Cultivating responsiveness

Talent development for complex organizational environments

Donald Ropes

This article is an adaptation of the inaugural speech 'Cultivating responsiveness: Learning and development in complex environments' given by Don Ropes on October 25th, 2015. In this article, Don Ropes discusses the concept of responsiveness in regards to talent development. He argues that talent development is a crucial factor for helping individuals, organizations and society to become responsive, which is a trait needed to change and develop in a highly complex world. After discussing the concept of responsiveness, Ropes proposes that responsiveness is cultivated by structuring organizations in ways that assure people continually learn and develop and in turn help the organization to learn and develop. He then goes on to explain that talent development, as a function of employee learning and development, is best conceptualized as a process of non-formal learning occurring naturally in the workplace, rather than formal learning trajectories such as management development programs. Ropes finishes by presenting several organizational structures and interventions that promote talent development - and thus develop responsiveness - through workplace learning.

Introduction

This article looks at how talent development, as a function of learning and development, enables organizations to change and develop along with the volatile and unpredictable business environments they are currently faced with. The ability to adapt and do well in complex and unpredictable environments is what I call *responsiveness*. Talent development, as a function of learning and development (L&D from now on), is a crucial factor for assuring societal well-being. In order for Dutch society to enjoy a high level of well-being, there needs to be sustained economic growth. In this article I suggest that continued investment in L&D is a highly effective strategy for promoting both of these things. Links between these ideas are illustrated below in Figure 1, which shows the path and logical framework behind my argument.

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Figure 1. Logical framework of this article

The article is structured as follows: I start at the right end of the figure, first sketching out the highly complex environment in which The Netherlands finds itself, linking this to the consequences for how Dutch society should approach economic development by becoming responsive. Next I look at cultivating responsiveness in organisations and the individuals working in them. This is the point where I discuss the concept of talent development as a function of L&D. I then go on to outline some of the challenges facing researchers and practitioners in the fields of Human Resource Development (HRD) and Human Resource Management (HRM). The article finishes with management implications and some advice for translating these into concrete actions.

Our complex environment

In November of 2013, The Dutch Scientific Council for Government Policy ('Wetenschappelijk Raad voor Regeringsbeleid', (WRR) published a report called *"Towards a learning economy. Investing in the Netherlands' earning capacity"* (*Naar een Lerende Economie*). In this report they discussed the idea that although The Netherlands has enjoyed more than 50 years of steady growth: *"...there are no guarantees that this situation will continue. The global balance of power is changing. Many emerging economies are developing from low-wage countries into knowledge-driven economies and by 2020, two thirds of the world's middle class will live in Asia. These changes are creating all sorts of new opportunities – but also putting established positions under constant pressure. Production processes are changing more rapidly all the time, and market leaders are soon toppled from their position. Innovation is no longer a short-term activity undertaken by a few inventors; it is a permanent process of fine-tuning and adjusting that involves everyone across the board, from shop floor workers to senior executives, suppliers and even customers. The question is how the Netherlands can thrive in these new circumstances."* (Hogevorst et al., 2013, p. 7)

Several important issues arise from this quotation. The first is that we need to adapt our way of earning, or accept losing our current high standard of living. We know land and capital- heavy investments are no longer a viable strategy for sustaining growth. Natural resource wealth for the Netherlands, such as the gas fields in Groningen, is declining rapidly. As a reaction to these fundamental and widespread changes we are becoming more and more a knowledge-based economy, where human and intellectual capital in organizations play critical roles. However, the labor-base of The Netherlands will start shrinking rapidly around the year 2020, forcing individual workers and the organizations in which they work to become more and more productive. Stimulating L&D is an important policy for achieving this because, as the WRR stresses, everyone involved

in the economy, regardless of their role, will need to contribute to development through continual innovation. The world we live in is changing continually and becoming at the same time more and more complex. For us to have a viable economy, we need to be prepared for this. We need to be responsive to our environment and understand that we either learn and adapt or suffer the consequences of a diminished economy; fewer jobs, poor healthcare, little social security - the list goes on. L&D plays an important role by helping people and organizations to learn to innovate and change effectively and efficiently (Alagaraja, 2013; Sparrow and Cooper, 2014).

Strategies for dealing with changes

There are two general strategies for dealing with a changing world. The first strategy is forecasting. Forecasting is based on a linear world where it's possible to make accurate predictions, even far into the future. But critics of forecasting see it as an ineffective and even misleading way to deal with a turbulent and complex environment (Byrne and Callaghan, 2013; Spence, 2011). Forecasting in complex situations can be misleading because it gives a false sense of security. Organizations and individuals also sometimes rely on forecasting, which may lead to problems in dealing with change.

The second strategy is aimed at developing earning capacity so that the economy can deal with continual change effectively. According to the WRR, earning capacity is *"...the sum of its ability to exploit future opportunities and overcome future threats. The aim is to develop infrastructure, institutions and human capital to the point where they can adapt smoothly to changing circumstances."* (Hogevorst et al., 2013, p. 5). The goal of a strategy aimed at boosting earning capacity is to develop an economy that can *learn* – one that has the ability to quickly and easily adapt and flourish in an unstable and highly competitive global environment. This in turn will boost Dutch earning capacity *and* capability.

Responsiveness as key characteristic of a learning economy

The ability to adapt relatively easily quickly and to new circumstances the WRR calls 'Responsiveness', and is a key characteristic of the learning economy, which as already explained, is crucial for successfully organizing Dutch earning capacity for continued economic growth. Below I break down the concept of responsiveness into its components of resilience, adaptive capacity, proactive attitude and feedback (Hogevorst et al., 2013).

- **Resilience.** Resilience in an economic sense of the word is the ability of an economy to absorb and minimalize the impact of external shocks. An important characteristic of a resilient economy central to this paper concerns the existence of a flexible, multi-skilled labor force because it allows for flows of important resources from a declining or 'damaged' section of the economy to a different one more viable (Briguglio, 2008). Talent development plays a critical role here; highly

skilled workers supported by structures that assure learning and development is a crucial aspect of this flexibility, as rapid skill changes are part of flexibility.

- **Adaptive capacity.** Adaptive capacity is the ability of a system to effectively adjust and change in response to new circumstances. For example the structure of predominant industries or occupations undergo change, or firms find a way to improve their competitive position. This they do for example by adopting better technologies or organizational forms or producing new products. People are also adaptive to a certain extent and one way to be adaptive is to continually learn and develop.
- **Proactive attitude.** A proactive attitude empowers a long-term vision in regards to understanding future problems and current mistakes as well as the search for new possibilities. Folke et al. (2002) define this characteristic of responsiveness is the "*...degree to which the system can build capacity for learning and adaption.*" (p. 440) Proactivity is important to change threats into opportunities and a crucial attitude for effective employees.
- **Processing Feedback.** The WRR does not specifically position the ability to process feedback as a component of responsiveness but is an important aspect of system thinking. Feedback is 'information on the results of actions' and a necessary part of learning because it guides future actions.

The four components of responsiveness given above are crucial for assuring that an economy maintains growth (Hogevorst et al., 2013). In order for The Netherlands to keep its current level of social and economic well-being we need to develop its earning capacity by developing a learning economy. A learning economy is responsive: it bounces back from shocks, adapts smoothly and relatively easily to changes in its external environment and is prepared to search for new possibilities. It follows logically that the first step towards a learning economy is to cultivate responsiveness by instituting structures that facilitate the process. While sound governance and effective macroeconomic policy are critical factors for cultivating resilience, other structures are needed for assuring the adaptive capacity and proactivity: institutional structures related to promoting learning, feedback and a long-term vision. This is true for each of the actors shown in Figure 1 above.

The purpose of the discussion above is to illustrate that all aspects of L&D play a crucial role in helping assure the continued economic growth of The Netherlands because it is linked directly to organizations through the individual. Following this line of reasoning, the economy reacts and changes with stimuli from society, organizations interact with their environment, and individuals function in a relationship with the organization in which they work. Globalization and the internet have contributed to the complexity of this system by adding a multitude of relationships and interconnectedness. Understanding this complex web of relationships is thus essential to understanding L&D in an organizational context. Individual learning, as a function of talent development, is the cornerstone of

a learning economy because it helps assures responsiveness of the organization. I discuss the idea of cultivating organizational responsiveness in the next section.

Cultivating Organizational Responsiveness

Responsiveness is an important topic for modern organizations due to the increasing complexity of the world. Organizational science literature doesn't explicitly use the term responsiveness, but rather 'organizational learning' or 'learning organization', or some combination of the two. In this way the idea of responsiveness goes a step further by combining the terms into a more holistic concept. To illustrate: r*esilience* for organizations is the same as for any system and the ability to absorb unexpected shocks is important for the short-term viability of an organization. *Adaptive capacity* is the ability to change along with the environment - key aspects of a learning organization. And finally a *proactive attitude* stimulates learning and innovation. The idea of *cultivating* responsiveness can also be applied to organizations. The field of organizational behavior has been promoting the concept of learning organizations for many years. Both the academic and practitioner literatures argue for the need to create a learning *system*, made up of (learning) individuals working in (learning) organizations. A major focus of both HRD and HRM is on creating learning systems, which is a major goal of both practitioners and researchers in the two fields.

Organizational learning and a learning organization

Organizational learning is ordinarily conceptualized along the same lines as individual learning. For example, organizational learning can be said to have occurred (i.e. learning as outcome) if there has been a change in the cognitive structure of the organization (like a new strategy is developed), or if knowledge is being transferred between organizational actors (learning as process). In organizational learning theory, the psychological processes of learning connect individuals with the organization as a whole. As an outcome, organizational learning is typically understood as changes in organizational practices such as a new strategy or procedure for working. Changes are arbitrated through an individual's learning, for example during problem-solving or collaborative innovation. One important point is that an individual's learning is a *necessary but insufficient* condition for organizational learning to happen (Ellström, 2001); it requires other things such as a positive learning climate within the organization (see Figure 2 below) and knowledge management systems that assure knowledge dissemination and reuse (McElroy, 2000).

The ability to learn and create new knowledge is essential to modern organizations in a complex and turbulent world. Learning is often considered a major contributor to the success or failure of an organization because through learning, new or rare competences are developed that helps to create competitive advantage (Muthusamy and Palanisamy, 2004). Organizations that are exceptionally good at creating new knowledge and successfully turning it into marketable products or services are called learning organizations. The need to innovate and to change for

maintaining competitive advantage is becoming more crucial due to technological as well as social developments. It logically follows that a critical competence of a learning organization is the ability to change and develop, in other words to be *responsive*.

According to Peter Senge (1990), a learning organization is characterized by a culture in which there is lifelong learning and development among employees. Organizational learning is directly related to individual learning as seen in the large number of organizational development strategies based on improving individual performance through various types of learning initiatives (Harrison and Kessels, 2004; Watkins and Marsick, 1993). Continuous learning - sometimes called lifelong learning - by employees is an important issue for both researchers and management alike because it is a powerful way for organizations to be responsive and deal with the challenges posed by a highly competitive and dynamic environment (De Lange *et al.*, 2009). Through learning, employees become responsive by increasing their ability to adapt to new roles and acquire new skills that help them remain effective in organizations undergoing constant change. The crucial role lifelong learning plays in organizational effectiveness is discussed expansively in the literature on organizational learning and knowledge management (see Beck, 2012).

Cultivating a learning organization

Berg & Chyung (2008) point out that a learning organization is most often conceptualized as a *strategy* that focuses on process design and as such *"...is defined by the nature of the organization's processes and the extent to which they enhance employees' learning and facilitate the transfer of learning to others."* (p. 230). Following this, a learning organization is a practical strategy for promoting responsiveness. This means cultivating a learning organization is a conscious and consistent set of interventions by management in order to improve internal conditions for learning (Goh, 2003). In order to cultivate a learning organization, management needs to promote a positive learning climate. According to Hellriegel and Slocum (1974), *"Organizational climate refers to a set of attributes which can be perceived about a particular organization and/or its subsystems, and that may be induced from the way that organization and/or its subsystems deal with their members and environment."* (p. 253) Translated to more general language, a learning climate is the way individuals perceive the organization in regards to their learning.

Mikkelsen and Gronhaug (1999) found that employees experience a learning climate as positive if the factors shown in Figure 2 are considered positive.

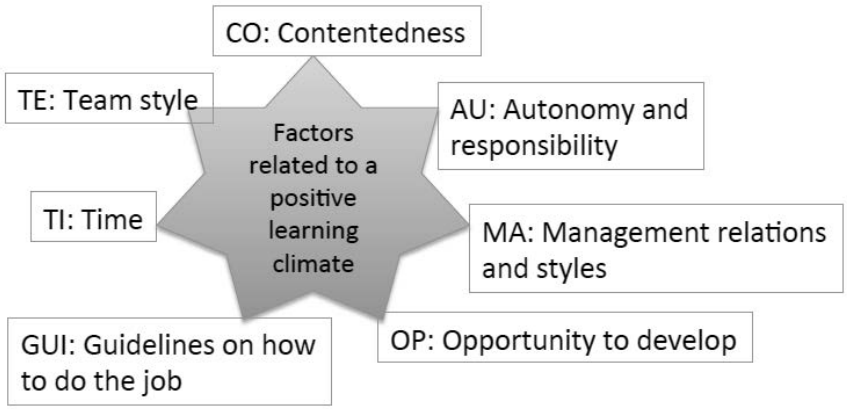

Figure 2. Factors in a Learning Climate

The following is a short explanation of the factors that make up the 'learning climate scale' developed by Mikkelsen and Gronhaug (1999) and pictured above in Figure 2.

- **MA:** Management Relations and Style, where high scores reflect perceptions of management as being supportive.
- **TI:** Time, where high scores indicate that individuals perceive sufficient time to do their job and learn.
- **AU:** Autonomy and Responsibility, where high scores indicate perceptions of control over organizational events, initiating action and making decisions.
- **TE:** Team style, where high scores indicate perceptions of opportunities to learn from expert colleagues.
- **OP:** Opportunity to Develop, where high scores reflect perceptions of opportunities to learn new jobs and do a variety of types of work at the workplace.
- **GUI:** Guidelines on How to Do the Job, where high scores indicate perceptions of easy access to relevant written information and guidelines.
- **CO:** Contentedness, where high scores indicate perceptions of a general feeling of satisfaction with the workplace.

For practitioners, the scale Mikkelsen and Gronhaug (1999) developed is a powerful instrument for understanding what interventions might be implemented in order to help cultivate a learning organization. For researchers, the scale is useful for measuring effects of interventions or eliminating plausible rival explanations for any observed effects (Ropes, 2011).

Cultivating employee responsiveness

Up until now I have avoided the discussion of what talent development is, and just called it 'a function of L&D'. I start this section by explaining what talent development actually means in regards to L&D. After that I describe how *effective* talent development is stimulated by *effective* L&D.

Talent development as a function of L&D

In the literature, talent development is considered a part of talent management. Although an agreed upon definition of what talent management is does not seem to exist in the literature (Garavan, Carbery, Rock, *et al.*, 2012; Thunnissen *et al.*, 2013) it is often conceptualized as a set of practices organizations undertake to *"...attract, select, develop and manage employees in an integrated and strategic way."* (Garavan, Carbery and Rock, 2012, p. 5). From this perspective, talent development is a specific function performed by the HRM and/or HRD department that 1) defines *what* talent is needed 2) *who's* talent should be further developed and 3) implements some type of training and development program for high-potentials or 'key employees'. My perspective on talent development is slightly different. I would argue that talent development is actually a way of thinking aimed at assuring *all* employees perform to the best of their potential. And I am not alone in this (see for example Thunnissen *et al.*, 2013). Secondly, I propose that the typical training and development implemented by HRM/HRD is not an effective way to ensure that employees can reach their potential. I explain this further shortly. Talent development should be about *continual workplace learning*, which is situated and considers organizational contexts and structures as being crucial for defining how individuals develop their talents in an ongoing way. Talent as such is not an innate ability (Sternberg, 1998) and can be both developed and gained through work itself. This is why I position talent development within the broader perspective of L&D, which as I argue in the next section is about much more than training and development.

Effective workplace learning

The premise of this article is that employees cultivate their responsiveness through learning. Workplace learning occurs in many different situations and is organized in different ways but the most *effective* learning at work occurs during participation in everyday situations. There is an ongoing trend in management learning to move away from formal training and development towards informal, situated learning (McGuire and Gubbins, 2010). This is probably because 1) organizations are investing less and less in formal training and development and 2) formal training and development programs are being questioned as to their effectiveness (Kyndt *et al.*, 2009).

The movement towards informal learning at the workplace is seen in the popularity of the '70:20:10' HRD framework that Charles Jennings developed in 2002 (Jennings and Wargnier, 2011). Essentially, Jennings explains that 70% of all learning takes place in the daily activities of work, 20% by observing others and 10% in formal training. We know that much learning at the workplace is in fact unplanned, taking place in the natural

activity system of the workplace, where employees participate regularly in organizational group activities such as team meetings, formal and informal discussions, etc. (Ropes, 2013). From this perspective, workplace learning is largely a byproduct of participation in the daily activities of the organization rather than formal, planned training activities. Workplace learning is thus mostly non-formal, linked to daily work activities and 'predominantly unstructured, experiential, and non-institutional' (Marsick and Volpe, 1999). However, as one can see in Table 1 below, non-formal learning is not necessarily unplanned or unintentional. This is an important distinction with what is called incidental learning, which is unintentional, unplanned and results in tacit knowledge or other non-measurable learning outcomes (Watkins and Marsick, 1992). Examples of planned, non-formal learning activities with identifiable outcomes are mentoring, participation in a performance review or taking part in a project aimed at new product development. The table below illustrates the differences between non-formal workplace learning and formal learning in an educational setting.

Learning in formal education	Learning in the workplace
Intentional (+unintentional)	Unintentional (+intentional)
Prescribed by formal curricula, competency standards, etc.	Usually no formal curriculum or prescribed outcomes
Uncontextualized – characterized by symbol manipulation	Contextual – characterized by contextual reasoning
Focused on mental activities	Focused on tool use and mental activities
Produces explicit knowledge and generalized skills	Produces implicit and tacit knowledge and situation-specific competences
Learning outcomes predictable	Learning outcomes less predictable
Emphasis on teaching and content of teaching	Emphasis on work and experiences based on learner as a worker
Individual	Collaborative
Theory and practice traditionally separated	Seamless know-how, practical wisdom
Separation of knowledge and skills	Competences based holistically, no distinction between knowledge and skills

Table 1. Differences between formal and informal learning (Tynjälä, 2008)

Non-formal learning is considered by most L&D scholars - and many practitioners - to be the most effective type of learning for workers in knowledge-intensive environments (Warhurst, 2013). This is how professionals increase their expertise while contributing to the knowledge base of the organization. The following are several key aspects of learning at the workplace and what they mean for developing talent.

- Workplace learning is situated, i.e. takes place in a specific context which means any expertise developed will be expertise specific to that context (Farrington-Darby and Wilson, 2006). This is important for understanding how expertise and competence is developed and can inform learning design.

- Workplace learning is a social process that occurs in groups, such as work teams or communities of practices (Ropes, 2010), or even mentor-pupil relationships. Understanding that social processes are important to facilitating learning means looking to other theories on learning, such as activity theory (Jonassen and Rohrer-Murphy, 1999).
- Workplace learning is about knowledge building and creating new knowledge which is an important meta-competence learned during participation in various group activities at work (Illeris, 2002).
- Creating new knowledge is the link to organizational learning and as such needs to be stimulated and facilitated.

In summary, workplaces are not by definition powerful learning environment but need to be designed as such (Skule, 2004). So talent doesn't just develop by itself, it needs to be *cultivated*. Billet (2002) argues that all learning in organizations is dependent on structures that shape how people do their jobs. This suggests a challenge for structuring the workplace and the jobs people do in such a way as to assure that non-formal learning occurs. Onstenk (2011) goes so far as to posit that the learning potential of the work itself needs to be addressed if we are to realize the full potential of each employee.

Becoming a superhero and other HRD challenges for people and organizations

According to some research, employees will need to be 'super smart' (and able to remain so), 'super social' and 'super flexible' (Biemans *et al.*, 2015). Essentially, employees need to be responsive in the same ways as the economy and an organization needs to be. Thus, cultivating employee responsiveness is a main goal of L&D research and practice. However, while we know what types of learning environments are theoretically effective for workplace learning in general, we do not know if specific types of learning environments can be made effective for a broad range of talent development needs and/or learners (D'Amato and Herzfeldt, 2008). This means we need to map out what types of learning environments are effective in which contexts, considering the different variables (*what* needs to be learned *when* and by *whom*). Taking these variables into consideration means organizing complex learning environments, yet HRM initiatives are often one-size fits all with little thought to the complexity of learning. This is especially true in regards to motivation for learning and the different cognitive styles of learners have (Nieuwenhuis and van Woerkom, 2006; Ropes and Ypsilanti, 2012).

Another challenge for L&D research and practice is how to organize learning in a way that is beneficial to both the organization and the employee. This is an important because we also need to take into account the human aspect of learning, not just a utilitarian one. People learn for reasons other than to help the organization they work in to develop, and may not be motivated to learn if they do not see the added value in learning. For example, self-actualization is a powerful motivation for learning, yet learning in organizations is often seen as a utilitarian instrument for

making business processes more effective, and has no connection with the employee's self. Järvensivu and Koski (2012) state that *"Learning has been mobilized to legitimize and reinforce a neo-liberal ethos as an inescapable answer to changes caused by the knowledge society and the globalized economy. As learning discourse is conquering the world, it has reached a point where learning is in different connections un-problematically assumed to be a good thing for everyone."* (p. 7) We need to be careful that learning does not become a tool for management to oppress or alienate certain groups or increase workloads in the name of becoming a 'learning organization'. Not being aware of these issues could lead to employees' refusing to participate in learning, or stymie their continuous learning, which would negatively affect both the individual's and organization's responsiveness. Thus, why employees *do not* partake in learning activities is an important point that needs more research (Cunningham and Hillier, 2013a; Järvensivu and Koski, 2012). At a theoretical level, understanding how learning at the individual level is linked to the organization – and vice-versa – needs much more research (Lozano, 2014; Lyles, 2014).

Integrating formal and non-formal learning

On the one hand I discussed workplace learning as essentially non-formal. However, in certain instances, organizations need to help employees to learn new, specific skills or competences. In situations like this, having a structured learning environment is probably more effective than the non-formal learning Jennings proposes. However, there is evidence showing that certain types of learning environments lead to higher levels of non-formal learning outside of the formal environment (Cunningham and Hillier, 2013b; Kyndt *et al.*, 2009).

The core process of learning is reflection. Without it, there is no real learning (Illeris, 2002). In the table below, three types of non-formal learning are shown along with the time of stimulus. Deliberative learning is non-formal in nature, but is able to be planned and even evaluated a simple level: the individual can actually structure this type of non-formal learning. In this sense it is close to formal learning. An example of deliberative learning would be doing an after-action review of a project, or preparing for an employment evaluation by reflecting on past accomplishments and future possibilities. Far from formal learning is implicit learning, which is neither planned nor structured – it just happens unconsciously (one reason that it is sometimes referred to as unconscious learning). A simple illustration of implicit learning would be when a person can properly use the grammar of their native language without a real understanding of the rules. We don't know much about implicit learning, especially in relation to formal types of learning (Xie *et al.*, 2013). Reactive learning is somewhere between implicit and deliberative learning. It also has elements of both. An example of reactive learning would be the act of thinking about a fact you heard during a presentation and coming to a new idea that you use later in your work.

Time of Stimulus	Implicit Learning	Reactive Learning	Deliberative Learning
Past Episodes	Implicit linkage of past memories with current experience	Brief *near-spontaneous reflection* on past episodes	Review of past actions, communications events, experiences More systematic reflection
Current Experiences	A selection from experience enters the memory	*Incidental* noting of facts, opinions, impressions, ideas *Recognition* of learning opportunities	*Engagement* in decision-making, problem-solving, planned informal learning
Future Behavior	Unconscious effects of previous experiences	Being prepared for *emergent* learning opportunities	*Planned* learning goals *Planned* learnin opportunities

Table 2. Typology of non-formal learning (Eraut, 2004)

Supporting workplace learning

My premise is that effective learning at work should help people to move from deliberative learning to implicit learning as shown in Table 2. People would be more effective learners in situations where time and facilitation of learning is minimal – like in many organizations. The driving question here is about how to integrate aspects of non-formal learning into formal workplace learning trajectories in order to increase their effectiveness. Measuring any increase in effectiveness should prove elusive because workplace learning is about tacit, rather than declarative knowledge (Dealtry, 2009). Tacit knowledge is something people have, but don't know it. Michael Polyani (1966) is considered the first to theorize about tacit knowledge, describing it by stating that 'you know more than you can tell'. Measuring the effectiveness of talent development trajectories, or any other type of work-based learning trajectory is an important point because while HR departments aspire to have a strategic role in organizations, they often don't. In fact, while research shows a clear link between HRM and organizational success, companies chose to ignore this and focus on improving other organizational aspects such as operations, processes and products (Alagaraja, 2013). Supporting workplace learning for these reasons is not an easy job. This leads us to the next section, which is about how this article might contribute to practice.

Implications for practice

Perhaps the biggest implication for HRD professionals is related to the concept of talent development as both an individual and organizational level phenomenon - and needs to be implemented as such. This means that talent development cannot be solely in the hands of the HR department, but must be part of the organizational structures that promote a learning organization. The model shown above in Figure 2 can be used by managers and HR personnel in order to reflect and gauge to what extent the organization is able to learn and to assess its capability to be responsive.

Another implication concerns how learning is approached within the organization. Many HR training and development initiatives are based on instrumental approaches aimed at specific employees who - according to management - need to develop a specific skill that is needed by the organization. For example a manager sends a 'high potential' to a leadership training program at a local university. This strategy can be useful but does not prepare the individual or the organization for continual learning within the context of the organization, which is how responsiveness is achieved. A much more effective way to achieve continual learning is to facilitate knowledge exchange, ensure challenging work assignments or introduce job rotation. Other effective learning environments that managers can organize are communities of practice or learning networks within the organization. Communities of practice are a natural way people learn and develop individually while contributing to organizational learning (Wenger *et al.*, 2002) and can occur naturally or be organized by management (Ropes, 2010).

Concluding remarks

In this article I proposed that cultivating responsiveness, so that organizations and the people in them learn and develop, is the goal of talent development. However, this is not an easy goal to reach. Modern organizations are currently a complex web of interconnected relationships combined with multiple, and sometimes conflicting, perspectives making it difficult to organize learning effectively. Adding to this is the fact that complexity will increase and expand across different facets of society (Klein *et al.*, 2012). Organizational borders will become permeable and ever-shifting as more and more short-term partnerships – especially of small and medium enterprises – are forged among actors operating in networks; contracts between employee and employer will become increasingly ephemeral until they no longer exist as how we know them now; man and machines will be interconnected and big data will be watching you (Biemans *et al.*, 2015). These things and other increases in the complexity of social, technical and organizational environments have serious consequences for both organizations and the people in them. This means that while cultivating responsiveness becomes more and more vital to society, it also becomes more and more difficult to actually do. The challenge for all those involved in HRM and HRD will be to design learning environments that cultivate responsiveness *and are in themselves responsive*. In other words, we need to cultivate learning environments that can learn and develop along with society and the people in it. This is a huge challenge for us because of the high levels of complexity and instability in the environments we as HR researchers and practitioners work in. The big question is whether we can take on these challenges. I would say *yes we can*, so long as we ourselves are responsive.

SAMENVATTING

Dit artikel is een aangepaste versie van de lectorale rede 'Het cultiveren van responsiviteit: leren en ontwikkeling in complexe omgevingen' gehouden door Don Ropes op 25 oktober 2015. In dit artikel bespreekt Don Ropes het concept van responsiviteit met betrekking tot talentontwikkeling. Hij betoogt dat talentontwikkeling een cruciale factor is om individuen, organisaties en de maatschappij te helpen meer responsief te worden. Deze responsiviteit is nodig om verandering en ontwikkeling in een zeer complexe wereld teweeg te brengen. Na het bespreken van het concept van responsiviteit, stelt Ropes dat responsiviteit ontwikkeld kan worden door organisaties zo te structureren dat het constant leren en ontwikkelen in de organisatie verankerd zit. Vervolgens zullen de voortdurend lerende medewerkers de organisatie helpen te leren en te ontwikkelen. Hierna legt Ropes uit dat talentontwikkeling het best vormgegeven kan worden als een proces van informeel leren dat op een natuurlijke manier voor komt op de werkvloer. Dit in plaats van formele leertrajecten zoals management ontwikkeling programma's. Aan het eind van het artikel gaat Ropes in op verschillende organisatiestructuren en interventies die talen-tontwikkeling bevorderen, en hiermee dus ook de responsiviteit.

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