EFFECTS OF HUMAN RESOURCE MANAGEMENT ON INFORMAL LEARNING

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INTRODUCTION

Despite organizations spending billions of dollars every year on learning activities of a formal nature, 70 percent of learning in the workplace is informal (Cunningham and Hillier, 2013). For many workplaces, especially those that require non-routine decision making and problem-solving, organizational performance depends on the ability of employees to continually upgrade their knowledge and skills. Informal learning enables employees to adapt to a rapidly changing business environment (Hall, 1996). Moreover, informal learning can enhance employees' long-term employability and career prospects. Under this circumstance, Human Resource (HR) professionals must shift from delivering conventional, formal training to empowering and motivating employees to engage in informal learning (Bednall, Sanders, and Runhaar, 2014; Runhaar, Sanders, and Yang, 2010).

Traditionally, HR professionals, senior and line managers were responsible for employees' development. That is, they would organize training and other methods of formal instruction in response to perceived gaps in employees' knowledge and skills (Vrasidas, and Glass, 2004). Although such programs play an important role in building employees' capabilities (Kyndt, and Baert, 2013), these programs can be expensive and time-consuming. In addition, they may be poorly aligned with employees' actual work and their unique learning needs (Hall, 1996). Conversely, informal learning carries certain benefits over formal learning activities. Informal learning – also known as workplace or work-related learning – is situated in the workplace and is initiated by employees to meet a specific learning need. As a result, it is less expensive, less time-consuming and strongly aligned to the work of employees (Marsick, and Watkins, 1990; 2001; Hoffman, 2005; see also Bednall *et al.,* 2014; Van Rijn, 2014). Informal learning is also

related to autonomous learning, which has been defined as "methods that employees engage in to acquire skills and advance their knowledge outside of formal training and development programs" (Betts, and Kercher, 1999).

In this chapter we draw on Marsick and Watkins' (2001, p. 25) definition of informal learning. In contrast to formal learning, they argue: "Informal learning (…) may occur in institutions, but is not typically classroom-based or highly structured, and control of learning rests primarily in the hands of the learner". In terms of objectives, informal learning is intended to enhance knowledge and skills (Eraut, 2004). In terms of formats, informal learning activities might entail reflection on daily activities, keeping up to date by reading professional journals or books, seeking for feedback from and knowledge sharing with colleagues, supervisors and customers, as well as engaging in innovative behavior which encompasses many of the actions described above for the benefit of the organization (see also Sanders, and Lin, 2014). It also includes networking, coaching, mentoring and performance planning (Marsick, and Watkins, 2001).

There is growing evidence that organizations' human resource management (HRM) policies and practices can facilitate informal learning (see for instance, Bednall *et al.,* 2014; Sanders, and Yang, 2016). HRM is defined as the management of people at work to achieve competitive advantage (Boselie, Dietz, and Boon, 2005). HRM includes HR practices like recruitment and selection, training, pay (for performance), career management, promotion, and performance appraisals. This chapter discusses this potential for HR practices to guide and motivate informal learning activities. We begin with a discussion of the different forms of informal learning activities. Next, we discuss the impact of HR practices and the joint effect of HR practices and

HR strength on informal learning activities. The chapter concludes with an agenda for future research.

INFORMAL LEARNING ACTIVITIES

Marsick and Watkins (1990) developed an initial model for enhancing informal learning, which they subsequently modified in collaboration with Cseh (Cseh, Watkins, and Marsick, 1999). Their model highlights two elements: 1) an individual belief that learning grows out of everyday encounters while working and living in a given context, and 2) the personal, social, business, and cultural context for informal learning that plays a key role in influencing the way in which people interpret the situation, their choices, and the actions they take. An important assumption of the model is that individuals progress in how they attach meaning to their experiences. With every new insight, they may return to and question their earlier understanding. Although the model is arranged in a circle, the steps are neither linear nor necessarily sequential (see Marsick, and Watkins, 2001).

According to this model learning starts with a trigger, an internal or external stimulus that for instance signals dissatisfaction with current ways of thinking. Individuals will interpret this experience (refine their diagnosis) and might for instance ask a colleague about their interpretation of the experience (examine alternative solutions). The interpretation of the context will lead to choices about learning strategies and producing the proposed solution. Contextual factors like time, money, and people from whom to learn, will influence the ability to successfully implement the desired solution. Once an action is taken, individuals can assess the outcomes and decide whether or not they match the individual's goal (the intended result). In this

judgement of the consequences individuals can draw lessons learned and use these lessons in planning future actions, which results in new understanding that an individual would bring when encountering a new situation.

Based on the model proposed by Marsick and Watkins (1990; 2001), informal learning in the workplace can be categorized in *individual informal learning activities* and *collaborative informal learning activities* (see Van Rijn, 2014). In addition, we also regard *innovative behavior,* defined as the generation of novel solutions to problems, convincing colleagues to adopt new approaches, and ultimately implementing them as a type of collaborative informal learning activity (Scott, and Bruce, 1994; see also Sanders, and Lin, 2014). Specifically, we argue idea generation involves experimenting with, evaluating and refining creative solutions, thereby yielding useful insights to the learner. Moreover, the implementation of innovative ideas, described by Baer (2012) as a socio-political process, requires the advocacy and/or sponsorship of supporters within the organization. We argue that the process of socializing new ideas with colleagues yields useful feedback and insights (De Stobbeleir, Ashford, and Buyens, 2011), ultimately contributing to the innovator's knowledge.

Individual informal learning activities are those activities that are carried out individually without any assistance from colleagues or supervisors. In Marsick and Watkins' model (1990; 2001), they refer to the learning parts which are executed without the context of other individuals, like interpreting the experience and diagnosing or frame a new experience. In these activities employees explore their own values, interests, attitudes, career goals, and learning style preferences. Reflection on daily activities, and keeping up to date are examples of individual informal learning activities (e.g. van Woerkom, 2004; Kwakman, 2003; Lohman, and Woolf,

2001). *Reflection on daily activities* include activities such as assessing progress towards goals, identifying strengths and weaknesses, and devising approaches to overcome perceived obstacles (see Bednall *et al.,* 2014). It is believed to assist employees in consolidating knowledge, recognizing areas in need of improvement, reconsidering existing conceptions of high performance, and changing routine behavior (Schön, 1983; Van Woerkom, 2004). *Keeping up-to-date* is defined as an individual informal learning activity in which employees keep themselves up-to-date with developments in the field and acquire external knowledge by scanning for example studying subject matter literature and reading professional journals (e.g. Geijsel, Sleegers, Stoel, and Krüger, 2009; see also Van Rijn, 2014).

Collaborative informal learning activities refer to those activities in which employees acquire knowledge and skills directly through interaction with others, such as knowledge sharing, seeking feedback, and testing new approaches to work, either original or learned elsewhere (e.g. Kwakman, 2003; Lohman, 2005; van Woerkom, 2004). In Marsick and Watkins' model (1990; 2001), they corresponds to the learning elements in which other persons, like a colleague or a supervisor help to interpret the context, and examine different learning strategies. *Seeking feedback from supervisors* is a collaborative activity in which employees focus on one-to-one dyadic information sharing with their supervisor, specifically seeking feedback from their supervisor about their work (e.g. Lohman, 2005). *Knowledge sharing* is an activity in which employees have productive informal meetings or chats with each other in which they share their knowledge, successes, and failures (Kwakman, 2003).

In comparison to individual informal learning activities, those collaborative ones require an additional investment of time and energy that many employees may be unwilling to make.

Employees may be discouraged from activities that require interaction with their supervisor or other employees because doing so entails risk (see Bednall *et al*., 2014; Bednall, and Sanders, *in press*; Sanders, and Lin, 2014). Risk in this context refers to the possibility that something unpleasant will happen, for instance reputational damage or losing credibility, resistance from peers, and even losing their job. For example, employees may be discouraged from seeking advice or feedback for fear of criticism or exposure of their lack of knowledge (Bednall *et al.*, 2014). Similarly, if employees share knowledge with their colleagues, their methods may be criticized and they risk losing their unique 'expert power' (Raven, 2008; Renzl, 2008). As a result, organizations face the conundrum of how they can best encourage employees to engage in such learning activities.

Innovative behavior represents another informal learning activity. Our conceptualization of innovative behavior chimes with the idea that learning grows from everyday experience including the problems and opportunities that arise in day-to-day life and work (Cseh *et al.,* 1999). Broadly comprising two main phases- creativity and innovation implementation- the term is suggestive of several discrete, but inter-related activities (Scott, and Bruce, 1994). The first stage -creativity- entails first recognizing the potential for doing things differently, then reflecting upon potential alternatives. The second stage –innovation implementation- requires collaborative engagement, as individuals reflect upon the feasibility of these possible alternatives, then in conjunction with others evaluate their options and implement that which makes most sense. Although these phases do not necessarily occur in a linear fashion, they are suggestive of balance, whereby originality and feasibility are considered in tandem. Hence, innovative behaviors represent a distinct form of informal learning, whereby new ideas are not

only triggered by opportunities in the wider context, but are also assessed and evaluated in a measured way so that the optimum solution is reached.

Like other forms of informal learning, innovative behaviors are fragile and likely to dissipate given an environment that curtails one or other of the phases highlighted above. Unlike other types of informal learning, innovative behavior by definition gives rise to some collective-level change that is novel, relative to the setting within which it occurs, valuable as perceived within that setting, and flowing from the conscious intention of the individual or individuals concerned (West, and Farr, 1990). Innovative behaviors may give rise to change that is radical or incremental (Anderson, and Potocnik, 2014).

HR PRACTICES AND INFORMAL LEARNING ACTIVITIES

HR scholars and practitioners have begun to address the question of *how and under what circumstances* Human Resource Management (HRM) can encourage greater participation in informal learning activities. Literature examining the influence of HRM on informal learning has taken two perspectives. In the first perspective, *individual HR practices* such as performance appraisal, career planning, training and development are highlighted and their effects on employees' participation in informal learning activities are examined. The second perspective is inspired by the *HR process approach* (Bowen, and Ostroff, 2004; Sanders, Shipton, and Gomes, 2014) in which HR strength is proposed as a central concept to understand how and why HR practices work. Within this perspective the individual HR practices and HR strength interact and jointly influence employees' motivation to engage in informal learning activities.

First perspective: Individual HR Practices on Informal Learning

Performance appraisal is one of the most important components of HRM (Nankervis, Compton, and Baird, 2005; see also Bednall *et al*., 2014) as it creates an explicit link between individual performance and the organization's strategic goals (DeNisi, and Somesh, 2010). In addition, it helps employees to identify learning needs and provides a framework for setting development goals (Elicker, 2006). Performance appraisal delivered by the supervisor may be especially important (MacNeil, 2001) as supervisors have the ability to deliver insightful performance feedback, to encourage employees to treat mistakes as learning opportunities, and to establish a knowledge-sharing environment among team members. Supervisors are also thought to be the main interface between the organization and its employees, as supervisors implement the organization's HR policy and practices, and drive the organization's strategic objectives by managing the performance of individual team members (Nankervis *et al.,* 2005). Research shows that the success of performance appraisals in enhancing employees' performance depends on how the feedback is delivered. Specifically, when feedback provides correct information, is focused on task details, encourages goal setting in an open dialogue, provides opportunities for performance to be improved and is not threatening to self-esteem it is more effective (Nankervis *et al.,* 2005).

In a two-wave study of 238 employees from 54 work teams, performance appraisal quality, defined as clarity, regularity and openness assessed at time 1, was found to be positively associated with increased participation in reflection on daily activities, knowledge sharing with colleagues and innovative behavior between time 1 and time 2 (Bednall *et al.,* 2014). The effects of clear, regular and open performance appraisal similarly increased participation in reflection

and knowledge sharing, and substantially increased innovative behavior. Interestingly results from this study also showed that although it might be assumed that informal learning activities are empirically distinct, reciprocal (positive) relations can emerge among them. The relationships observed in this study suggest that reflection on daily activities, knowledge sharing and innovative behavior reinforced each other. Knowledge sharing may encourage innovative behavior by giving employees new ideas they can adapt to their work and providing additional sources of feedback to support reflection. In the same way, detecting performance deficiencies through reflection may prompt remedial activities such as receiving new ideas through knowledge sharing. This may in turn prompt innovative behaviors and concrete change in organizational functioning.

The positive effects of high-quality performance appraisal on participation in informal learning activities are consistent with studies that found that informative feedback could produce more effective self-regulation of learning and ultimately enhance performance (Kluger, and DeNisi, 1996). By receiving accurate information about their performance, employees may feel more confident in making informed choices about suitable informal learning activities, and therefore, may feel encouraged to increase their participation. Alternatively, supervisors who give effective feedback may provide accompanying development goals, mentoring, or suggestions for learning activities, which may prompt greater participation. The findings of this study underscore the importance of supervisors in delivering high-quality performance appraisals (Macneil, 2001) in motivating employees to participate in informal learning activities.

Career planning and development is a management process in which employees are developed along a path of experiences and jobs that may be in one or more organizations

(Baruch, and Peiper, 2000). Although career planning and development is sometimes seen as employees own initiatives, it is important to put the employees' initiatives into an organizational context (Brousseau, Driver, Eneroth, and Larsson, 1996). An important element in career planning and development is the career motivation of employees, describing the driving force that employees have in developing themselves in their jobs and careers (London, 1993). In a questionnaire study among 323 teachers from four Dutch vocational training schools, Van Rijn, Yang, and Sanders (2013) examined the relationship between career motivation and employees' participation in three types of informal learning: keeping up-to-date, seeking feedback from supervisors and knowledge sharing. Their findings confirmed the conventional assumption that career motivation is positively associated with all three types of informal learning. More intriguingly, they found that how employees view themselves in relation to others—employee self-identity—will adjust the associations between career motivation and informal learning. A strong personal self-identity (self is understood as a unique entity and different from other) strengthens the relationship between career motivation and keeping up-to-date. In contrast, a strong collective self-identity where self is viewed as connected and similar to others makes the relationship between career motivation and knowledge sharing more salient. Overall this study suggests that employees' preference for different types of informal learning activities may be subject to their career motivation, and the way how they fundamentally identify themselves. As a result, HR professional should take employees' career motivation and identity into account when designing career management practices within an organization.

In order to build employees' expertise, organizations often provide (*opportunities for) formal learning,* such as classroom-based learning or workshops to their employees. Despite the

inherent limitations of formal learning mentioned earlier, providing structured opportunities that signal the organization's support for formal learning may stimulate informal learning activities. Informal learning in this case can be seen as a means by which employees may transfer knowledge and skills acquired externally to their specific work context. Managers play a key role in enabling and encouraging participation in both formal and informal learning activities (Bednall *et al.,* 2014; Bednall, and Sanders, *in press*). If managers support formal learning activities, they are also likely to provide sufficient time and resources for informal learning to occur. In addition, employees who perceive that management supports learning are more likely to voluntarily participate in informal learning activities (Maurer, and Tarulli, 1994). If employees perceive their organization has made a long-term investment in them, they may be more willing to spend time engaged in informal learning to improve their work performance and enhance their career prospects within an organization.

Choi and Jacobs (2011) examined the effects of formal learning, personal learning orientation and supportive learning environment on informal learning among 203 middle managers in Korean commercial banks. Formal learning in their study was measured by means of a self-developed scale distinguished by the location in which the formal learning occurs (Jocabs, and Parks, 2009): formal learning on-the-job and formal learning off-the-job. Informal learning was measured using a scale based on Lohnman's (2005) measure, which consist of three types of informal learning: knowledge exchange, experimentation and environmental scanning ("I attended non-mandatory professional conferences or seminars that might provide useful information"). The results from their structural equation modeling (independent and dependent

variables were measured in separate questionnaires) showed that formal learning, and personal learning orientation have a positive effect on informal learning.

Bednall and Sanders (*in press)* investigated how opportunities for formal learning stimulate short- and long-term participation in informal learning activities. Using a sample of 430 respondents representing 52 teams, they found that formal learning opportunity influenced short-term participation in individual informal learning activities and participation in these activities up to one year later. These findings indicate that involvement in formal learning activities can sustain informal activity after the initial opportunity is provided (Bednall, and Sanders, *in press*). As both activities can be performed without the aid of colleagues, employees may continue their participation after initial habits have been established. However, formal learning opportunity had different effects on collaborative informal learning activities. Specifically, formal learning was positively related to short- and long-term feedback asking, to long-term, but not short term knowledge sharing, and to short-term, but not long term innovative behavior.

These differences likely relate to the nature of each type of activity and the conditions required for each to occur. Seeking feedback and knowledge sharing involve conversations with colleagues, supervisors and mentors from within the same organization (see Bednall, and Sanders, *in press*). However, feedback seeking typically focuses on discussing some aspect of performance, whereas knowledge sharing involves the exchange of information, including ideas, facts, expertise and judgements (Wang, and Noe, 2010). Feedback can be sought at the discretion of the employee, as long as there is an available feedback giver who has suitable expertise, is trusted by the employee and is willing to offer reactions and guidance. Innovative behavior on the other hand involves experimenting with new ideas to test their effectiveness, as well as

implementing them to improve systems, procedures and strategy (Scott, and Bruce, 1994; Van der Vegt, and Janssen, 2003). The short-term increase in innovative behavior likely reflects employees' trialing new knowledge and techniques in the context of their specific work setting. In the long term, however, the knowledge is less likely to require further experimentation to determine its effectiveness. In order to sustain innovative behavior, organizations may need to provide continuing opportunities for formal learning and embed formal training within the set of HR practices.

Perspective two: HR Practices in combination with HR Process on Informal Learning

Apart from examining the effect of HR practices, studies have also emphasized the *importance of HR process* on informal workplace learning. Bowen and Ostroff (2004) argue that in order for HRM to function in a desired way, employees have to perceive and understand HRM as it was intended by management (see also Sanders *et al.,* 2014). The degree to which employees attribute HRM to management and understand what is expected from them and what is rewarded is called *HR strength*. Scholars examining HR strength try to understand the psychological processes by which employees attach meaning to HRM.

HR strength (sometimes denoted as *HRM system strength*) refers to the effectiveness of the HRM system in signaling to employees the kinds of behavior expected and valued by their organization (Bowen, and Ostroff, 2004). Bowen and Ostroff (2004) were among the first scholars to explicitly highlight the importance of the psychological processes through which employees attach meaning to HRM. They developed a framework for understanding how HRM as a system "can contribute to organizational performance by motivating employees to adopt

desired attitudes and behaviors that, in the collective, help to achieve the organization's strategic goals" (Bowen, and Ostroff, 2004; p. 204).

Drawing on the co-variation principle of the attribution theory (Kelley, 1967; 1973), Bowen and Ostroff (2004) defined strong HR strength by three features: 1) distinctiveness of the HR practices (i.e. they are visible, relevant, comprehensible and seen as legitimate), 2) consistency of HR practices (i.e. their purpose is presented in the same way across HR practices and time), and 3) consensus about the practices (i.e. there is agreement among policy makers about the need for and purpose of the practices). If employees can perceive HRM as distinctive, consistent, and consensual, they will have a better understanding of the kinds of behaviors management expects, supports, and rewards (see also Schneider, Brief, and Guzzo, 1996).

Consequently, when HR strength is high, employees can understand and make sense of HRM as intended by management. While Ostroff and Bowen (2016) argue that HR strength should be conceptualized and measured at the unit or organization level as a contextual property of the unit or organization, we follow scholars within the process approach (e.g., Sanders *et al.,* 2014; Bednall *et al.*, 2014; Li, Frenkel, and Sanders, 2011; Katou, Budhwar, and Patel, 2014; Sanders, and Yang, 2016) who have conceptualized HR strength as employees' perception and understanding of the features of HRM. Ostroff and Bowen (2016, p. 198) argue that this conceptualization of HR strength at the employee level differs from their own, but is nonetheless a meaningful construct. We agree that it is meaningful to conceptualize HR strength at the employee level as we know that perceptions and understanding of the situation is idiosyncratic (Fiske, and Taylor, 2013).

Only a few studies have investigated the joint impact of either single or bundles of HR practices and HR strength on informal learning activities (Bednall *et al.,* 2014; Sanders, and Yang, 2016; Bednall, and Sanders, *in press*). For instance, Bednall *et al.* (2014) found that the relationship between *quality of performance appraisal* on one hand and reflection on daily activities, knowledge sharing, and innovative behavior on the other hand was stronger when employees perceived HRM as distinctive, consistent and consensual. All three interaction effects between performance appraisal quality and HR strength on the informal learning activities were significant. These findings show that the combination of high quality performance appraisal and HR strength may signal to employees that ongoing improvement is highly valued by the organization, and that participation in informal learning activities will be regarded positively. As a result, employees may elect to spend a greater proportion of their time engaged in learning activities.

Bednall and Sanders (*in press)* also examined whether HR strength intensifies the relationship between *opportunities for formal learning* and informal learning in the short and long-term. Their study showed that consistent with the HRM process approach (Bowen, and Ostroff, 2004), HR strength intensified the relationship between formal learning opportunity and participation in informal learning activities, with the exception of innovative behavior in the long-term. As previously described, innovative behavior may be less sensitive to HRM than other employee outcomes. With regard to the other activities, these findings support the hypothesis that if formal learning is embedded within a strong HRM system, the practice will send a stronger signal to employees that informal learning will be supported by management. HR strength may also indicate to employees that supplying formal learning is not merely manager

choice, but a practice that is supported by the entire organization. Stated differently, a strong HR system will lead employees to view formal learning as a means to support long-term organizational goals (distinctiveness), which works in concert with other HRM practices such as performance appraisal in achieving these goals (consistency), and reflects agreed upon actions by key stakeholders throughout the organization (consensus). In this type of work environment, employees are more likely to proactively engage in informal learning as a supplement to formal learning for improving their own performance and working towards organizational goals.

AN AGENDA FOR FUTURE RESEARCH

Several conclusions can be made on the basis of research on the relationship between HR practices, HR strength and informal learning. First, HR practices like performance appraisal, career planning and development (in the elements of career motivation), and (opportunities for) formal learning are relevant for individual and collaborative informal learning activities. Much insight has been gained about the connection between these HR practices and informal learning activities. In addition, HR strength, referred to as employees' understanding of HRM as intended by management has an additional effect on participation in the informal learning activities. Yet, this effect is understudied.

Second, some findings between HR practice and informal learning activities are inconsistent with conventional findings between HRM and employee outcomes (see Bednall *et al.,* 2014; Bednall, and Sanders, *in press*). These inconsistencies suggest a more complex relationship between HRM and informal learning in comparison to other employee outcomes like commitment, job satisfaction, engagement and turnover (intentions). These inconsistencies

deserve more attention in understanding how HRM affect informal learning activities. For example, timing may be a crucial factor in modeling such relationships. Informal learning activities often occur in a non-linear fashion over-time. However, most studies have only considered the linear relationships between HR practices, HR strength and informal learning activities. More research including timing as a predictor and using the curvilinear modelling to test the relationships between HR practices and informal learning activities is needed.

By reviewing the previous research as presented in this Chapter, we would like to present an agenda for future research in the following. In addition to timing, context is another factor that may influence the relationship between HRM and informal learning. The majority of studies discussed here involve data collected from the Dutch educational sector, specifically, Dutch Vocational Education and Training (VET) schools. VET's are facing serious challenges. The Dutch government places a strong emphasis on educational innovation within VET schools, both in terms of changing curriculum and pedagogical approaches and methods, holding both schools and teachers responsible for students' achievements (Runhaar, and Sanders, 2013; 2015). In facing these challenges, the on-going development of teachers has played an important role, meaning that teachers are more aware of the need to continually develop themselves and engage in workplace learning. Employees and managers in other professions and industries may also be aware of the need of continually development. These increasingly importance of learning activities makes the role of HRM, and the different HR practices, and their relationship with formal and informal learning more articulate and relevant. Professions are however different in terms of autonomy and task and outcome interdependencies of other employees. For instance, employees working in a team will put more emphasis on collaborative informal learning

activities than employees having a more autonomous task. The task of HR professionals in this case will be to adjust the HR practices to enhance the different informal learning activities needed for the specific profession. More research is needed to study the relationship between different HR practices and the different informal learning activities across different professional.

In this overview we discussed only the effects of HRM on a small number of informal learning activities. More types of informal learning activities should be explored. For example, exploratory learning entails conscious efforts by the organization to prompt employee engagement with perspectives that are outside the day-to-day perspectives of employees. Project work, a temporary transfer of an employee to another position in the same organization, customer and supplier liaison, job rotation and benchmarking practices outside the organization open cognitive channels to new and different ways of operating (Shipton, Sanders, Bednall, Lin, and Escriba, 2016). This will help that employees appreciate the importance of new ideas and increases the likelihood that they will support new ideas through to implementation. Training that brings individuals into contact with novel ideas and individuals from outside their day-to-day frame of reference can have a similar effect. Broadening and deepening connections with those stakeholders who have alternative perspectives - for example, suppliers - might cause individuals to review the novel ideas that others put forward in a more open and considered manner, thereby enriching informal learning activities and fostering innovative behaviors.

Related to the previous paragraph, we also argue that informal learning activities are further enriched and enhanced where HR practices promote customer engagement (see also Lin, Sanders, Shipton, Sun, and Mooi, *in press*). Through working closely with customers, employees initiate and maintain relationships that provide a vibrant source of knowledge for the

organization. Even employees who do not directly interface with customers, but who are open to customer needs strengthen the climate for knowledge sharing. Such employees, being aware of customer tastes and preferences, can "augment" products and processes by improving the design with characteristics appealing to the customers, and implement ideas reliably.

Networking – connecting with others across boundaries both within and outside the organization – can also be an important informal learning activity. Networking helps employees visualize opportunities for applying knowledge. A wide base of contacts increases the chances that individuals are primed about where potential problems exist and how new ideas might resolve the problem at hand. This is important for positioning a creative idea. Second, because networking entails making connections across vertical and hierarchical boundaries, it increases collaboration and co-operation, which in turn makes it more likely that feasibility and practicality implications are fully taken into account. Third, through networking individuals are primed about where expert capability resides. In this way, less evident knowledge (e.g. that derived from capable and informed junior employees) can be accessed and utilized.

Future research also need to move from examining the effect of individual HR practices to exploring the effect of HR bundles on informal learning. Influenced by strategic HR literature, researchers have begun to examine the effect of bundles of HR practices. These bundles are often referred to as high-performance work practices (HPWPs; Collins, and Smith, 2006; Becker, and Huselid, 1998), or high-commitment HRM (HC-HRM; Walton, 1985). The main idea of HR bundles is to create an organization based on employee involvement, commitment, and empowerment. Both HPWPs and HC-HRM have yet to be defined authoritatively, but they generally involve a group of HR practices, comprising selective recruiting, extensive training,

internal labor markets, learning and development, performance appraisal, performance-based pay, employment security, and teamwork. These bundles of HR practices are designed to increase organizational performance by enhancing employees' ability, motivation and opportunity to perform. A large body of field research, including two meta-analyses, shows a positive relationship between high-performance HR practices and employee and organizational performance (Combs, Liu, Hall, and Ketchen, 2006; Wright, Gardner, Moynihan, and Allan, 2005). Although there is some research available on the relationship between bundles of HR practices and informal learning activities, especially on the effect of HR bundles of HR practices on innovation and innovative behavior (Sanders, and Yang, 2016, see for an overview Sanders, and Lin, 2015), in general research on the relationship between bundles of HR practices and individual and collaborative informal learning activities is lacking. Research has yet to consider how HR bundles might affect individual and other forms of collective informal learning.

Future research also needs to consider the specific character of the different informal learning activities, like innovative behavior and the effects of specific HR practices on the different informal learning activities. The results presented in this Chapter show that the effects of HR practices on different informal learning activities are not always similar.

Finally, it is important to mention is the need of advanced research design. Many studies on the effect of HR practices on employee and informal learning activities apply a cross-sectional and single actor research design (Lin, and Sanders, 2014; Bainbridge, Sanders, Cogin, and Lin, in press), wherein employees or HR managers are asked to rate both HRM and their learning activities. In general, these kinds of research designs result in reduced internal validity (Cook, and Campbell, 1979). In particular, the relationship between HRM content and process on one

hand and informal learning activities may become spuriously high due to common method variance and no conclusions can be drawn as to whether HRM causes informal learning activities or vice versa (Wright et al., 2001). These problems can be reduced through rigorous research designs, such as using multi-actor (Sanders, and Frenkel, 2011) and conducting experimental and longitudinal studies (Little, 2013; Sanders, and Yang, 2016). Most of the studies in this overview are characterized by advanced research methods. Future research can however extend these kinds of advanced research methods and include more of these advanced research methods. For instance social network research may provide more insights in the collaborative informal learning activities. Also longitudinal research with short intervals, for instance a day or a week, can shine some light on the maybe curvilinear relationship between some HR practices and informal learning activities.

In sum, this Chapter provides information about the relationship between HRM, in terms of HR practices, and HR strength on one hand and individual and collaborative informal learning activities, including innovative behavior on the other hand, and shows that HRM can stimulate employees' participation in these informal learning activities. However this Chapter makes also clear that the relationship between HRM and informal learning activities is not always straight forward; indeed, and effects vary according to the type of informal learning activity. Also, the context of the research in terms of profession and industry can have an influence on the effects of HRM. Finally, although the research results on the relationship between HRM and informal learning activities are promising, and show that HRM can enhance informal learning within an organization, more research is needed.

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