propose that signalling and social exchange processes between individuals and organizations generate obligations and expectations that are the foundational elements of longer-term employability development within the organization. This integration enables us to extend the cyclical approach to career development proposed by De Vos et al. (2019, 2020), which argues that the transition from education to work is not a one-off decision moment, but, instead, a series of ongoing learning cycles. Specifically, we identify interdependence and interactivity between employers and graduates that encompass the pre-flow phase before employees enter the labour market, the in-flow phase during selection, talent identification, and onboarding; and a through-flow phase focusing on initial employment experiences and career development. Our conceptualization does not conflate signaling theory and social exchange theory. Instead, our theoretical integration identifies the importance of both and further proposes that in the early phase of employability development, signalling exchanges are prominent, whereas, in the through-flow phase, social exchange becomes most consequential.

Third, the employability development processes we discussed (also see Figure 1) identify the pivotal role of talent identification processes as an important point of integration between informational signalling and social exchange processes. Although graduates are considered to be an important feature of "talent pools" and are viewed as a key source of high potential employees (McCracken et al., 2016), the links between initial employability and talent management have thus far remained undertheorized. Our paper contributes a conceptual

"bridge" between the talent management and employability literatures. Talent identification processes involve signals associated with both potential and performance (Jooss et al., 2021). However, studies have yet to establish how talent identification and subsequent performance are related and how talent identification is objectively achieved. Our conceptualization proposes that talent identification processes arise as a feature of employability signalling during the in-flow phase. Subsequent to talent designation signalling by employers, signalling and reciprocal social exchange processes are enacted during initial socialization processes. Subsequent in-role employment during the through-flow phase underpins ongoing talent (re)designation processes involving both signalling and social exchange in the dynamic and uncertain workplace context. The integration of social exchange obligations with talent signalling by both employers and individuals offers an important explanation of talent management processes and outcomes that take place within what is often referred to as the organizational talent pipeline (Kwon & Jang, 2021).

The fourth contribution of our article is to extend the processual approach to initial employability development by conceptualizing employer-employee interaction as a driver of human capital movement into, through, and out of, organizations (Makarius & Stevens, 2019). Human capital movement and flow are recognized as important for individual and organizational outcomes such as performance, productivity, and organisational culture. Our conceptualization provides an important means to understand and explain how interactive information and resource exchange processes occurring at pre-flow, in-flow, and through-flow phases are consequential for potential voluntary and involuntary turnover (outflow). This addresses the so far unresolved employability paradox (De Cuyper & De Witte, 2011; Forrier et al., 2018) and explains why unwanted graduate turnover (out-flow) from the organization is a recurrent feature of graduate recruitment experiences in practice settings.

In sum, our paper provides the basis for an explicit integration of constructs from the graduate employability, workplace employability, and HR/talent management fields. This integration is important as it provides the basis for enhanced interdisciplinary research, debate, and theory development of initial employability.

Directions for future research

Although our focus in this article is on initial employability development, our conceptualization can potentially inform future studies on employability development and career development more generally. First, we encourage scholars to use our conceptual model to operationalize constructs from social exchange theory and signalling theory to identify causal relationships that lie beneath employability development outcomes. Such research might identify the effect of the quality, frequency, and veracity (Connelly et al., 2011) of informational and resource exchange processes and their effect on employability-related outcomes as indicated by promotions, retention, and longer-term career development. In doing so, there is a need for longitudinal research to explicitly test signalling and social exchange processes during initial employability development and provide more clarity about the human

capital flow phases. For example, studies could examine pre-flow promises and expectations and, at a later time, the fulfilment of those promises and expectations via formalization of employment relationships and subsequent career development fulfilment. Yet another important direction for research would be to examine what happens if the signalling and social exchange “loops” do not play out as intended. For instance, what are the implications for graduates’ employability development and employer outcomes if certain signals during the pre-flow and in-flow phases are misunderstood or remain unfulfilled? Similarly, what if an employer has a labour shortage and decides to hire a graduate despite insufficient signalling of fit? Or, conversely, if a graduate decides to sign an employment contract out of financial need, despite a lack of high-quality employer signals and initial promises? We encourage researchers to empirically examine – both qualitatively and quantitatively – such processes to understand initial employability development in different ways.

Furthermore, scholars could use various individual and contextual predictors and moderators that would likely impact these processes. For example, empirical studies could examine whether relatively stable individual differences (e.g., extroversion, conscientiousness, proactive personality) and more malleable attributes (e.g., career competencies, career ambition) could impact which signals graduates send and how these signals are evaluated by employers. Similarly, it would be essential to study how labour market conditions (e.g., how VET and higher education are organized and whether there is a loose vs. tight labour market situation) and organizational factors (e.g., firm reputation, organizational culture) may play a role in strengthening or weakening the effectiveness of certain signals and resource exchanges. Such research would provide important new knowledge of the mechanisms by which longer-term employability development signals and exchange processes occur.

Second, integrating constructs from social exchange theory and signalling theory into research designs can provide a basis from which to compare how the interaction of (signalling and resource) exchange processes may result in different employability development outcomes for graduates from varying socio-economic backgrounds or different types of universities. Such studies may reconcile prior research about the positive and negative sides of contemporary graduate employability (Tomlinson, 2012) and potential Matthew effects (i.e., the strong get stronger, the weak get weaker) in employability development (Forrier et al., 2018). This may include the efficacy of early signals between employers and less-advantaged graduates (e.g., from less privileged socio-economic backgrounds, lower tariff institutions, or ethnic minority backgrounds) and the extent to which employers’ signal interpretation enhances or diminishes initial sector/company target decisions. For example, it would be important to empirically explore and test whether less-advantaged groups may send out different types of signals and how these would align with employers’ signal evaluations and employment decisions and outcomes. Such studies should take national and cultural contexts into account, as certain factors may be more or less salient depending on those contexts. To illustrate, although university prestige is prominent in, for example, the UK and US, it is much less

pronounced in many Western European countries, such as Germany or the Netherlands. We also urge scholars to study cultural and ethnic differences in how graduates and employers send and receive signals, as such differences may complicate alignment between the parties involved and the effectiveness of signalling and resource exchanges. These factors may not reflect meaningful differences in job-related skills and career potential, yet may hinder initial employability development if they are not sufficiently understood by all parties involved in the process.

Moreover, although our model focuses on initial employability development and unique characteristics of the first major career transition people navigate, we encourage future research to explore whether the theoretical ideas underlying the conceptual model may also hold for different types of worker groups at different career stages. For example, scholars could assess whether our model applies to career transitions across career stages (e.g., among mid-career and late-career professionals), occupations (e.g., blue-collar, white-collar, and pink-collar workers), cultures (e.g., countries with a less strong focus on individual agency and more traditional employment relations), and employment types. For example, it would be exciting to study how the type and content of signals and resource exchanges might be somewhat different across career transition types. This could establish whether signals and resources about learning and development are especially prominent among graduates and initial employability development, whereas those related to employment stability and work-family balance might become more pronounced when people transition between jobs in their mid-career phase. Furthermore, it would be fascinating to study employability development processes – i.e., signalling and resource exchanges – in non-traditional employment relations, such as agency or gig workers (cf. Kost et al., 2020; Vallas & Schor, 2020).

As a third suggestion, we propose that scholars examine the role of disruptive and unexpected changes that may impact employability development processes. Research has convincingly shown that chance events impact the vast majority of graduates (Hirschi, 2010) and can impact people’s career decision-making (Seibert et al., 2013). Akkermans et al. (2018) argued that career shocks – disruptive events that trigger deliberate thought processes about one’s career – need to be included in conversations about employability and career development. Indeed, Blokker et al. (2019) showed that such career shocks can impact graduates’ employability development. Career shocks are highly relevant to understand job search and HRM processes (Akkermans et al., 2021) and, as such, could play a pivotal role in information and resource exchange processes. For example, a sudden reorganization may abruptly end such exchange processes and lead to early outflow. Similarly, an unexpected promotion opportunity may offer a significant boost to the exchange processes’ quality and enhance employability development. In all, we encourage scholars to study such disruptive events when studying employability development.

Conclusion

Our conceptual synthesis combines social exchange theory and signalling theory to better integrate and understand initial

employability issues. To do so, we focus on transition processes from education or vocational training into employment. We define initial employability development as the process of enhancing an individual's initial employment potential and realization in the internal and/or external labour market (see also Forrier & Sels, 2003; Rothwell & Arnold, 2007). Our integrated processual perspective on employability development extends processual explanations (Forrier et al., 2018; Holmes, 2013), and better explains employability outcomes as the result of interactivity between employer and employee through signalling and resource exchange processes. Graduates are a unique group to use as a basis to conceptualize pre-flow, in-flow, through-flow (and potential out-flow) phases of employability development. Although certain aspects may differ, our processual conceptualization identifies key areas of interactivity through pre-employment signalling, socialization and onboarding processes, and social exchange mechanisms that also feature in wider employment relations processes.

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References

- Akkermans, J., Collings, D. G., da Motta Veiga, S. P., Post, C., & Seibert, S. (2021). Toward a broader understanding of career shocks: Exploring interdisciplinary connections with research on job search, human resource management, entrepreneurship, and diversity. *Journal of Vocational Behavior*, 126, 103563. <https://doi.org/10.1016/j.jvb.2021.103563>
- 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., Seibert, S. E., & Mol, S. T. (2018). Tales of the unexpected: Integrating career shocks in the contemporary careers literature. *SA Journal of Industrial Psychology*, 44, e1503. <https://doi.org/10.4102/sajip.v44i0.1503>
- Akkermans, J., Tims, M., Beijer, S., & De Cuyper, N. (2019). Should employers invest in employability? Examining employability as a mediator in the HRM - commitment relationship. *Frontiers in Psychology*, 10, Article 717. <https://doi.org/10.3389/fpsyg.2019.00717>
- Anderson, V. (2019). Moving on from the organization. In W. Wong, V. Anderson, & H. Bond (Eds.), *Human capital management standards: A complete guide* (pp. 185–214). Kogan Page, 2019Chapter 8.
- Anderson, V., & Tomlinson, M. (2021). Signaling standout graduate employability: The employer perspective. *Human Resource Management Journal*, 31(3), 675–693. <https://doi.org/10.1111/1748-8583.12334>
- Barrick, M. R., & Parks Leduc, L. (2019). Selection for fit. *Annual Review of Organizational Psychology and Organizational Behavior*, 6(1), 171–193. <https://doi.org/10.1146/annurev-orgpsych-012218-015028>
- Baruch, Y., & Vardi, Y. (2016). A fresh look at the dark side of contemporary careers: Toward a realistic discourse. *British Journal of Management*, 27(2), 355–372. <https://doi.org/10.1111/1467-8551.12107>
- Blau, P. (1964). *Exchange and power in social life*. Wiley.
- Blokker, R., Akkermans, J., Tims, M., Jansen, P., & Khapova, S. (2019). Building a sustainable start: The role of career competencies, career success, and career shocks in young professionals' employability. *Journal of Vocational Behavior*, 112, 172–184. <https://doi.org/10.1016/j.jvb.2019.02.013>
- Bordia, P., Restubog, S. L. D., Bordia, S., & Tang, R. L. (2017). Effects of resource availability on social exchange relationships: The case of employee psychological contract obligations. *Journal of Management*, 43(5), 1447–1471. <https://doi.org/10.1177/0149206314556317>
- Bridgstock, R. (2009). The graduate attributes we've overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development*, 28(1), 31–44. <https://doi.org/10.1080/07294360802444347>
- Cai, Y. (2013). Graduate employability: A conceptual framework for understanding employers' perceptions. *Higher Education*, 65(4), 457–469. <https://doi.org/10.1007/s10734-012-9556-x>
- Celani, A., & Singh, P. (2011). Signaling theory and applicant attraction outcomes. *Personnel Review*, 40(2), 222–238. <https://doi.org/10.1108/00483481111106093>
- Clarke, M. (2008). Understanding and managing employability in changing career contexts. *Journal of European Industrial Training*, 32(4), 258–284. <https://doi.org/10.1108/03090590810871379>
- Clarke, M., & Scurry, T. (2020). The role of the psychological contract in shaping graduate experiences: A study of public sector talent management programmes in the UK and Australia. *The International Journal of Human Resource Management*, 31(8), 965–991. <https://doi.org/10.1080/09585192.2017.1396545>
- Collings, D. G., & Mellahi, K. (2009). Strategic talent management: A review and research agenda. *Human Resource Management Review*, 19(4), 304–313. <https://doi.org/10.1016/j.hrmr.2009.04.001>
- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39–67. <https://doi.org/10.1177/0149206310388419>
- Cook, K. S., Cheshire, C., Rice, E. R. W., & Nakagawa, S. (2013). Social exchange theory. In J. De Lamater & A. Ward (Eds.), *Handbook of social psychology* (pp. 61–88). Springer Netherlands. https://doi.org/10.1007/978-94-007-6772-0_3
- Costea, B., Amiridis, K., & Crump, N. (2012). Graduate employability and the principle of potentiality: An aspect of the ethics of HRM. *Journal of Business Ethics*, 111(1), 25–36. <https://doi.org/10.1007/s10551-012-1436-x>
- Cropanzano, R., Anthony, E. L., Daniels, S. R., & Hall, A. V. (2017). Social exchange theory: A critical review with theoretical remedies. *The Academy of Management Annals*, 11(1), 479–516. <https://doi.org/10.5465/annals.2015.0099>
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874–900. <https://doi.org/10.1177/0149206305279602>
- De Cuyper, N., & De Witte, H. (2011). The management paradox: Self-rated employability and organizational commitment and performance. *Personnel Review*, 40(2), 152–172. <https://doi.org/10.1108/00483481111106057>
- Dess, G. G., & Shaw, J. D. (2001). Voluntary turnover, social capital, and organizational performance. *Academy of Management Review*, 26(3), 446–456. <https://doi.org/10.2307/259187>
- 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.
- De Vos, A., Van der Heijden, B. I. J. M., & Akkermans, J. (2020). Sustainable careers: Towards a conceptual model. *Journal of Vocational Behavior*, 117, 103196. Article 103196. <https://doi.org/10.1016/j.jvb.2018.06.011>
- Dries, N., & De Gieter, S. (2014). Information asymmetry in high potential programs. *Personnel Review*, 43(1), 136–162. <https://doi.org/10.1108/PR-11-2011-0174>
- Dries, N., Forrier, A., De Vos, A., & Pepermans, R. (2014). Self-perceived employability, organization-rated potential, and the psychological contract. *Journal of Managerial Psychology*, 29(5), 565–581. <https://doi.org/10.1108/JMP-04-2013-0109>

- Foa, E. B., & Foa, U. G. (1980). Resource theory: Interpersonal behavior as exchange. In K. Gergen, M. S. Greenberg, & R. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 77–94). Plenum Press.
- Forrier, A., De Cuyper, N., & Akkermans, J. (2018). The winner takes it all, the loser has to fall: Proving the agency perspective in employability research. *Human Resource Management Journal*, 28(4), 511–523. <https://doi.org/10.1111/1748-8583.12206>
- Forrier, A., & Sels, L. (2003). The concept employability: A complex mosaic. *International Journal of Human Resources Development and Management*, 3(2), 102–124. <https://doi.org/10.1504/IJHRDM.2003.002414>
- Forrier, A., Verbruggen, M., & De Cuyper, N. (2015). Integrating different notions of employability in a dynamic chain: The relationship between job transitions, movement capital and perceived employability. *Journal of Vocational Behavior*, 89, 56–64. <https://doi.org/10.1016/j.jvb.2015.04.007>
- Fugate, M., Van der Heijden, B., De Vos, A., Forrier, A., & De Cuyper, N. (2021). Is what's past prologue? A review and agenda for contemporary employability research. *The Academy of Management Annals*, 15(1), 15. <https://doi.org/10.5465/annals.2018.0171>
- Gallardo-Gallardo, E., Dries, N., & González-Cruz, T. F. (2013). What is the meaning of 'talent' in the world of work? *Human Resource Management Review*, 23(4), 290–300. <https://doi.org/10.1016/j.hmr.2013.05.002>
- Gault, J., Leach, E., & Duey, M. (2010). Effects of business internships on job marketability: The employers' perspective. *Education + Training*, 52(1), 76–88. <https://doi.org/10.1108/00400911011017690>
- Grosemans, I., Coertjens, L., & Kyndt, E. (2017). Exploring learning and fit in the transition from higher education to the labour market: A systematic review. *Educational Research Review*, 21, 67–84. <https://doi.org/10.1016/j.edurev.2017.03.001>
- Guan, Y., Arthur, M. B., Khapova, S. N., Hall, R. J., & Lord, R. G. (2019). Career boundarylessness and career success: A review, integration and guide to future research. *Journal of Vocational Behavior*, 110, 390–402. <https://doi.org/10.1016/j.jvb.2018.05.013>
- Guest, D. E., Sanders, K., Rodrigues, R., & Oliveira, T. (2021). Signaling theory as a framework for analysing human resource management processes and integrating human resource attribution theories: A conceptual analysis and empirical exploration. *Human Resource Management Journal*, 31(3), 796–818. <https://doi.org/10.1111/1748-8583.12326>
- Handley, K. (2018). Anticipatory socialization and the construction of the employable graduate: A critical analysis of employers' graduate careers websites. *Work, Employment and Society*, 32(2), 239–256. <https://doi.org/10.1177/0950017016686031>
- Highhouse, S., Thornbury, E. E., & Little, I. S. (2007). Social-identity functions of attraction to organizations. *Organizational Behavior and Human Decision Processes*, 103(1), 134–146. <https://doi.org/10.1016/j.obhdp.2006.01.001>
- Hirschi, A. (2010). The role of chance events in the school-to-work transition: The influence of demographic, personality and career development variables. *Journal of Vocational Behavior*, 77(1), 39–49. <https://doi.org/10.1016/j.jvb.2010.02.002>
- Holmes, L. (2013). Competing perspectives on graduate employability: Possession, position or process? *Studies in Higher Education*, 38(4), 538–554. <https://doi.org/10.1080/03075079.2011.587140>
- Ingram, N., & Allen, K. (2019). 'Talent-spotting' or 'social magic'? Inequality, cultural sorting and constructions of the ideal graduate in elite professions. *The Sociological Review*, 67(3), 723–740. <https://doi.org/10.1177/0038026118790949>
- Jackson, D., & Wilton, N. (2017). Perceived employability among undergraduates and the importance of career self-management, work experience and individual characteristics. *Higher Education Research & Development*, 36(4), 747–762. <https://doi.org/10.1080/07294360.2016.1229270>
- Jones, D. A., Willness, C. R., & Madey, S. (2014). Why are job seekers attracted by corporate social performance? Experimental and field tests of three signal-based mechanisms. *Academy of Management Journal*, 57(2), 383–404. <https://doi.org/10.5465/amj.2011.0848>
- Jooss, S., McDonnell, A., & Burbach, R. (2021). Talent designation in practice: An equation of high potential, performance and mobility. *The International Journal of Human Resource Management*, 32(21), 4551–4577. <https://doi.org/10.1080/09585192.2019.1686651>
- Keppeler, F., & Papenfuß, U. (2021). Employer branding and recruitment: Social media field experiments targeting future public employees. *Public Administration Review*, 81(4), 763–775. <https://doi.org/10.1111/puar.13324>
- Khedher, M. (2019). Conceptualizing and researching personal branding effects on the employability. *Journal of Brand Management*, 26(2), 99–109. <https://doi.org/10.1057/s41262-018-0117-1>
- Kost, D., Fieseler, C., & Wong, S. I. (2020). Boundaryless careers in the gig economy: An oxymoron? *Human Resource Management Journal*, 30(1), 100–113. <https://doi.org/10.1111/1748-8583.12265>
- Kwon, K., & Jang, S. (2021). There is no good war for talent: A critical review of the literature on talent management. *Employee Relations: The International Journal*, 44(1), 94–120. <https://doi.org/10.1108/ER-08-2020-0374>
- Lievens, F., & Slaughter, J. E. (2016). Employer image and employer branding: What we know and what we need to know. *Annual Review of Organizational Psychology and Organizational Behavior*, 3(1), 407–440. <https://doi.org/10.1146/annurev-orgpsych-041015-062501>
- Makarius, E. E., & Stevens, C. E. (2019). Drivers of collective human capital flow: The impact of reputation and labor market conditions. *Journal of Management*, 45(3), 1145–1172. <https://doi.org/10.1177/0149206317690585>
- McCracken, M., Currie, D., & Harrison, J. (2016). Understanding graduate recruitment, development and retention for the enhancement of talent management: Sharpening 'the edge' of graduate talent. *The International Journal of Human Resource Management*, 27(22), 2727–2752. <https://doi.org/10.1080/09585192.2015.1102159>
- McHugh, P. P. (2017). The impact of compensation, supervision and work design on internship efficacy: Implications for educators, employers and prospective interns. *Journal of Education and Work*, 30(4), 367–382. <https://doi.org/10.1080/13639080.2016.1181729>
- Meyers, M. C., Van Woerkom, M., Paauwe, J., & Dries, N. (2020). HR managers' talent philosophies: Prevalence and relationships with perceived talent management practices. *The International Journal of Human Resource Management*, 31(4), 562–588. <https://doi.org/10.1080/09585192.2019.1579747>
- Nelissen, J., Forrier, A., & Verbruggen, M. (2017). Employee development and voluntary turnover: Testing the employability paradox. *Human Resource Management Journal*, 27(1), 152–168. <https://doi.org/10.1111/1748-8583.12136>
- Philippaers, K., De Cuyper, N., & Forrier, A. (2017). Employable, committed, and thus well-performing: A matter of interdependent forward-looking social exchange. *European Journal of Work and Organizational Psychology*, 26(5), 755–767. <https://doi.org/10.1080/1359432X.2017.1351950>
- 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>
- Römgens, I., Scoupe, R., & Beausaert, S. (2020). Unraveling the concept of employability, bringing together research on employability in higher education and the workplace. *Studies in Higher Education*, 45(12), 2588–2603. <https://doi.org/10.1080/03075079.2019.1623770>
- Rothwell, A., & Arnold, J. (2007). Self-perceived employability: Development and validation of a scale. *Personnel Review*, 36(1), 23–41. <https://doi.org/10.1108/00483480710716704>
- Saini, G. K., & Jawahar, I. M. (2019). *The influence of employer rankings, employment experience, and employee characteristics on employer branding as an employer of choice*. Career Development International.
- 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. *The Journal of Applied Psychology*, 98(1), 169–182. <https://doi.org/10.1037/a0030882>
- Silva, P., Lopes, B., Costa, M., Melo, A. I., Dias, G. P., Brito, E., & Seabra, D. (2018). The million-dollar question: Can internships boost employment? *Studies in Higher Education*, 43(1), 2–21. <https://doi.org/10.1080/03075079.2016.1144181>

- Smith, V. (2010). Enhancing employability: Human, cultural, and social capital in an era of turbulent unpredictability. *Human Relations*, 63(2), 279–300. <https://doi.org/10.1177/0018726709353639>
- Spence, M. (1978). Job market signaling. In P. Diamond & M. Rothschild (Eds.), *Uncertainty in economics* (pp. 281–306). Academic Press. <https://doi.org/10.1016/B978-0-12-214850-7.50025-5>
- Spence, M. (2002). Signaling in retrospect and the informational structure of markets. *The American Economic Review*, 92(3), 434–459. <https://doi.org/10.1257/00028280260136200>
- Stiglitz, J. E. (2000). The contributions of the economics of information to twentieth century economics. *The Quarterly Journal of Economics*, 115(4), 1441–1478. <https://doi.org/10.1162/003355300555015>
- Sumelius, J., Smale, A., & Yamao, S. (2020). Mixed signals: Employee reactions to talent status communication amidst strategic ambiguity. *The International Journal of Human Resource Management*, 31(4), 511–538. <https://doi.org/10.1080/09585192.2018.1500388>
- Tholen, G. (2015). What can research into graduate employability tell us about agency and structure? *British Journal of Sociology of Education*, 36(5), 766–784. <https://doi.org/10.1080/01425692.2013.847782>
- Tomlinson, M. (2012). Graduate employability: A review of conceptual and empirical themes. *Higher Education Policy*, 25(4), 407–431. <https://doi.org/10.1057/hep.2011.26>
- Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. *Education + Training*, 59(4), 338–352. <https://doi.org/10.1108/ET-05-2016-0090>
- Tomlinson, M., & Anderson, V. (2021). Employers and graduates: The mediating role of signals and capitals. *Journal of Higher Education Policy and Management*, 43(4), 384–399. <https://doi.org/10.1080/1360080X.2020.1833126>
- Tsai, W. C., & Yang, I. W. F. (2010). Does image matter to different job applicants? The influences of corporate image and applicant individual differences on organizational attractiveness. *International Journal of Selection and Assessment*, 18(1), 48–63. <https://doi.org/10.1111/j.1468-2389.2010.00488.x>
- Vallas, S., & Schor, J. B. (2020). What do platforms do? Understanding the gig economy. *Annual Review of Sociology*, 46(1), 273–294. <https://doi.org/10.1146/annurev-soc-121919-054857>
- 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 Harten, J., De Cuyper, N., Knies, E., & Forrier, A. (2021). Taking the temperature of employability research: A systematic review of interrelationships across and within conceptual strands. *European Journal of Work and Organizational Psychology*, 31(1), 1–15. <https://doi.org/10.1080/1359432X.2021.1942847>
- Weiss, F., Klein, M., & Grauenhorst, T. (2014). The effects of work experience during higher education on labour market entry: Learning by doing or an entry ticket? *Work, Employment and Society*, 28(5), 788–807. <https://doi.org/10.1177/0950017013506772>
- Wilton, N. (2012). The impact of work placements on skills development and career outcomes for business and management graduates. *Studies in Higher Education*, 37(5), 603–620. <https://doi.org/10.1080/03075079.2010.532548>