Can Individual, Group and Organizational Learning explain the Human Resource Development - Employee Performance Relationship?

A multilevel study in small, medium- and large-size organizations

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Abstract

In the present study, the so called "black box" is revealed by testing the mechanisms that explain the Human Resource Development (HRD) and employee performance relationships, including organizational citizenship behavior. The literature proposes that the learning capacity of individuals, groups and organizations plays an important role in these relationships. Both, employees' perceptions of HRD (perceived HRD) and human resource managers' perception of HRD (intended HRD) are taken into account. The hypothetical model was tested with 223 employees and 35 HR managers from 30 small, medium- and large-size organizations in Germany and the Netherlands. The results showed that intended and perceived HRD were significantly related to each other. This correlation was significantly higher for small organizations. Intended HRD was significantly related to employee performance and this relationship was significantly mediated by individual learning capacity. Further, there is a significant relationship between perceived HRD and employee performance and this relationship is mediated by individual learning capacity while controlling for group- and organizational learning capacity.

Key words: Intended and perceived HRD, learning capacity, employee performance, organizational citizenship behavior and organizational size

Can Individual, Group and Organizational Learning explain the Human Resource Development - Employee Performance Relationship?

Strategic Human Resource Management (SHRM) encloses the human resource (HR) activities that are planned in alignment with the organization's strategy in order to reach its competitive advantage (Wright & McMahan, 1992). HR practices are used to reach this competitive advantage by increasing productivity and performance (Clardy, 2008) through its influence on employees' knowledge, skills and abilities (Bowen & Ostroff, 2004). Although there is scientific support that HR practices, being properly designed and implemented, improve performance (Nishii & Wright, 2008; Combs, Liu, Hall, & Kitchen, 2006; Becker & Huselid, 2006), it is still not clear how this link occurs (Bowen & Ostroff, 2004). Bowen and Ostroff (2004) and Nishii and Wright (2008) ask for illumination of the so-called "black box" by showing how HRM and performance are related.

Bowen and Ostroff (2004) suggest that the strength of the Human Resource Management (HRM) system is a solution to how HRM practices lead to organizational performance. They noted that HRM can be connected to organizational performance by integrating HRM content and process effectively. The HRM content is understood as the specific practices that aim to lead to a specific goal. The HRM process encloses the way the HRM system is developed and administrated. They stress that research should focus on understanding the elements of the HRM process through which employees construe the information inferred from HR practices.

When examining HR practices, researchers have primarily focused on *intended* HR policies investigated at the top and HR management level. They neglected how HR practices have actually been implemented by line managers and *perceived* by employees. So, research needs to focus on the variability in employees' perceptions of HR systems to unravel the so called "black box" (Nishii & Wright, 2008). That is, how employees understand and perceive situations similar to other employees (Schneider, Salvaggio, & Subirats, 2002).

The present study concentrates on one major element within the domain of HRM, namely the development of the human resource. *Human Resource Development* (HRD), as a crucial part of HRM, is an effective instrument (Horwitz, 1977) to ensure that the intellectual capital of an organization can contribute to its competitive advantage (Subramaniam & Youndt, 2005). The intellectual capital is inevitable for the organization's survival (Yang & Lin, 2009), consists of the accumulated knowledge of an organization (Subramaniam & Youndt, 2005) and is three to four times of its book value (Edvinsson & Malone, 1997). Organizations that spend huge amounts of money on the development of their employees

anticipate that this results in a competitive advantage in the long run (Aguinis & Kraiger, 2009). Research revealed that organizations with large investments in training and development are more successful, profitable and treasured on Wall Street (Bontis, Crossan, & Hulland, 2002). According to Chalofsky (1992) HRD can be understood as:

> *the study and practice of increasing the learning capacity of individuals, groups, collectives, and organizations through the development and application of learning-based interventions for the purpose of optimizing human and organizational growth and effectiveness. (p. 179)*

Thus, HRD aims to increase the individual learning capacity (ILC), the team or group learning capacity (GLC) and the organizational learning capacity (OLC) in order to contribute to individual and organizational performance (Chalofsky, 1992; Berge, Vernail, Berge, Davis, & Smith, 1994). The *learning capacity* is defined as superior or enhanced learning that should be established at the individual, group and organizational level and should increases the employees' capacity of learning how to learn (Chalofsky, 1992).

Similar to the HRM process used by Bowen and Ostroff (2004), the HRD process is at the focus of the present study. It will be explored by looking at the elements of the HRD system that aid employees in recognizing the expected responses collectively. Implications of the HRD process show how HRD can be designed or administrated. Even though learning and development interventions are aimed to enhance individual, group and organizational performance (Yamnill & McLean, 2001), the present study focuses on the performance of the individual employee's behavior and not on group or organizational performance.

Performance is understood as the overall achievement of an employee throughout a specific amount of time, taking the employee's attitudes and behavior into account (Wang, He, & Zeng, 2011). Employee performance includes the specific behaviors an employee exhibits in order to achieve specific tasks and produces specific results within an organization to reach organizational objectives (Swanson & Gradous, 1986). Individual employee performance is vital, because it is said to have implications for outcomes on the firm level (Huselid, 1995).

The attitudes and behaviors of employees are the most proximal outcomes of HR practices (Kehoe & Wright, 2011), because employees are the once who perceive HR practices as they have been implemented by managers (Nishii & Wright, 2008). The employees' attitudes concerning HR practices can lead to organizational citizenship behavior (OCB) (Coyle-Shapiro, Kessler, & Purcell, 2004). OCB is an individual performance indicator and is important because organizations increasingly rely on the contribution of

individual employees (Somech & Drach-Zahavy, 2007). OCB is the discretionary behavior of employees that goes further than existing role expectations and is directed at others within the organization (Organ, 1988).

In alignment with the missing research on SHRM, the individual perspective of employees in the HRD context is rarely explored (Garavan, McGuire, & O'Donnell, 2004). Similar to Nishii and Wright (2008), the present study differentiates between intended HRD and perceived HRD in order to address different levels of analysis. It is argued that both the intended HRM and the employees' perceptions are crucial for the employees' behavioral reactions. Since the focus of this study is related to employee performance, the perceptions of employees that are thought to precede individual behavioral reactions are important as these are the most direct reaction on HR practices (Kehoe & Wright, 2011). In addition, employees and HR managers (in small organizations the owners) might interact more colsely with each other in small organizations (Spence, 1999).

Although researchers assume a relationship between learning and performance within organizations, a conceptual framework and scientific evidence have not yet been provided (Yeung, Lai, & Yee, 2007). Therefore, the present study will reveal the "black box" in the context of HRD. Identifying the mechanisms that link HRD and employee performance will contribute to the missing empirical work. An attempt is made to test the HRD – employee performance link through three elements of learning (individual, group and organization). The study includes both, the employees' perceptions of HRD (perceived HRD) and the HR managers' perceptions of HRD (intended HRD), as the perceptions of employees are said to precede employees' behavior. The data from 30 organizations is analyzed by means of multilevel modeling. All in all, revealing the "black box" helps organizational decision makers in tracking down the factors that influence the development of their human resource. The following question will lead us through this paper: *In how far can the relationship between intended and perceived HRD on the one hand and employee performance and organizational citizenship behavior on the other hand be explained by learning capacities at different levels (individual, group and organization)?*

Theoretical Background and Hypothesis formation

In the following section theoretical arguments will be provided in order to understand the relationships between intended and perceived HRD, the three learning capacities (individual, group and organizational), employee performance and organizational citizenship behavior. These relationships will lead to the main hypotheses and the proposed research

model. In Figure 1 the research model is presented. First, intended and perceived HRD are shown to be related. The degree of this relationship might be influenced by the size of an organization. Second, it is hypothesized, that ILC, GLC and OLC are related. Third, the figure shows that intended and perceived HRD are related to employee performance and OCB. Fourth, the individual employees' perceptions of ILC, GLC and OLC are depicted to intervene between intended and perceived HRD and employee performance.

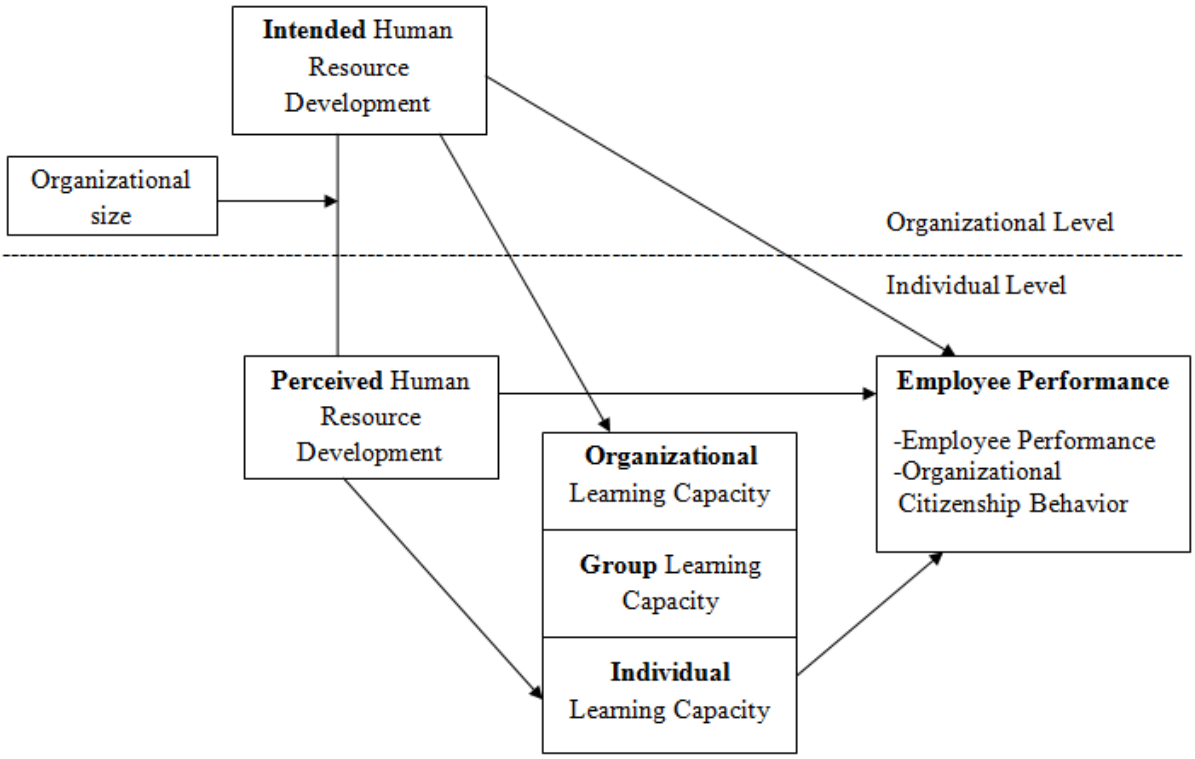

Figure 1. The Research Model Representing the Multilevel Mediation

Employees' and HR Managers' Perceptions

In this section the relationship between intended and perceived HRD is explained. Bowen and Ostroff (2004) argue the importance of taking employees' perception and understanding of HRM into account to explain the HRM – organisational performance link. Positive perceptions of employees about HR practices will finally lead to improved performance. The HRM process is thought to lead from intended HR practices, to implemented practices, to perceived practices (Boxall & Macky, 2007). There is a need to understand how HR practices are transformed into the outcomes requested by the organizations and thus, employees' perceptions need to be incorporated (Nishii, Lepak, & Schneider, 2008).

When translating the HRM process model into the context of HRD, a distinction is made between intended and perceived HRD. An employee's perception, for example about

the opportunities for learning, can differ significantly from that of a manager (Liao, Toya, Lepak, & Hong, 2009). Managers can promote the learning of their employees and are able to shape a work situation, which measures and rewards desired employee outcomes (Marsick & Watkins, 2003). Intended HRD practices are the result of strategic decisions made about the process and the content of HRD that is supposed to influence the employees' behavior in a way required by the organization. Those people in charge of the implementation are not all likely to apply the practices as intended (Bowen & Ostroff, 2004). Policies might be fixed but people might implement them differently. And employees perceive the practices as they are implemented and not as they are intended (Nishii & Wright, 2008) and then interpret these individually (Bowen & Ostroff, 2004). If the perceptions of HR managers and employees about HRD are related, then HRD has been implemented and perceived in the way it was intended by the HR manager. For organizations, this means that the plans made at the organizational level about HRD come across correctly, if employees perceive HRD in the same way as HR managers do.

Furthermore, the size of an organization may play a crucial role in how employees and managers perceive HRD. In small firms there is a greater possibility for a manager/ owner and the employee to interact and have personal contact (Spence, 1999). Within small organizations managers/owners like to apply an informal management style, which is sought to improve communication between managers/owners and employees (Matlay, 1999). In addition, small organizations enhance the formation of work relationships that are close and coherent (Wilkinson, 1999). This might lead to a stronger relation between intended and perceived HRD when organizations are small. Thus, the first hypotheses assert that:

Hypothesis 1a (H1a): *Intended HRD (perceived by HR managers) is positively related to perceived HRD (perceived by employees).*

Hypothesis 1b (H1b): *Organizational size moderates the relation between intended HRD and perceived HRD, in the sense that this relationship is stronger in small organizations, in comparison with medium and large organizations.*

Individual-, Group- and Organizational Learning Capacity

Learning within organizations always includes three levels (individual level, team or group level and organizational level), because it is evident that this multilevel structure is vital for its performance (Bontis et al., 2002). Bontis et al. (2002) define the individual level learning as: "individual competence, capability, and motivation to undertake the required tasks" (p.443). Thus, the combinations of what people are capable of, how motivated they

are, and what their focal point is, can increase the individuals' capacity to learn (Bontis et al., 2002). At the individual level, successful HRD interventions need to be well designed concerning the content and need to be attractive for the individual so that they understand what the management is rewarding (Bowen & Ostroff, 2004) and see a value in participating (Maurer & Tarulli, 1994). When employees are willing and motivated to participate they can develop new insights (Bontis et al., 2002). Intuiting (developing new insights) and afterwards interpreting the newly learned input involves competences and capabilities of employees. It also asks for an individual's motivation, intention or focal point.

The knowledge generated by employees does not aggregate itself to the level of the organization. Within organizations, groups are founded where employees share their knowledge. Learning within a group[1] involves the development of a shared understanding through sharing individual interpretations (Bontis et al., 2002), attitudes and interacting with each other or experiencing the same situations (James, Joyce, & Slocum, 1988). Group level learning is defined as: "group dynamics and the development of shared understanding" resulting in integration (Bontis et al., 2002, p. 443).

The knowledge stock present within these groups then becomes institutionalized as an organizational product (Crossan, Lane, & White, 1999). Organizational learning is seen as the learning processes used intentionally in order to achieve a long-term transformation of the organization so that its stakeholders are satisfied. These processes are then applied at the individual, group and systems level (Dixon, 1992). Employees should be able to interact and work interdependently across various kinds of boundaries. The organization should be receptive and use the learning capacity of its employees. Organizational level learning is defined as: "alignment between the non-human storehouses of learning including systems, structure, strategy, procedures, and culture, given the competitive environment" (Bontis et al., 2002, p. 444). Therefore, theories concerning learning within organizations stress to include individual, group and organizational level learning (Crossan et al., 1999).

The learning within an organization is a dynamic and ongoing process. In order to develop a culture of learning, goals and structures must be obvious and enhance a culture of sharing (Hung, Lien, Yang, Wu, & Kuo, 2011). According to Bontis et al. (2002) the learning capacity of individuals will result in group learning capacity. Such bottom-up processes show that the theoretical roots are lower levels; however, the emergent properties are at a higher

[1] Using the term group learning also covers team learning, because a team is very strictly defined (West & Markiewicz, 2004).

level (Kozlowski & Klein, 2000). The learning at the organizational level originates from sharing insights, knowledge, understanding and mental models (Stata, 1994), which arise due to an organizational culture, its systems, work procedures and processes (Swanson & Holton, 2001) and is translated into novel products and services, work procedures, processes, structures and strategies (Bontis et al., 2002). Thus, discussion and dialogue between employees promotes that knowledge is transferred from the individual to the group and finally to the organizational level (Tregaskis, Edwards, Edwards, Ferner, & Marginson, 2010). Here, the individual employees' perceptions of individual, group and organizational learning are considered. The next hypothesis states that:

Hypothesis 2 (H2): *There is a positive relationship between individual learning capacity, group and organizational learning capacity.*

Perceived Human Resource Development and Employee Performance

Strategic HR practices are linked to organizational performance (Combs et al., 2006; Delery & Doty, 1996). They send out messages to employees that they will interpret and draw on to, in order to identify the psychological meaning of their work situation (House, Rousseau, & Thomas-Hunt, 1995). It is important to identify and pay attention to those characteristics of the HRM processes, so that employees interpret and respond appropriately. When many employees interpret specific HRM processes in the same way and "have a shared perceptions about what behaviors are expected and rewarded in the organization" they experience an organizational climate (Bowen & Ostroff, 2004, p. 207). Their perception about HR practices will first affect the behavior and attitudes of employees and it is only afterwards that organizational outcomes are influenced (Dyer & Reeves, 1995). Bowen and Ostroff (2004) argue that a HR system needs to unravel the unambiguous and collective perceptions of climate, or the behaviors that management anticipates, encourages and rewards when it should lead to performance in the desired way. Nishii and Wright (2008) state that employees' perceptions of HR practices are responsible for the way employees behave and thus whether HR practices can lead to different attitudes and behavior of employees.

The co-variation principle of the attribution theory (Kelley, 1973) is used in the HRM literature (Bowen & Ostroff, 2004) to explain message-based persuasion and collective interpretation of employees (Fiske & Taylor, 1991). Employees give meaning to their work situation by the signals they receive from the management through HRM messages (Guzzo & Noonan, 1994). Employees need to deduce attributions about cause and effect in order to judge which behavior is rewarded and necessary. Deducing causes means that employees tell

others about their explanations for a cause and receive the explanations of others (Fiske & Taylor, 1991).

As employees' perceptions about HR practices are thought to go before employee attitudes and behavior (Nishii, et al., 2008), employees' perceptions about HRD activities will also precede their behavior and thus their performance. HRD has been identified as encouraging and contributing to the behavior of employees (Bartlett & Kang, 2004). Thus, relating the notion of Nishii and Wright (2008) to the context of HRD practices can explain that the way employees behave is a result of the attributions employees make about the fundamental cause of the learning and development interventions they experience. Even though "each employee makes his own construction of reality" (Delmotte, 2008, p. 107), the way employees perceive HRD can lead to enhanced individual performance and lead to increased OCB, because OCB is an essential part of individual performance (Werner, 2000). In addition, OCB is linked to "hard" measures of performance at the organizational level (Podsakoff, MacKenzie, Paine, & Bachrach, 2000).

In addition, the expectancy theory applied to the context of HRD claims that employees only learn from HRD programs and are motivated to engage in them when they think that learning will result in novel skills that eventually increase their performance at work (Werner & DeSimone, 2009). It increases performance through HRD interventions, which increase the capabilities of employees and create valuable performance systems (Holton, 2002). Therefore, the study assesses whether employees' collective perceptions about HRD are related to performance and OCB. In order to test more objectively whether HRD has an influence on employee performance and OCB, the relationship between intended HRD (by HR managers) and employee performance and OCB needs to be revealed, along with to the relationship between perceived HRD (by employees) and employee performance and OCB. As HRD is related to improved performance (Horwitz, 1977) positive perceptions about HRD could be related to improved performance as well. Therefore, the following hypothesis emerges:

Hypothesis 3 (H3): *Positive HRD perceptions are positively related to employee performance.*

Learning Capacity as the Mediator in the HRD – Employee Performance Relationship

Influences on employees' skills can foster that HRM activities affect employee performance (Huselid, 1995). The learning of groups is adventurous when employees can receive new indications from individual employees about group processes to enhance

performance (Argote, 1999). In addition to that, organizational learning structures give employees the chance to learn and increase their commitment and involvement, which creates interdependence in tasks and processes that will immediately benefit other employees (Somech & Drach-Zahavy, 2007). Within the HRM practices, HRD is in charge of encouraging the long-term and work-related learning capacity of the individual, the group and the organization (Garavan, Gunnigle, & Morley, 2000; Smith, 2003). Chalofsky (1992) argues that HRD has the aim to increase ILC, GLC and OLC in order to enhance the growth of employees and the organization's effectiveness. HRD can facilitate the promotion of ILC, GLC and OLC in the long run through creating an organizational culture that values and supports continuous learning. This can be achieved by taking down barriers to learn within groups and the organization and increasing the individual employee's capacity to learn (Swanson & Holton, 2001).

Furthermore, learning is seen as the most important component of HRD, which is implemented to build systems in the organization that enlarge the possibility that learning will enhance individual performance (Swanson & Holton, 2001). Thus HRD interventions are built in order to enhance the possibility that learning increases employee performance. As companies invest highly in learning and development interventions to enhance individual learning (ASTD, 1996), they aim to advance their performance (Bontis et al., 2002). Burke and Hutchins (2007) argue that, through the way HR interventions are designed and delivered, organizations can decide whether learning skills and knowledge can be transferred into practical job situations so that capabilities and competences of employees can be related to individual performance (Guest, 1997). Therefore, the last hypothesis emerges:

Hypothesis 4 (H4): *Individual learning capacity (a), group learning capacity (b) and organizational learning capacity (c) mediate the relationship between HRD perceptions and employee performance.*

Method

Participants

The sample included employees from 115 small, medium- and large-size organizations in Germany and the Netherlands selected from the researcher's personal network. Thirty of those organizations agreed to participate in the present study. Three of those 30 organizations are small (1-50 employees), six are medium-size organizations (50-500 employees) and 21 organizations are large-size (>500 employees) organizations. The 30

organizations were from diverse sectors such as banking, healthcare, social services, energy-supply, software maintenance, automotive manufacturing, internet services, food manufacturing and distribution, IT and ICT. A minimum of 10 employees within each of the 30 organizations have been randomly addressed by the contact person (some contact person chose the employees randomly, but within one department). Within small organizations random assignment was not possible. Among the 389 questionnaires that have been send to employees, 249 employees returned their questionnaire (response rate = 64% among those 30 organizations). The data of 26 employees had to be excluded due to more than 91% of missing data, leaving the information from 223 employees. In addition to that, at least one human resource manager (in smaller organizations this person was mostly the owner) per organization was asked to participate. In three organizations more than one HR manager filled in the questionnaire (response rate 35 HR managers from 30 organizations). 76 % of the participants (employees and HR managers) filled in the German questionnaire and 24% filled in the Dutch questionnaire.

Employees' ages ranged from 20 to 60 with an average age of 33 years and 56.1 % of the employees were male while 43.9 % were female. A total percentage of 27.5% of the employees reported to have a university degree and 22% reported to have a degree from a university of applied science as their highest diploma. Most employees are currently working in a non-managerial position (72.2%) and most employees (52.5%) have worked between one and five years in their current organizations.

HR managers' ages ranged from 24 to 62 with an average age of 43 years and 48.6 % of the HR managers were male and 51.4 % were female. Most of them had a university degree or a degree from a university of applied science as their highest diploma (42.9% and 25.7%, respectively). Almost all of the HR managers reported to be in a management position (91.4%) and they have usually (45.7%) been working between one and five years in their current organization.

Procedure

After approaching the 115 organizations by e-mail or telephone and sending a brochure with relevant information and the questionnaires, the organizations' top management, director and/ or the worker's council had to be asked for approval to conduct the research (ensuring confidentiality). The questionnaire was available in Dutch, German and English. Within the 30 organizations who agreed to participate one contact person per organization send an e-mail or distributed the questionnaire in paper pencil form to a

minimum of 10 employees. Five companies used the paper pencil format, the remaining 25 organizations filled in the questionnaire online, using an individualized link.

All items used in the questionnaire have been translated from English into Dutch and German and from Dutch and German back into English using back translation procedure (Brislin, 1980). The Dutch and the German questionnaires have been reviewed by three native speakers for each language. The six reviewers have been asked about their understanding and opinion of the items. Comparing the notes lead to some alterations that were necessary to make the items suitable for a European working environment. For example in item eight of the employee performance scale the original item is called "It is my right to use all my sick leave allowance". This has been changes to "I hardly ever call in sick", as the German and Dutch reviewers did not understand the original question.

Employees and HR managers received the same questions about Human Resource Development (HRD). The learning capacity and the employee performance questions are only answered by the employees. The questionnaire itself was made up of four parts (for the employees). The questionnaire for the HR managers only included the first two parts. The first part included eight general questions concerning for example education, gender and time spent in the current organization. The second part contained a 34 item 5-point Likert scale, measuring the organization's involvement in HRD activities. The third part concerned 30 items about the individual learning capacity (ILC), group learning capacity (GLC) and organizational learning capacity (OLC). The last part of the questionnaire, measuring employees' perception about their performance, involved 15 items on a 5-point Likert scale. There was no reward or motivation provided to the participants to encourage them to fill in the questionnaire and all participants engaged due to their own free will.

The subjects received the instruction that the following questions will concern the opportunities the employees have within their organization to engage in learning and development activities and how they perceive this. Additionally, the participants received information about the duration of the questionnaire depending on their condition (for employees 10-15 minutes and for HR managers 5-7 minutes). Further, they were ensured that the questionnaire is fully anonymous and that the data will not be provided to any third party. The questionnaire can be found in Appendix A.

Measurement of the Scales

All scales are measured on a 5-point Likert scales, which ranges from 1= strongly disagree to 5= strongly agree. In the following the measurement scales for HRD, learning capacity and employee performance will be explained.

Intended and perceived HRD. The independent variable is computed by the score the participants (employees and HR managers) gave on the items of four scales from the Dimensions of the Learning Organization Questionnaire (DLOQ)[2] by Marsick and Watkins (2003) and ten additional questions. The four DLOQ scales measure whether the organization: *creates systems to capture and share learning* (example item: "My organization maintains an up-to-date database of employee skills"); the *organization empowers people toward a collective vision* (example item: "My organization gives people control over the resources they need to accomplish their work"); the *organization is connect to its environment* (example item: "My organization encourages people to get answers from across the organization when solving problems") and the *organization provides strategic leadership for learning* (example item: "In my organization, leaders mentor and coach those they lead").

Furthermore, ten additional questions were used, which have revealed to be useful in practice to assess the degree of HRD involvement from organizations. These questions concern the organization and implementation or existence of certain HRD process and interventions (example item: "The possibilities and requirements necessary for career steps and development within the organization are visible for all employees"). Therefore, the five scales will be used to measure intended and perceived HRD. The factor analysis has shown that all items from the five constructs load on one factor with a reliability of Conbach's α = .94. No item had to be deleted and the five scales emerged to one variable called HRD.

The learning capacity. The ILC, GLC and OLC are measured by three scales from the Strategic Learning Assessment Map (SLAM) questionnaire by Bontis et al. (2002). The SLAM questionnaire focuses on an individual's, a group's and the organization's level of learning indicated by the employees. Specifically individual competence, capability and motivation to carry out a mandatory task, the group's dynamics and the development of

[2] Organizations that implement a strategic approach to HRD can become a learning organization (Pandey & Chermack, 2008). A Learning organization has the ability to respond and readjust rapidly through innovative methods while breaking down obstacle that would hinder learning (Marsick & Watkins, 2003) and it is defined as an organization "that learns continuously and transforms itself" (p. 83). So using a questionnaire that measures whether an organization comes close to a learning organization shows in how far HRD is implemented in a beneficial way.

collective understanding are measured with these questions. An example items for the *individual level* is: “I am current and knowledgeable about my work”. Upon others, an item concerning the learning capacity at the *group level* is: “During group meetings we seeks to understand everyone's point of view”. And an example item concerning the learning capacity at the *organizational level* is: "The organizational strategy positions the organization well for the future". The factor analysis has shown that ILC and TLC are separate constructs as the items load on different factors and have good reliability $\alpha = .87$ and $\alpha = .91$, respectively. OLC showed to be the opposite of ILC, but the scale showed to have good reliability $\alpha = .90$. Nevertheless, as ILC and OLC correlate $r = .34$ the scales were used separately in the analyses.

Employee performance. The dependent variable, employee performance, is measured through discrete data on a nine item 5-point Likert scale by Rodwell, Kienzle, and Shadur (1998). An example item is: "I am currently working at my best performance level". Further, as organizational citizenship behavior is a good individual behavior performance measure a scale measuring organizational citizenship behavior is used as well. OCB is measured on a six item 5-point Likert scale (see also Kehoe & Wright, 2011). The items have been selected by Kehoe and Wright (2011) from many potential organizational citizenship behavior items provided by Podsakoff et al. (2000). An example item is: "I encourage others to try new and effective ways of doing their job". The factor analyses showed that the items within both scales, OCB and employee performance, load on one factor and are reliable so that no item had to be deleted, $\alpha = .84$. Therefore, the two scales emerged to one variable called employee performance capturing OCB and employee performance items.

Control variables. The research will control for the following background information of the participants during the analysis: gender being male (1) or female (2), work experience (1=1-10 years, 2=11-20 years, 3=21-30 years, 4> 31 years), the country of the organization (1=Germany, 2= the Netherlands), type of contract (1=full-time, 2=part-time), whether the participant was in a managerial position (1=yes, 2=no) and the size of the organization (1=small, 2=medium-size, 3=large-size).

Analysis

In order to show in how far HR managers agree with each other when multiple HR managers per organization filled in the questionnaire, the intraclass correlation for intended HRD was calculated. In addition, the intraclass correlation for perceived HRD was calculated in order to see in how far employees within one organization perceive HRD in the same way.

The ICC (1) was calculated for the variable intended HRD taking into account the three organizations where more than one HR manager filled in the questionnaire. This was done in order to see whether theses HR managers agree with each other. The analysis revealed a large effect .26 (LeBreton & Senter, 2008) indicating that 26% of the variance in intended HRD occurs between organizations. For the variable perceived HRD the ICC (1) was calculated for all employees. The analysis showed that it was .32, which is considered to be a large effect according to LeBreton and Senter (2008). Therefore, the data for intended HRD and perceived HRD can be aggregated. The data of GLC and OLC are not aggregated to the group and organizational level, but the employees' perceptions concerning GLC and OLC are considered in the analyses.

The data presented in this study provides a multilevel structure, where employees are nested within organizations. Therefore, the data is analyzed by the means of multilevel analysis, which captures the different levels (individual and organizational level) and determines their interaction. Employees within the same organizations inevitably share some features. These features can range from organizational structure, strategy, management style and organizational size to the geographic location, the organizational culture, the products or services an organization deals with or purely by the interaction between different employees. Therefore, multilevel analyses make it possible that employees behavior is analyzed in the organizational context (Heck & Thomas, 2009) and relationships between different variables measured at lower and higher levels can be examined (Hox, 2010). Whether a model has improved from entering control variables to entering the independent variables and the mediators can be seen in the change of the -2 restricted log-likelihood measure using SPSS 18.

Results

Descriptive Statistics

An overview of the means (M), standard deviations (SD) and Pearson's correlations (r) between the variables are displayed in Table 1. The individual perceptions of employees about the three learning capacities and the outcome variable are used next to the aggregated data for intended and perceived Human Resource Development (HRD). The analyses showed that intended HRD correlated positively with perceived HRD ($r = .56$, $p < .01$). Furthermore, there is a significant correlation between intended HRD and employees learning capacity (ILC), $r = .15$, $p < .05$, and how employees judged their group's learning capacity (GLC), $r = .14$, $p < .05$. In addition, the HR managers' ratings on HRD (intended HRD) are significantly

correlated with the performance of their employees, $r = .19$, $p < .01$. However, intended HRD did not correlate with how employees perceived their organization's learning capacity (OLC), $r = .04$, ns.

Perceived HRD has a significant correlated significantly higher with OLC, $r = .42$, $p < .01$ than with ILC, $r = .21$, $p < .01$, as $z = -2.38$, $p < .01$, and GLC, $r = .26$, $p < .01$, as $z = -1.95$, $p < .05$. Perceived HRD is significantly related to employee performance, $r = .27$, $p < .01$. In addition to that, employees' perceptions about their learning capacity correlated significantly with their perception about their group's learning capacity, $r = .58$, $p < .01$ and the learning capacity of their organization, $r = .34$, $p < .01$. And employees' perceptions about group and organizational learning capacities correlated as well significantly, $r = .54$, $p < .01$.

Next, the correlation between intended and perceived HRD is viewed in more detail. The control variable country and organizational size had a significant influence on either intended or perceived HRD[3]. Therefore, the data was split up for each of the control variables separately to detect possible moderators. The detailed correlation showed that intended and perceived HRD correlated, $r = .49$, $p < .001$ for the German organizations and, $r = .69$, $p < .001$ for Dutch organizations. Comparing the correlations showed that within Dutch organizations the correlation between intended and perceived HRD were significantly higher in contrast to German organizations, $p < .05$. This might indicate a moderating effect of the type of country.

Further, whether the correlation between intended and perceived HRD is different for small, medium-size and large-size organizations was assessed. Within small organizations the correlation was the highest, $r = .91$, $p < .001$. Within medium-size organizations the correlation was weaker, $r = .64$, $p < .001$ and among large-size organization the correlation was even smaller, $r = .48$, $p < .001$. These will be compared in the next section.

Last, the relation between ILC and employee performance is significant, $r = .67$, $p < .01$. GLC and employee performance are also positively correlated to each other $r = .44$, $p < .01$, and OLC is related to employee performance as well, $r = .38$, $p < .01$. The relation between ILC and employee performance is significantly higher than with GLC, $p < .001$, and OLC, $p < .001$. GLC did not have a significantly higher correlation with employee performance than OLC.

[3] The control variable type of contract also had a significant influence on intended and perceived HRD, however only three HR manager were working part-time. Comparing the correlations between intended and perceived HRD for part-time and full-time contracts, showed that these did not differ significantly, ns.

Table 1. Means, standard deviations and correlations between the variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Gender (1=male)	1.45	.50											
2. Work experience	1.77	.99	-.16**										
3. Country (1=Germany)	1.24	.43	-.16**	.03									
4. Contract (1=fulltime)	1.29	2.21	-.02	-.05	-.15*								
5. Managerial position (1= yes)	1.70	1.13	.14*	-.20**	-.04	.08							
6. Organizational size (1=small)	2.55	.66	.16**	.09	-.26**	-.06	-.05						
7. HRD HR Manager	3.59	.46	.02	-.03	-.27**	-.14*	.04	.33**					
8. HRD Employee	3.31	.41	.00	.02	-.09	-.16*	-.01	.10	.56**				
9. ILC	3.95	.58	-.11	.19**	.03	-.10	-.08	-.03	.15*	.21**			
10. GLC	3.58	.67	-.01	.10	-.08	-.01	-.07	-.06	.14*	.26**	.58**		
11. OLC	3.44	.73	.04	.01	.02	-.05	.04	-.22**	.04	.42**	.34**	.54**	
12. EP	4.05	.45	-.06	.13	-.01	-.12	-.10	.01	.19**	.27**	.67**	.44**	.38**

Note. * = $p \leq .05$; ** = $p < .01$

ILC= individual learning capacity; GLC= group learning capacity; OLC= organizational learning capacity; EP= employee performance

Hypothesis Testing

Intended and perceived HRD and organizational size. H1a assesses whether the aggregated data of intended HRD (perceived by HR managers) is positively related to the aggregated data of perceived HRD (perceived by employees). A correlation analysis showed that the aggregated data of intended HRD and perceived HRD correlated significantly and positively with each other, $r = .56$, $p < .01$. Therefore, H1a can be confirmed.

H1b assesses whether organizational size (small, medium and large) moderates the relation between intended and perceived HRD. To test for the hypothesis a correlation analysis is conducted splitting up the data according to small, medium-, and large-size organizations. As stated above, the correlation was the highest for small organizations, $r = . 91$, $p < .001$. For medium-size organizations the correlation was weaker, $r = .64$, $p < .001$ and among large-size organization the correlation was even smaller, $r = .48$, $p < . 001$. Comparing the correlations between intended and perceived HRD for small, medium-size and large-size organizations revealed that these are significant higher for the correlation of small organizations in contrast to medium-size organizations ($z = 3.14$, $p < .001$) and large-size organizations ($z = 4.42$, $p < .001$). Further, the correlation between intended and perceived HRD is higher for medium-size organizations in contrast to large-size organizations ($z = 1.64$, $p \leq .05$). Therefore, H 1b can be confirmed, showing that organizational size significantly moderates the degree of the relationship between intended HRD and perceived HRD. In addition, the degree of this relationship is significantly stronger for smaller organizations than for medium-size and large-size organizations and the degree of the relationship is significantly stronger for medium-size organizations than for large-size organizations.

In addition, through the correlation analysis stated above, it can be seen that ILC, GLC and OLC are positively related to each other. ILC correlated significantly with GLC, $r = .58$, $p < .01$ and OLC, $r = .34$, $p < .01$. And GLC and OLC correlated as well significantly with each other, $r = .54$, $p < .01$. This confirms H 2.

Testing for indirect and main effects. In the following sections a hierarchical linear modeling analysis is used to test for H3. This type of analysis makes it possible to estimate the variance between organizations and discretely the variance between employees within the same organization. This multilevel regression analysis includes the hierarchical structure of the organization and the intercepts are included as random effects. Before testing for a mediated

effect three conditions must be met: the independent variables must affect the mediators, the independent variables must affect the dependent variable and the mediators must affect the dependent variable (Baron & Kenny, 1986). The following analyses are conducted while controlling for gender, working experience, country, management position and organizational size.

First, employees' perceptions of ILC, GLC and OLC are regressed on the independent variables. Intended HRD showed to have a significant relationship with ILC, $b = .23$, $p < .05$ however not with GLC and OLC, ns. Perceived HRD is significantly related to ILC, $b = .30$, $p < .01$; GLC, $b = .46$, $p \leq .001$; and OLC, $b = .82$, $p < .001$. Second, the dependent variable is regressed on the independent variables. Intended HRD significantly related to employee performance, $b = .25$, $p < .05$. Perceived HRD significantly related to employee performance, $b = .34$, $p < .01$. Third, the dependent variable is regressed on the mediator variables. ILC is significantly related to employee performance, $b = .55$, $p < .001$. GLC is significantly related to employee performance, $b = .29$, $p < .001$. And OLC is also significantly related to employee performance, $b = .22$, $p < .001$.

H3, stating that positive HRD perceptions are positively related to employee performance, can be confirmed. The relationships between intended HRD and perceived HRD and employees' performance are both significant. All three requirements that need to be evident when testing for a mediated effect are met for intended HRD, using ILC as a potential mediator and for perceived HRD, using ILC, GLC and OLC as potential mediators. Further analysis will concern the relationship between intended HRD and employee performance testing for a mediated effect of ILC. For the relationship between perceived HRD and employee performance the tests for a medicated effect include ILC, GLC and OLC.

Stepwise analysis for intended HRD. In this analysis the depended variable employee performance is regressed on intended HRD using a hierarchical linear modeling analysis. In a stepwise analysis, model 1 shows the regression of employee performance on the control variables and the independent variable intended HRD. The intercepts are included as a random effect. In model 2 the mediating variable ILC is included in model 1. A mediating effect is evident when the influence of intended HRD on employee performance disappears or deceases after ILC has been added to the model (Baron & Kenny, 1986). The stepwise analysis can be found in Table 2.

In model 1, employee performance is regressed on the control variables and intended HRD. The model revealed a significant and positive relationship between intended HRD and employee performance, $b = .25$, $p < .05$. However, adding intended HRD to the model did not improve it. In model 2, a significant relationship was found between ILC and employee performance, $b = .54$, $p < .001$. Through adding ILC to the model the effect of intended HRD on employee performance disappeared, $b = .16$, ns. Adding ILC as a mediator has significantly improved the model. Therefore, ILC significantly mediates the relationship between intended HRD and employee performance.

Table 2. Stepwise hierarchical linear modeling analysis for intended HRD and employee performance

	Model 1	Model 2
Gender	.03 (.07)	.07 (.05)
Work experience	.03 (.04)	.00 (.03)
Country	.07 (.12)	-.01 (.09)
Contract	-.01 (.01)	-.00 (.01)
Management position	-.17* (.08)	-.10 (.06)
Organizational size	-.03 (.08)	-.02 (.06)
Intended HRD	.25* (.11)	.16 (.08)
ILC		.54*** (.05)
χ^2	252.06	156.57
($\Delta\chi^2$ (Δ df)) [a]	2.49(1)	95.49(1)**

Note. *= $p \leq .05$; **= $p < .01$; ***= $p < .001$

[a] Model 1 is compared to a model without the independent variable

ILC= individual learning capacity; in the last row, the dimensions of freedom are reported within the parentheses to indicate the significance of the model fit

Stepwise analysis for perceived HRD. In this analysis the depended variable employee performance is regressed on perceived HRD using a hierarchical linear modeling analysis. In a stepwise analysis, model 1 shows the regression of employee performance on the control variables and the independent variable perceived HRD. The intercepts are included as a random

effect. In model 2, 3 and 4 the mediating variables ILC, GLC and OLC are included in model 1, respectively. In model 5 all mediators are included at the same time in model 1. A mediating effect is evident when the influence of perceived HRD on employee performance disappears or deceases after ILC, GLC and OLC have been added to the model (Baron & Kenny, 1986). The stepwise analysis can be found in Table 3.

In model 1, employee performance is regressed on the control variables and the independent variable, perceived HRD. There was a negative relationship found between management position and employee performance, $b = -.17$, $p < .05$. The model also revealed a significant and positive relationship between perceived HRD and employee performance, $b = .34$, $p < .01$. In model 2, a significant relationship was found between ILC and employee performance, $b = .53$, $p < .001$. Through adding ILC to the model the effect of perceived HRD on employee performance decreased, but remains significant, $b = .20$, $p < .05$. In the third model, a significant relationship was found between GLC and employee performance, $b = .27$, $p < .001$. Through adding GLC to the model, the relationship between perceived HRD and employee performance is not significant anymore, $b = .22$, ns. In the fourth model, OLC is added to the first model. The relationship between OLC and employee performance is significant, $b = .19$, $p < .001$. Through adding OLC to the model, the relationship between perceived HRD and employee performance is not significant anymore, $b = .17$, ns. In addition to that, model 4 shows that the control variable management position has a significant, but negative relationship with employee performance, $b = -.18$, $p < .05$. In model 5 all three proposed mediators are added to model 1. A significant relationship was found between ILC and employee performance, $b = .47$, $p < .001$. The relationship between perceived HRD and employee performance is not significant anymore, $b = .16$, ns, and neither are the relationships between GLC, $b = .06$, ns, and OLC, $b = .03$, ns, and employee performance.

As the relationship between perceived HRD and employee performance was significantly reduced however it continued to be significant, the reduction in the coefficient can be tested with the Sobel (1982) test. The Sobel (1982) test is conducted for the possible partial mediation of ILC between perceived HRD and employee performance and showed that ILC significantly mediates this relationship, $z = 2.43$, $p < .05$. All in all, H 4 can be partially confirmed. The hierarchical linear modeling analysis showed that ILC significantly mediates the relationship between intended HRD and employee performance. For perceived HRD, the hypothesis can be

Table 3. Stepwise hierarchical linear modeling analysis for perceived HRD and employee performance

	Model 1	Model 2	Model 3	Model 4	Model 5
Gender	.02 (.07)	.06 (.05)	.01 (.06)	.00 (.06)	.05 (.05)
Work experience	.03 (.04)	.00 (.03)	.01 (.03)	.02 (.03)	.00 (.03)
Country	.02 (.11)	-.04 (.09)	.07 (.11)	.03 (.10)	-.02 (.09)
Contract	-.01 (.01)	.00 (.01)	-.02 (.01)	-.01 (.01)	.00 (.01)
Management position	-.17* (.07)	-.10 (.06)	-.12 (.07)	-.18* (.07)	-.10 (.06)
Organizational size	.00 (.07)	.00 (.05)	.04 (.07)	.05 (.06)	.02 (.05)
Perceived HRD	.34** (.11)	.20* (.08)	.22 (.11)	.17 (.10)	.16 (.09)
ILC		.53*** (.05)			.47*** (.06)
GLC			.27*** (.04)		.06 (.05)
OLC				.19 ***(.04)	.03 (.04)
χ^2	247.90	155.03	215.64	234.07	160.06
($\Delta\chi^2$ (Δ df)) [a]	6.65(1)**	92.87(1)**	32.26(1)**	13.83(1)**	87.84(3)**

Note. *= $p \leq .05$; **= $p < .01$; ***= $p < .001$

[a] Model 1 is compared to a model without the independent variable

ILC= individual learning capacity; GLC= group learning capacity; OLC= organizational learning capacity; standard errors are reported within the parentheses next to the variables; in the last row, the dimensions of freedom are reported within the parentheses to indicate the significance of the model fit

confirmed as well. ILC significantly mediates the relationship between perceived HRD and employee performance while controlling for GLC and OLC.

Additional Analysis

Splitting up HRD and employee performance. In this section additional analyses will be presented. The variable perceived HRD[4] is split up in its five constructs that have been treated as a single variable before. These five constructs are: the organization creates systems to capture and share learning, the organization empowers people toward a collective vision, the organization is connected to its environment, the organization provides strategic leadership for learning (from the DLOQ) and the practical questions. Further, the dependent variable that is made up of OCB and employee performance is also split up. Then, the relationship between these five constructs and the two dependent variables will be assessed considering the control variables. In addition to that, the role of the three mediators (ILC, GLC and OLC) will be explored (see Table 4, 5, 6, 7 and 8 in Appendix B). The aggregated data was used for each of the five scales as the lowest ICC was ICC = .32 and the largest was ICC = .47, indicating a large effect (LeBreton & Senter, 2008). All three criteria for testing for a mediated effect have been met for all relationships between the five constructs, the two dependent variables and the three mediators.

The *organization creates systems to capture and share learning* is significantly related to OCB, $b = .22$, $p < .05$, however not to employee performance, $b = .26$, ns. Adding all three mediators simultaneously has shown that the relationship between the organization creates systems to capture and share learning and OCB is mediated by ILC, $b = .41$, $p < .001$, and GLC, $b = .18$, $p < .01$. OLC did not mediate this relationship, $b = -.02$, ns. Adding the three mediators has significantly improved the model, $p < .01$.

The *organization empowers people toward a collective vision* is also significantly related to OCB, $b = .36$, $p < .05$ and to employee performance, $b = .38$, $p < .05$. Adding all three mediators simultaneously has shown that the relationship between the organizations empowering people toward a collective vision and OCB is mediated by ILC, $b = .41$, $p < .001$, and GLC, $b = .17$, $p < .01$. OLC did not mediate this relationship, $b = -.02$, ns. The relationship between the

[4] Perceived HRD (and not intended HRD) is chosen for the more detailed analyses as the relationship between perceived HRD and employee performance was mediated by all three mediators (ILC, GLC and OLC).

organization empowers people toward a collective vision and employee performance is mediated by ILC, $b = .51$, $p < .001$. GLC and OLC did not mediate this relationship, $b = .00$, ns, and, $b = .07$, ns, respectively. Adding the three mediators to the relationship between the organization empowers people toward a collective vision and OCB significantly improved the model, $p < .01$. The model improvement for the relationship between the organization empowers people toward a collective vision and employee performance was calculated in comparison to the model with the control variables and employee performance. Adding the variable the organization empowers people toward a collective vision and the three mediators, significantly improved this model, $p < .01$.

The *organization is connected to its environment* is significantly related to OCB, $b = .37$, $p < .01$, and to employee performance, $b = .46$, $p < .01$. Adding all three mediators simultaneously has shown that the relationship between the organization is connected to its environment and OCB is mediated by ILC, $b = .41$, $p < .001$, and GLC, $b = .17$, $p < .01$. OLC did not mediate this relationship, $b = -.02$, ns. The relationship between the organization is connected to its environment and employee performance is mediated by ILC, $b = .51$, $p < .001$. GLC and OLC did not mediate this relationship, $b = .00$, ns, and, $b = .07$, ns, respectively. Adding the three mediators to the relationships significantly improved the model, $p < .01$.

The *organization provides strategic leadership for learning* is also significantly related to OCB, $b = .33$, $p < .01$ and to employee performance, $b = .48$, $p < .01$. Adding all three mediators simultaneously has shown that the relationship between the organization provides strategic leadership for learning and OCB is mediated by ILC, $b = .41$, $p < .001$, and GLC, $b = .18$, $p < .01$. OLC did not mediate this relationship, $b = -.02$, ns. The relationship between the organization provides strategic leadership for learning and employee performance is mediated by ILC, $b = .51$, $p < .001$. GLC and OLC did not mediate this relationship, $b = .00$, ns, and, $b = .06$, ns, respectively. Adding the three mediators to the relationships significantly improved the model, $p < .01$.

The *practical questions* are significantly related to OCB, $b = .21$, $p < .01$, and employee performance, $b = .20$, $p < .001$. However, adding the variable practical questions to the model with the control variables and employee performance does not significantly improve the model. Adding all three mediators simultaneously has shown that the relationship between the practical questions and OCB is mediated by ILC, $b = .41$, $p < .001$, and GLC, $b = .17$, $p < .01$. OLC did

not mediate this relationship, b = -.02, ns. The relationship between the practical questions and employee performance is mediated by ILC, b = .52, p < .001. GLC and OLC did not mediate this relationship, b = .00, ns, and, b = .07, ns, respectively. Adding the three mediators to the relationship between the practical questions and OCB significantly improved the model, p < .01. The model improvement for the relationship between the practical questions and employee performance was calculated in comparison to the model with only control variables and employee performance. Adding the practical questions and the three mediators significantly improved this model significantly, p < .01.

All in all, it is evident that ILC and GLC always mediate the relationships between each of the five constructs and OCB. OLC never mediated any of these relationships. ILC mediated the relationship between four of the five constructs and employee performance. GLC and OLC did not mediate any of the relationships for employee performance.

Discussion

In the following section, the present study is summarized and the results are interpreted starting with the aim of the research, discussing the hypothesis and the additional analyses. These arguments include possible explanations for the results that have been found. Afterwards implications for practice are presented indicating in what way the results are applicable in organizations and providing possible alterations organizations should make according to the results found. Following this, possible limitations show in how far the study should have been improved theoretically and statistically. These imply suggestions for future research, which are presented afterwards. Here, possible new research directions as well as possibly influencing variables are listed. Last but not least, a conclusion ends this paper stressing its inevitableness.

Summary and Theoretical Implications

The inducements of the study were the unexplored mechanisms that explain how HRM results in performance. Here, this so called "black box" (Bowen & Ostroff, 2004) has been discussed in the context of HRD, as it is the most important part of HRM (Horwitz, 1977). In contrast to prior research, the present study included the perspective of the employees (perceived HRD) and compares it to the HR managers' perspective (intended HRD). The HR managers' perspective is seen as an objective measure of the HRD interventions available within the

organization. The employees' perceptions have been used because employees perceive most directly the effect of HR practices (Kehoe & Wright, 2011). Examining employees' perceptions shows what elements they find important and how they deduce from the information provided to them (Nishii & Wright, 2008).

Little is known about how the emergence of differently implemented HR practices occurs and what mechanisms are responsible. However in the present study it was found that intended and perceived HRD showed to be positively related to each other (confirming hypothesis 1a). A positive relation between intended and perceived HRD means that employees know how and what kind of the learning and development processes are available, as intended HRD is seen as an objective measure of those HRD processes available. So when HR managers rate the HRD processes in their organization very positively, employees are likely to rate them in the same way. The employees' perceptions about HRD have been used as aggregated data at the organizational level (confirmed by a high intraclass correlation). This shows that the HRD messages provided to employees are perceived in internally coherent ways. In addition, Nishii and Wright (2008) argue that the investigation of the employees' perceptions can provide an organization with the information about how the internal fit concerning the HR practices is. So a high correlation between intended and perceived HRD indicates a good internal fit.

Taking a closer look at this correlation shows that it is significantly higher within Dutch organizations than in German organizations. A possible explanation could be that Dutch organizations have an egalitarian culture (Yang, Van de Vliert, & Shi, 2007) where the social structure is flat (Schwartz, 1994). However, not enough is known about the cultural differences in the perceptions of HRD between Germany and the Netherlands, to explain this difference more precisely.

In addition to that, hypothesis 1b assesses the correlation between intended and perceived HRD for small, medium-size and large-size organizations. This correlation was significantly higher for small organizations in contrast to medium-size and large-size organizations. As indicated above the proximity of employees and employers in small organizations might be responsible for this phenomenon (Spence, 1999).

Furthermore, hypothesis 2 could be confirmed, showing that ILC, GLC and OLC are positively related to each other. This shows that changes at the individual level can be positively related to the group and the organizational level. Learning among individuals has a significant

influence on higher level learning. Apparently the interaction of employees and their communication is responsible for the relationship between how individuals' competences, capabilities and motivation are responsible for group dynamics and the development of a shared understanding or perception. The latter is then responsible for the formation of systems, structure, strategy, procedures and culture (Bontis et al., 2002). Furthermore, corrleational findinds show that ILC had a significantly greater relation with employee performance than GLC or OLC. Bontis et al. (2002) found a mirrored effect showing that learning at the organizational level is more closely related to organizational performance in contrast to individual and group level learning.

Through testing hypothesis 3, intended and perceived HRD both demonstrated to be related to employee performance. This shows that the performance of employees might be positively influenced by the way HRD processes are designed (perceived objectively by HR managers). The HR managers' perception of HRD is treated as the objective indication of how good the HRD processes are designed in an organization. And thus, when HRD is good designed, employees are likely to improve their performance. Perceived HRD is also positively related employee performance. This shows that the performance of employees increases as they perceive the opportunities for learning and development more positively.

The present research revealed to some extent *"in how far the relationship between intended and perceived HRD on the one hand and employee performance and organizational citizenship behavior on the other hand can be explained by learning capacities at different levels (individual, group and organization)"*. By testing for the fourth hypothesis, the outcomes of the hierarchical linear modeling analyses have shown that the relationship between intended HRD and employee performance can be mediated by individual learning capacity (ILC). However, group learning capacity (GLC) and organizational learning capacity (OLC) could not mediate this relationship, because intended HRD did not have a positive relationship with GLC or OLC. GLC and OLC are measured through the employees perspectives as the present study focuses on the employees' attributes made at a higher level. A possible reason behind it could be that the way HRD processes are designed influences the employees' performance only through the individuals' learning capacity. It shows that the HRD processes (indicated by the HR managers) did not facilitate group dynamics, processes that support the development of a shared

understanding and organizational structures, systems, processes and procedures that facilitate learning and development (Bontis et al., 2002).

Further, the analyses have shown that perceived HRD can be mediated by ILC, GLC and OLC. However, when all three mediators have been taken together only ILC showed to mediate the relationship. Doing so improved the model fit enormously compared to the model where only perceived HRD and employee performance are taken into consideration. This shows that the individual's learning capacity is the most important factor that makes it possible for positive perceptions of HRD perceived by employees to result in employee performance.

Through the additional analysis, it became clear which of the five constructs (create systems to capture and share learning, empower people toward a collective vision, connect organization to its environment, provide strategic leadership for learning and the practical questions) from the Dimension of the Learning Organization questionnaire by Marsick and Watkins (2003) included in the HRD variable had the greatest influence on either employee performance or organizational citizenship behavior (OCB). This analysis shows that how employees perceive that their organization provides strategic leadership for learning is a very important factor when it should have a positive relationship with employee performance. Employees that perceive that their organization is very well connected to its environment has a great influence on OCB.

On the one hand, the relationships between any of the four of the five constructs and employee performance are mediated by ILC (for the first construct no mediator was found). On the other hand, the relationship between any of the five constructs and OCB was mediated by ILC and GLC. A possible explanation why GLC played a role in the latter relationships however not in the first might be that OCB is measures the discretionary behavior of employees that is directed at others within the organization (Organ, 1988) so that group processes become more important. Podsakoff et al. (2000) understand OCB as an altruistic behavior, which means that employees are willing to help and assist their co-workers when having problems or when asking for help. The analyses have shown that OLC is not responsible whether employees' perceptions about any part of HRD (measured in this study) have a positive relationship with employee performance or OCB. As OCB is an individual behavioral performance measure, which influences performance irrespectively of organizational settings as industry, business strategy

and culture (Kehoe & Wright, 2011) measuring it was especially important in this study where organizations of diverse backgrounds participated.

Practical Implications

General implications that can be drawn from this study include that organizations must develop a thorough understanding of the learning and development processes they provide to their employees so that these can be implemented as intended by HR managers. Wognum and Lam (2000) argue that stakeholder involvement in HRD policy making increases the effectiveness of HRD programs. Especially stakeholder's perception of the quality of the policy making process had an influence on their perceived HRD effectiveness. HR managers' perceptions and that of employees are more closely related to each other in small organizations. This shows that intensive interaction between the person knowledgeable about the HRD processes and the employees can more easily bring across HRD processes. Organizations can therefore aim to promote the interaction between HR managers and employees.

In addition, line managers come between HR managers and employees, because these are responsible for the implementation of the HRD processes. In order to bring HRD processes across as intended by HR managers, line managers should receive information about how to implement these in the best way, taking into account the cultural and contextual factors of the organization. Line managers need to understand the purpose of the HRD processes so that they can bring this information across to employees as good as possible. This can increase the likelihood that employees understand the purpose of specific HRD systems. In alignment with the expectancy theory (Vroom, 1964), understanding the purpose of the specific systems and procedures makes it more likely that employees learn through these systems and procedures. Ensuring the consistency of HRD interventions might enhance this process.

Relating intended HRD to perceived HRD has shown the importance of employees' perceptions. In contrast to Liao et al. (2009), the present study shows that intended and perceived HRD have a positive relationship with each other. Therefore, asking HR managers about the HRD processes present in their organization might be a good indication of how positively employees perceive HRD processes in their organization. Organizations can use this information in targeting interventions, making sure HR managers' efforts are understood correctly.

In addition, the present study has shown that investments in learning and development are not merely a cost, but that positive perceptions of employees about HRD and a positive evaluation of HR managers about HRD are related to employee performance. This shows that HRD, if implemented correctly can increase the performance of employees. Further, the employees' performance can be increased when HRD is organized in a good way so that HR managers rate their HRD processes very positively. HRD processes can ensure that an organizational climate should be established in which employees are asked for feedback about HRD in order to enhance it. HRD should be dealt with at the top management level in order to ensure that the organization facilitates and supports learning and development. The employees' view may not be left out, so that a feedback loop from employees to the top management and back is possible (Crossan et al.,1999).

Organizations should increase ILC, which includes employees' competences, capabilities and their motivation to carry out the required tasks (Bontis et al., 2002). This can be done through designing HRD processes and strategies as good and obvious as possible. Showing line managers how to implement these so that employees are able to perceive HRD processes as intended, because it has shown to lead to positive employee performance and OCB.

As seen in this study, engaging in GLC is important. Group members can generate an environment where it is unproblematic to learn and where the psychological risks related to learning is reduced. Learning at the group level embraces the process of integration, which in turn includes effective group work, productive meetings, knowledge about whom to address for certain issues, and conversational competences as being prepared to share success and failure, supporting diversity, and clarifying conflicts effectively (Bontis et al., 2002). Therefore, implementing processes that foster the groups' learning capacity are crucial. The study showed that HRD processes can enhance GLC, which is beneficial as GLC is positively related to employee performance and OCB.

Although, OLC showed to mediate the relationship between perceived HRD and employee performance, the additional analysis has shown that OLC is a rather sensitive measure. OLC did not mediate any of the relationships when HRD and employee performance have been divided into their smaller components. This shows that the mechanisms emerging at the organizational level are not as important for employee, because it does not relate to employee performance and OCB. However, the implications made at the individual level can foster a

group's learning capacity and an organization's learning capacity, because these are related to each other (Bontis et al., 2002).

Next to employee performance, OCB is increasingly getting important. OCB is the discretionary behavior of employees that goes further than existing role expectations and is directed at others within the organization (Organ, 1988). OCB can result in increased organizational effectiveness (Organ, 1988), productivity (Podsakoff, Ahearne, & MacKenzie, 1997) and greater employee job satisfaction (McNeely & Meglino, 1994). Through the additional analysis it was evident that it is important that organizations provide strategic leadership for learning in order to enhance employee performance. Employees that perceive that their organization is very well connected to its environment can enhance their OCB.

Implications for employee performance involve that managers should support the employees' demand for learning prospects and trainings. It is important that managers share their knowledge about competitors, trends in the sector and aims of the organization with their employees. In addition, managers should look for opportunities to develop themselves and they should ensure that work related actions are connected to the values of the organization, because employees indicated that they find these important. The perceptions of employees about these aspects are related to their performance (Marsick & Watkins, 2003).

Implications for OCB include that organizations should help their employees to balance work and family, which is increasingly getting important for employees (Caproni, 2004). Organizations should encourage employees to think from a global perspective, encourage them to consider the customer's view as well as to push employees to get answers from different layers within the organization to solve problems. In addition, the organization should let employees know that it thinks about the consequences serious decisions will have for employees. And finally, it is crucial that the organizations works together with external partners, such as universities, in order to meet mutual needs (Marsick & Watkins, 2003).

Overall, the organizations participating in the present study came from various sectors, including manufacturing and service organizations. In addition to that, the study was conducted in Germany and the Netherlands. These aspects make it possible that results can be generalized across different organizations, in different cultures from different contexts.

Limitations

The limitations of this study include that 30 organizations are a minimal requirement to conduct multilevel research. Using more organizations would more likely allow for generalization. In addition, the average amount of employees who returned their questionnaire per organization was seven. Unfortunately seven employees are not a representative sample when around 70.000 employees are working in the organization. Further, whether participants came from Germany or the Netherlands had an influence on the degree of the correlation between intended and perceived HRD, which makes it evident that these cultural factors might have influenced the results.

An important limitation of this study is the common method variance (CMV). There are two different types of CMV. One where the data source plays a role, namely ratings by only one rater and where the same measurement type is used (Spector, 2006). Due, to the complexity of the study, the variable intended HRD is only rated by a different source, namely by HR managers. The remaining variables have been rated by the same rater, namely the employee. This might result in dependency among the ratings. Further, the only measurement technique used was a 5-point Likert scale, which might have influenced the outcome of the analysis.

In addition to that, employee performance was only measured through the behavior and attitude of the employees by self-ratings. Confirming the self-reports through more objective measures such as through output of goods and service (qualitative and quantitative), measurers of time, including lateness, absence etc., and financial indicators (Guest, 1997) would improve the validity of the study.

Organizational size showed to be moderator through which the degree of the relationship between intended and perceived HRD varies (Arnold, 1982). Although the correlations are significantly different for small, medium-size and large-size organizations, only three organizations of the 30 organizations could be categorized to be a small organization and only six organizations were categorized to be a medium-size. Therefore, the majority of the organizations are large-size, which might have influenced the results.

Furthermore, the data used in the present study are cross-sectional. This means that the variables have been measured at one point of time. Therefore, it is not clear how long a change in the HRD process might takes before it can have an influence the perceptions of employees and thereby having an influence of employee performance.

Next to the methodological limitations, theoretical implications involve the missing literature on HRD. As HRD is a very young academic field (Swanson, 2001), most theoretical arguments have been drawn from the existing research on HRM. A universal HRD theory is not evident until now (Swanson R. A., 2001a), which makes the interpretation and definition difficult.

Future Research

Future research should always consider a multilevel structure. A representative number of employees per department or group should be included so that these could be compared, including more hierarchical structures of the data. An equal amount of small, medium- and large-size organizations should participate, so that the results can be compared more easily.

Future studies should include more objective measures of employee performance. Line managers of the employees could be asked about their employee's performance next to the employees' perception. As in today's environment employees are more committed to their job and not to their organization, intention to turnover could be used as an outcome variable that would provide relevant results (Grover & Crooker, 1995).

Next to comparing German and Dutch organizations, further studies could compare European organizations or organizations across continents. Further research is necessary in order to judge which aspects of HRD are more positively perceived in different cultures using. Cultural aspects might moderate some relationships. Discovering theses is important so that multinationals that operate in various countries can attend to country specific applications of HRM interventions (Black & Mendenhall, 1990).

Future research should detect why intended HRD did not have had an effect on group and organizational learning capacity. Possible explanations might include that group learning capacity depends on the interaction among employees and thus is not a direct product of how HR managers organize HRD. OLC did not play a major role in neither intended nor perceived HRD relationships with employee performance. It is possible that employees simply know too little about the organizational systems and structures used to support learning and development within organizations so that they cannot rate these objectively. This might lead to the fact that the employees' perceptions of OLC are not related to intended HRD, because HR managers know about the HRD processes that might influence the organization's learning capacity.

Intended HRD could be measured even more objectively. Next to HR managers, the top management could be asked and researchers could review business reports, business strategies and if possible HR or HRD strategies (Montesino, 2002). Comparing these findings can reveal whether these are in line with each other.

HRD processes are increasingly decentralization so that line managers take over more tasks (Garavan, 2007), so that the line managers' understanding of HRD needs to be measured to see whether they understand HRD processes correctly and value them so that they can implement them appropriately. The line managers are partly responsible whether employees have access to formal and informal HRD, which could be used as a possible mediator. Line managers are responsible for the implementation of a learning culture, permitting or prohibiting their employees to make mistakes or learn from others instead that performance objectives are so central that there is no time for informal learning. And, very importantly line managers have different leadership styles (Daniel, 1985), personalities and behaviors (Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005) through which they can have an influence on the employees' perceptions (Daniel, 1985).

Additional variables that might be relevant in this model include personal characteristics of employees (Nishii & Wright, 2008) such as motivation towards learning (Aguinis & Kraiger, 2009; Huselid, 1995), locus of control, performance goal vs. learning goal orientation and personality measured for example through the Big Five (Holton, 2005). Overall, researchers might aim to include these variables in the present model in order to make it as whole as possible including all possible explanations for the relationship between HRD and performance.

Conclusion

All in all, the present research deepened our understanding about measuring HRD quantitatively and relating it to individual behavior performance measures. The present study is of great importance as it draws attention to the fact that investments in HRD are justified as it contributes directly and indirectly to the performance of employees and the employees' OCB. Organizations should be urged to focus on the learning of their employees, even though focusing on performance objectives might seem to be more important at first glance. Permitting employees to show altruistic behavior in the form of willingness to help their co-workers will be more important in times where employability and not life-time employment are common

practice. Managers thinking in financial outcome measures should understand that learning and development interventions and creating a culture of learning are important. The present research should lead to unite research from psychology and management scholars. Individual perceptions as well as the employee's performance should be explored from a behavioral and financial side more thoroughly. Last but not least, we have to keep in mind that even if HRD is perfectly organized, implemented and perceived and employees have the best skills and are very motivated, they need to have to opportunity within their work environment to apply their skills and knowledge to develop a new mode of performing.

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Appendix A

Questionnaire for employees (HR managers received only the first two parts):

How do you perceive the learning and development opportunities in your organization?

A Study from the University of Twente

Dear Sir or Madame,

In the name of the University of Twente, I am currently doing research about how employees perceive the learning and development opportunities in their organization. With the help of this questionnaire, I would like to ask you to participate in this study.

This study concerns the learning and development opportunities in your organization and how you experience them.
Your participation in this study is very important, as I would like to make a valid prediction about the relationship between the learning and development opportunities and the performance of employees. After this research has been finished, I am willing to provide the results of my study to you. Filling in the questionnaire will take about **10-15 minutes**.

Notice of confidentiality: All information gathered in the questionnaire, will be treated confidentially and will not be provided to any third party. All data will be deleted when the study is over. The information gathered in this questionnaire will only be used for the purpose of this study. Individual data will only be shown in a statistically summarized form.
The questionnaire is anonymously and voluntarily!
If you have any questions please feel free to contact me: Hanna Held (h.e.held@student.utwente.nl)

Thank you very much for your participation!

General Questions

1. Gender (circle) : female/ male
2. Age (in years):_____
3. What is your highest degree of education?
    a. university-entrance diploma or lower,
    b. vocational training
    c. bachelor/master vocational college,
    d. bachelor/master university
    e. other:_____

4. How many years of work experience do you have (in years)?_____
5. How long are you working in your current organization (in years)?_____
6. How long have you been working in your current position (in years)?_____
7. How many hours do you work per week on average?
   Part-time: _____hours, or full-time: _____hours
8. Are you in a management position (circle)? Yes / No

Learning and Development Opportunities in your Organization

The following statements concern the training, learning and development activities in your organization. Please indicate in how far you agree with the statements. Please check the box that is most likely to fit your answer: strongly disagree (1), disagree (2), neutral (3), agree (4) or strongly agree (5).

Please check only one answer per statement.	Strongly disagree	Dis-agree	Neu-tral	Agree	Strongly agree
1. My organization gives me the possibility to use two-way communication on a regular basis, such as suggestion systems, electronic bulletin boards, or town hall/open meetings.	□1	□2	□3	□4	□5
2. My organization enables people to get the information they need quickly and easily at any time.	□1	□2	□3	□4	□5
3. My organization maintains an up-to-date database of all employees' skills.	□1	□2	□3	□4	□5
4. My organization has systems that demonstrate the gap between current and expected performance from employees.	□1	□2	□3	□4	□5
5. My organization makes its lessons learned available to all employees.	□1	□2	□3	□4	□5
6. My organization has a system that shows the time and amount of resources spent on training.	□1	□2	□3	□4	□5
7. My organization recognizes people for taking initiative.	□1	□2	□3	□4	□5
8. My organization gives people the possibility to make their own decisions about their work assignments.	□1	□2	□3	□4	□5

Please check only one answer per statement.	Strongly disagree	Dis-agree	Neu-tral	Agree	Strongly agree
9. My organization asks and supports employees to contribute to the organization's vision.	□1	□2	□3	□4	□5
10. My organization gives people the possibility to make decisions about the resources they need to accomplish their work.	□1	□2	□3	□4	□5
11. My organization supports employees who take calculated risks.	□1	□2	□3	□4	□5
12. My organization tries to builds alignment between the visions from different levels within my organization (e.g. between managers and employees).	□1	□2	□3	□4	□5
13. My organization helps its employees to balance work and family.	□1	□2	□3	□4	□5
14. My organization encourages its employees to think from a global perspective.	□1	□2	□3	□4	□5
15. My organization encourages its employees to include customers' views into the decision making process.	□1	□2	□3	□4	□5
16. My organization considers the impact of decisions on employee.	□1	□2	□3	□4	□5
17. My organization works together with the outside community to meet mutual needs.	□1	□2	□3	□4	□5
18. My organization encourages employees to get answers from across the organization when solving problems.	□1	□2	□3	□4	□5
19. In my organization, leaders generally support requests for learning opportunities and training.	□1	□2	□3	□4	□5
20. In my organization, leaders share up-to-date information with employees about competitors, industry trends, and organizational objectives.	□1	□2	□3	□4	□5
21. In my organization, leaders ensure that employees carry out the organization's vision.	□1	□2	□3	□4	□5

Please check only one answer per statement.	Strongly disagree	Dis-agree	Neu-tral	Agree	Strongly agree
22. In my organization, leaders mentor and coach its employees.	□1	□2	□3	□4	□5
23. In my organization, leaders continually look for opportunities to develop themselves.	□1	□2	□3	□4	□5
24. In my organization, leaders ensure that work related actions are consistent with the organization's values.	□1	□2	□3	□4	□5
25. My organization has an organizational climate that stimulates learning.	□1	□2	□3	□4	□5
26. In my organization, learning and development is efficiently planed, registered and administrated.	□1	□2	□3	□4	□5
27. In my organization employees can autonomously plan their learning and development activities by themselves (e.g. through the use of intranet).	□1	□2	□3	□4	□5
28. my organization has up-to-date job descriptions available for each job.	□1	□2	□3	□4	□5
29. The job descriptions are connected to the learning and development opportunities.	□1	□2	□3	□4	□5
30. My organization has a cycle in which evaluation and development interviews take place.	□1	□2	□3	□4	□5
31. From the development interviews, development plans for employees are set up.	□1	□2	□3	□4	□5
32. The possibilities and requirements for career paths or development within the organization are visible for all employees.	□1	□2	□3	□4	□5
33. My organization has, among others, a standard learning and development offer available.	□1	□2	□3	□4	□5
34. My organization has an eye on formal (development and training) and informal learning (learning at the workplace) within its policies.	□1	□2	□3	□4	□5

Your Learning Opportunities

The following statements concern how you perceive yourself within your organization.

Please check only one answer per statement.	Strongly disagree	Dis-agree	Neu-tral	Agree	Strongly agree
1. I am current and knowledgeable about my work.	□1	□2	□3	□4	□5
2. I am aware of the critical issues that affect my work.	□1	□2	□3	□4	□5
3. I feel a sense of pride of accomplishment in what I do	□1	□2	□3	□4	□5
4. I generate many new insights.	□1	□2	□3	□4	□5
5. I feel confident in my work.	□1	□2	□3	□4	□5
6. I feel a sense of pride in my work.	□1	□2	□3	□4	□5
7. I have a high level of energy at work.	□1	□2	□3	□4	□5
8.I am able to grow through my work.	□1	□2	□3	□4	□5
9. I have a clear sense of direction in my work.	□1	□2	□3	□4	□5
10.I am able to break out of traditional mind-sets to see things in new and different ways.	□1	□2	□3	□4	□5

Team Learning Opportunities

The following statements concern how you perceive your team within your organization.

Please check only one answer per statement.	Strongly disagree	Dis-agree	Neu-tral	Agree	Strongly agree
1. During group meetings we seek to understand everyone's point of view.	□1	□2	□3	□4	□5
2. We share our successes within the team.	□1	□2	□3	□4	□5
3. We share our failures within our team.	□1	□2	□3	□4	□5
4. Ideas arise in meetings that did not occur to any one individual.	□1	□2	□3	□4	□5

5. We have effective conflict resolution when working in teams.	□1	□2	□3	□4	□5
6. Teams in the organization are adaptable.	□1	□2	□3	□4	□5
7. Teams have a common understanding of departmental issues.	□1	□2	□3	□4	□5
8. Teams have the right people involved in addressing the issues.	□1	□2	□3	□4	□5
9. Different points of view are involved in addressing the issues.	□1	□2	□3	□4	□5
10. Teams are prepared to rethink decisions when presented with new information.	□1	□2	□3	□4	□5

Organizational Structures

The following statements concern how you perceive the strategy, structure and culture of your organization.

Please check only one answer per statement.	Strongly disagree	Dis-agree	Neu-tral	Agre e	Strongly agree
1. The organizational strategy positions the organization well for the future.	□1	□2	□3	□4	□5
2. The organizational structure supports our strategic direction.	□1	□2	□3	□4	□5
3. The organizational procedures allow us to work effectively.	□1	□2	□3	□4	□5
4. Our operational procedures allow us to work effectively.	□1	□2	□3	□4	□5
5. The organization's culture could be characterized as innovative.	□1	□2	□3	□4	□5
6. We have a realistic yet challenging vision for the organization.	□1	□2	□3	□4	□5
7. We have the necessary systems to implement our strategy.	□1	□2	□3	□4	□5

8. Our organizational systems contain important information.	□1	□2	□3	□4	□5
9. We have company files and data bases that are up-to-date.	□1	□2	□3	□4	□5
10. We have an organizational culture characterizes by a high degree of trust.	□1	□2	□3	□4	□5

Your Behavior in your Organization

The last statements concern your perception about your behavior within your organization.

Please check only one answer per statement.	Strongly disagree	Dis-agree	Neu-tral	Agree	Strongly agree
1. I provide constructive suggestions about how my department can improve its effectiveness.	□1	□2	□3	□4	□5
2. For issues that may have serious consequences, I express my opinions honestly even when others may disagree.	□1	□2	□3	□4	□5
3. I "touch-base" with my coworkers before initiating actions that might affect them.	□1	□2	□3	□4	□5
4. I encourage others to try new and effective ways of doing their job.	□1	□2	□3	□4	□5
5. I help others who have large amounts of work.	□1	□2	□3	□4	□5
6. I willingly share my expertise with my coworkers	□1	□2	□3	□4	□5
7. I am currently working at my best performance level.	□1	□2	□3	□4	□5
8. I hardly ever call in sick.	□1	□2	□3	□4	□5
9. I do only enough to get by.	□1	□2	□3	□4	□5
10. I try to be at work as often as I can.	□1	□2	□3	□4	□5
11. I am one of the best at the work I do.	□1	□2	□3	□4	□5
12. I am one of the slowest at the work I do.	□1	□2	□3	□4	□5

13. I set very high standards for my work.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
14. My work is always of high quality.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$
15. I am proud of my work performance.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$

Do you have any questions or recommendations?

_____
_____
_____
_____
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_____
_____

Thank you very much for your participation in this study!

Appendix B

Table 4. Stepwise hierarchical linear modeling analysis with the organization creates systems to capture and share learning

	OCB		Employee performance
Variable	Model 1	Model 2	Model 1
Gender	.00	.03	.04
Work experience	.04	.00	.02
Country	-.01	-.03	.08
Contract	.00	.00	-.02
Management position	-.14	-.05	-.20*
Organizational size	-.16*	-.14*	.09
Creating systems	.22*	.12	.26
ILC		.41***	
GLC		.18**	
OLC		-.02	
χ^2	308.81	247.60	300.15
($\Delta\chi^2$ (Δ df)) [a]	2.28(1)	38.79(3)**	1.5(1)

Note. *= $p \leq .05$; **= $p \leq .01$; ***= $p \leq .001$

[a] Model 1 is compared to a model without the independent variable

ILC= individual learning capacity; GLC= group learning capacity; OLC= organizational learning capacity; in the last row, the dimensions of freedom are reported within the parentheses to indicate the significance of the model fit

Table 5. Stepwise hierarchical linear modeling analysis with the organization empowers people toward a collective vision

	OCB		Employee performance	
Variable	Model 1	Model 2	Model 1	Model 2
Gender	.00	.02	.04	.07
Work experience	.03	-.00	.01	-.01
Country	-.02	-.04	.08	.02
Contract	.00	.00	-.02	-.01
Management position	-.13	-.04	-.19*	-.13
Organizational size	-.09	-.11	.16	.15
Empowering people	.36**	.14	.38*	.14
ILC		.41***		.51***
GLC		.17**		.00
OLC		-.02		.07
χ^2	305.72	247.57	298.55	231.56
($\Delta\chi^2$ (Δ df)) [a]	5.37(1)*	57.67(3)**	3.1(1)	66.99 (3)** [b]

Note. *= $p \leq .05$; **= $p \leq .01$; ***= $p \leq .001$

[a] Model 1 is compared to a model without the independent variable

[b] This model fit was calculated in comparison with the model without the independent variable

ILC= individual learning capacity; GLC= group learning capacity; OLC= organizational learning capacity; in the last row, the dimensions of freedom are reported within the parentheses to indicate the significance of the model fit

Table 6. Stepwise hierarchical linear modeling analysis with the organization is connected to its environment

	OCB		Employee performance	
Variable	Model 1	Model 2	Model 1	Model 2
Gender	-.01	.02	.03	.07
Work experience	.03	.00	.02	-.01
Country	.00	-.03	.09	.03
Contract	.00	.00	-.02	-.01
Management position	-.13	-.05	-.19*	-.13
Organizational size	-.07	-.10	.19	.17*
Connect organization	.37**	.14	.46**	.20
ILC		.41***		.51***
GLC		.17**		.00
OLC		-.02		.07
χ^2	304.69	247.56	296.19	230.50
($\Delta\chi^2$ (Δ df)) [a]	6.40(1)*	57.13(3)**	5.46(1)*	65.69(3)**

Note. *= $p \leq .05$; **= $p \leq .01$; ***= $p \leq .001$

[a] Model 1 is compared to a model without the independent variable

ILC= individual learning capacity; GLC= group learning capacity; OLC= organizational learning capacity; in the last row, the dimensions of freedom are reported within the parentheses to indicate the significance of the model fit

Table 7. Stepwise hierarchical linear modeling analysis with the organization provides strategic leadership

	OCB		Employee performance	
Variable	Model 1	Model 2	Model 1	Model 2
Gender	.01	.03	.04	.08
Work experience	.04	.00	.02	-.01
Country	.01	-.02	.09	.03
Contract	.00	.00	-.02	-.01
Management position	-.14	-.05	-.20*	-.13
Organizational size	-.14*	-.13*	.11	.13
Strategic leadership	.33**	.13	.48**	.26
ILC		.41***		.51***
GLC		.18**		.00
OLC		-.02		.06
χ^2	306.13	247.78	294.74	229.14
($\Delta\chi^2$ (Δ df)) [a]	4.96(1)*	158.35(3)**	6.91(1)**	65.6(3)**

Note. *= $p \leq .05$; **= $p \leq .01$; ***= $p \leq .001$

[a] Model 1 is compared to a model without the independent variable

ILC= individual learning capacity; GLC= group learning capacity; OLC= organizational learning capacity; in the last row, the dimensions of freedom are reported within the parentheses to indicate the significance of the model fit

Table 8. Stepwise hierarchical linear modeling analysis with the practical questions

	OCB		Employee performance	
Variable	Model 1	Model 2	Model 1	Model 2
Gender	.02	.04	.04	.08
Work experience	.05	.00	.02	-.01
Country	-.06	-.06	.03	.00
Contract	.00	.01	-.02	-.01
Management position	-.13	-.05	-.19*	-.13
Organizational size	-.20**	-.16**	.05	.10
Practical questions	.21**	.10	.20*	.10
ILC		.41***		.52***
GLC		.17**		.00
OLC		-.02		.07
χ^2	305.99	247.26	300.22	232.22
($\Delta\chi^2$ (Δ df)) [a]	5.10(1)*	58.73(3)**	.87(1)	69.43(3)** [b]

Note. *= $p \leq .05$; **= $p \leq .01$; ***= $p \leq .001$

[a] Model 1 is compared to a model without the independent variable

[b] This model fit was calculated in comparison with the model without the independent variable

ILC= individual learning capacity; GLC= group learning capacity; OLC= organizational learning capacity; in the last row, the dimensions of freedom are reported within the parentheses to indicate the significance of the model fit