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Promoting self-directed learning in a learning organization: tools and practices

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Abstract

Purpose – The purpose of this paper is to examine a set of practices that can help promote self-directed learning (SDL) in congruence with the goals of developing and maintaining a learning organization.

Design/methodology/approach – Findings from this study were derived from an extensive review of the SDL and the learning organization literature, as well as the body of research that examines the connections between the two constructs.

Findings – This paper identifies the following set of practices as integral to promoting SDL in a learning organization: building and communicating a shared vision to employees at all levels; fostering collaboration, interaction and teamwork; empowering employees through participatory work practices; encouraging and providing opportunities for continuous learning; and using relevant technologies in the workplace.

Originality/value – This paper addresses the paucity of research that investigates the connections between SDL and the learning organization and that specifically examines important practices *vis-à-vis* the two concepts.

Keywords Self-directed learning, Practices, Learning organization, Tools, Individual learning, SDL

Paper type Conceptual paper

Globalization, technological advancement and the emergence of a knowledge-based economy have rendered the contemporary work environment more competitive than ever. Organizations are exploring and implementing different strategies and initiatives to ensure that their employees are capable of coping with the challenges and inevitable change they encounter. It is widely acknowledged that an organization's ability to innovate, improve operating efficiencies and create value for customers and shareholders is largely dependent upon its ability to learn (Davis and Daley, 2008). For these reasons, organizations are increasingly embracing the concept of the learning organization, which can be understood as "an organization which learns powerfully and collectively and is continually transforming itself to better collect, manage, and use knowledge for corporate success" (Marquardt, 1996, p. 19).

A learning organization can be characterized as an organization that has engrained within its structure a continuous learning process and that has an improved capability to change or transform (Watkins and Marsick, 1993). In a learning organization, members collectively learn and continually develop their knowledge and skills to accomplish desired organizational outcomes (Senge, 2006). A learning organization is "dynamic" – individuals' and groups' actions and interactions with the environment generate "a response, which is framed and interpreted within the organization, resulting in new knowledge" (Davis and Daley, 2008, p. 52). As such, individual members play a

key role in establishing and maintaining a learning organization because it relies heavily upon their ability to learn from any available resources or situations and to add value by converting individual information into organizational knowledge (Confessore and Kops, 1998; Nonaka and Takeuchi, 1995; Wen, 2014).

The capacity of individual members to be self-directed learners has been recognized as pivotal to the development of the organizational knowledge base (Confessore and Kops, 1998; Ellinger, 2004; Guglielmino and Guglielmino, 2001). Self-directed learning (SDL) is often broadly conceptualized as self-learning, in which individuals assume responsibility in planning, implementing and evaluating their learning projects (Ellinger, 2004). Existing research has suggested that SDL can be highly cost-effective (Ellinger, 2004; McNamara, 2008) and useful, relevant and meaningful to learners (Confessore and Kops, 1998). SDL has also been recognized as pivotal to the development of employees at all levels (Boyer *et al.*, 2013; Ellinger, 2004; Ravid, 1987), as well as to the development of a learning organization (Guglielmino and Guglielmino, 2001).

Despite the presence of substantial literature on the notion of the learning organization (Dixon, 1999; Ellinger *et al.*, 2002; Marsick *et al.*, 2014; Marquardt, 1996; Senge, 2006) and on promoting SDL in the workplace (Clardy, 2000; Ellinger, 2004), there is a paucity of research that identifies the connections between the two concepts or that specifically examines the practices aimed at promoting SDL in the workplace in congruence with the development of a learning organization. The few notable exceptions are Confessore and Kops (1998), who identified a few characteristics that are reflected in both literatures, and Cho (2002), whose forum article called for more studies that explore the connections between the two constructs. While these publications make a significant contribution to the literature base, their goals were not to provide a comprehensive analysis or discussion of the main practices associated with promoting SDL within a learning organization.

This paper seeks to delineate and explicate a set of practices that can help foster individual members' SDL in such a way that is consistent with the goal of developing and maintaining a learning organization. The paper builds upon the literatures on SDL and the learning organization, as well as on existing research – albeit somewhat limited – that examines the connections between the two. The main research question for this paper is:

RQ1. What are the practices that help promote self-directed learning in a learning organization?

Findings from this study were derived from an extensive literature review of books and journal articles utilizing major online databases such as Academic Search Premier, Google Scholar, Sage Library and Wiley Online Library. In addition, we conducted a targeted search of tables of contents of several major journals relevant to this project, including *Adult Education Quarterly*, *Advances in Developing Human Resources*, *European Journal of Training and Development*, *Human Resource Development International*, *Human Resource Development Review*, *Human Resource Development Quarterly and International Journal of Management Education*. Some descriptors (keywords) used in our literature search included *Self-Directed Learning*, *Learning Organization*, *Organizational Learning and Individual Learning*.

The significance of the study is threefold. First, it provides human resource development (HRD) scholars and practitioners, and other managers and executives in organizations with a set of recommendations for developing and implementing practices that link SDL and the learning organization. Second, it makes a contribution to the emerging stream of literature that identifies the connections between the two constructs. Third, by identifying a specific set of practices linking the two concepts, this paper provides a conceptual framework upon which future empirical research could be based.

This paper is divided into four sections. We start by providing a brief overview of the SDL and learning organization literatures and discussing the significance of these two constructs to HRD. Next, we identify the connections between these constructs. In the third section, we examine a set of practices aimed at promoting SDL in a learning organization. In the final section, we discuss the paper's implications for research and practice.

Self-directed learning

Because of the exponential and accelerating rate of change that persists in the contemporary society, it is becoming more challenging for organizations to manage the knowledge and development of their employees. As organizations, managers and HRD practitioners make efforts to build learning infrastructures that effectively utilize both formal and informal learning, employees are increasingly being challenged to assume more responsibility for their own learning to remain knowledgeable, employable and marketable (Ellinger, 2004). Not surprisingly, SDL has become a major component of adult learning in the workplace, and SDL approaches have emerged as organizations' effective responses to the complex demands of the changing nature of work (Ellinger, 2004).

Self-directed learning and its development

Adult learning has captured the attention of scholars and practitioners for almost a century; yet, there is no one perfect model or theory that helps us to precisely determine how adults learn best (Ellinger, 2004; Merriam, 2001). It was not until the mid-twentieth century that scholars sought to differentiate adult education from other forms of education. This new inquiry – the "drive to professionalize" the field (Merriam, 2001, p. 4) – spurred a lot of interest in processes of learning in adulthood; consequently, two of the most important "theory-building efforts" emerged: andragogy and SDL.

Andragogy is believed by many to be a set of assumptions that revolutionized adult education and training (Swanson and Holton, 2009). Andragogy provides a "classic modernist view of humanist, self-actualizing adults as mature, self-directed learners" (Marsick *et al.*, 2014, p. 41). Malcolm Knowles introduced the concept of andragogy with the purpose of differentiating adult learning from pre-adult schooling. He contrasted andragogy to pedagogy, the art and science of helping children learn, and presented a set of assumptions descriptive of the adult learner. In essence, Knowles (1980) described the adult learner as someone who:

- develops the need to be self-directing as he or she matures;
- comes to the classroom with a reservoir of life experiences that serve as a great learning resource;
- is interested in learning to modify social roles;

- is problem-centered and interested in immediate application of knowledge; and
- is internally motivated.

Despite some criticism of andragogy – for instance, whether it can be called a theory, whether its assumptions are specific to adult learners only and whether it is completely context-free (Merriam, 2001) – one could hardly dispute the notion that Knowles' work laid the foundation for research and literature on learning in adulthood, particularly on SDL. Tough's (1971) book titled *The Adult's Learning Projects*, followed by Knowles' (1975) *Self-Directed Learning*, have been credited for popularizing the concept of SDL. Tough (1971) argued that deliberate efforts to learn exist everywhere and that whether we are aware of it or not, our family members, colleagues, peers and instructors are the ones who provide us with these learning opportunities. In a study, Tough (1978) found that 70 per cent of all learning projects were self-planned. Tough (1978) defined a learning project as a "highly deliberate effort to gain and retain certain definite knowledge and skill, or to change in some other way", in which a series of relevant learning sessions must total at least seven hours (Tough, 1978, p. 250). Knowles (1975, p. 18) defined SDL as a:

> […] process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating their own goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes.

Although SDL can generally be understood as a form of study in which individuals take the primary responsibility for their own learning (Cho and Kwon, 2005; Hiemstra, 2000, Knowles, 1975), researchers have also recognized the impact of social, cultural and/or political contexts on a person's control over his or her learning process (Cho and Kwon, 2005). For instance, Candy (1991) argued that self-direction is an outcome of the interaction between a person and the environment. Garrison (1997 p. 23) advocated for a collaborative constructivist view of SDL and argued that "the individual does not construct meaning in isolation from the shared world". According to Garrison (1997, p. 23), "taking responsibility of one's own learning does not mean making decisions in isolation". Educators should seek to create learning environments and conditions that facilitate learners' self-direction (Garrison, 1997). Furthermore, Kerka (1999) provided a number of examples of SDL projects and concluded that much SDL occurs within a social context.

In a review of the literature, Merriam (2001) identified a number of goals of SDL. First, those grounded in a humanistic philosophy tend to view the goal of SDL as the "development of the learner's capacity to be self-directed" (Merriam, 2001, p. 9). The second goal is to foster transformational learning (Mezirow, 1985), in which critical reflection is fundamental to the process of SDL. Finally, SDL should aim to promote emancipatory learning and social action; in other words, SDL should be positioned more for social and political action than individual learning (Merriam, 2001).

In spite of the various perspectives on the goals of SDL, it seems clear that SDL has become an important part of individual learning in the modern society. In a democratic society, learners should be given opportunities to "learn how to choose *what* is to be learned, *how* it is to be learned, and *how to evaluate* their own progress" (Della-Dora and Blanchard, 1979, p. 1). Students can be assisted to become more self-directed learners when they are provided with resources, learning tools, motivation and encouragement

(Brockett and Hiemstra, 1991). Consequently, a facilitator is not merely a classroom teacher but can also be a counselor, consultant, tutor and resource locator (Brockett and Hiemstra, 1991).

With respect to HRD, today's organizations "often expect, hire for, and support proactive self-directed learners" (Marsick *et al.*, 2014, p. 41). HRD professionals and managers undoubtedly have a crucial responsibility for employees' growth and development; however, success also depends largely on the individuals' choices, efforts and initiatives (Marsick *et al.*, 2014). SDL, therefore, is critical to adult learning in the workplace. The following section explores the various benefits associated with promoting SDL in the workplace.

Benefits of promoting self-directed learning in the workplace
Various scholars have acknowledged the importance and necessity of promoting SDL in the workplace (Confessore and Kops, 1998; Ellinger, 2004; Marsick *et al.*, 2014; McNamara, 2008; Raemdonck *et al.*, 2014). In today's work environment, we constantly face new challenges, and one way to cope with these challenges is to be able to establish our own ways of learning, hence being self-directed. Raemdonck *et al.* (2014) argued that having a SDL orientation is an important characteristic for workers in the modern environment because it enables them to explore new opportunities, take initiatives to learn, and persevere in challenging situations (Raemdonck *et al.*, 2014). SDL initiatives may also prove to be highly cost-effective in the long run, given that formal training programs are often very expensive and that not all of them will answer employees' needs (Ellinger, 2004; McNamara, 2008; Ravid, 1987). McNamara (2008) maintained that SDL allows employees to learn to help themselves and each other with practical and appropriate materials and that SDL programs are crucial to the adult development because it accommodates individuals' learning styles and goals. Moreover, SDL is understood to increase employee effectiveness in their work roles, as they learn from their own experiences and apply them at the workplace (McNamara, 2008).

Guglielmino *et al.* (1987) studied 753 employees in a large American utility company and found that outstanding performers in jobs that require a high creativity level or a high degree of problem-solving ability had significantly higher Self-Directed Learning Readiness scores than their peers. Higher education institutions, the authors argued, should develop programs that are aligned with the goal of enhancing students' self-directedness, whereas businesses should consider using measures of SDL readiness as part of the job selection process, especially for jobs that require a high level of creativity and problem-solving ability. Confessore and Kops (1998) reported that SDL is useful, relevant and meaningful to managers at both public and private organizations. For example, when work projects that require considerable change arise, managers tend to highly engage in SDL. In addition, Tseng (2013) explored the relationships among SDL, entrepreneurial learning and entrepreneurial performance, and found that entrepreneurs who learn and develop SDL characteristics (self-management and self-monitoring skills) have more opportunities to be successful in their entrepreneurial endeavors.

In a similar vein, Ellinger (2004, p. 166) posited that as organizations are looking to build more:

> […] responsive and cost-effective learning infrastructures, flexible approaches to learning that incorporate technology and lessen the provision of traditional training have emerged that required learners to be more self-directed.

Ellinger (2004) identified two major benefits of promoting SDL among an organization's members:

(1) increased job performance; and

(2) significant savings in training costs.

Finally, it has been acknowledged that self-directed learners are at the heart of learning organizations (Ellinger, 2004; Guglielmino and Guglielmino, 2001). As organizations endeavor to become learning organizations, developing learning capability at the individual level becomes quintessential for group- and organizational-level learning (Ellinger, 2004).

The learning organization

While individual learning has been a major focus in HRD literature and practice for decades, learning at the organization level only received significant attention from adult educators and HRD professionals in the 1980s and particularly in the 1990s (Swanson and Holton, 2009). As an organization development (OD) intervention, the concept of the learning organization has grown to become an integral element for organizations looking to adapt to the constantly transforming work and business environment (Swanson and Holton, 2009).

A learning organization is "an organization that has embedded a continuous learning process within its structure and that has an enhanced organizational capacity to change or transform" (Watkins and Marsick, 1993, p. 81). Marquardt (1996, p. 19) presented another definition of the concept: "an organization which learns powerfully and collectively and is continually transforming itself to better collect, manage, and use knowledge for corporate success". It empowers members to learn as they work; technology is used to enhance both learning and productivity (Marquardt, 1996). Senge (2006, p. 3) defined a learning organization as one:

> […] where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together.

A number of commonalities can be derived from these definitions, including open communication, systems thinking, openness to new initiatives and ideas and individuals and teams working toward obtaining shared goals, and presenting and sharing available information (Swanson and Holton, 2009).

It may be important to explicate the distinction between organizational learning and the learning organization. This distinction has spurred a lot of debate and confusion among scholars and researchers. Confessore and Kops (1998, p. 366) offered a differentiation between the two concepts. Organizational learning, they argued, refers to a "body of corporate knowledge", which is integral to the organization as it constitutes the organization's norms, values and culture. This knowledge, therefore, is communicated to the individuals so that it is collectively shared, interpreted and used throughout the organization (Confessore and Kops, 1998, p. 366). The learning organization, on the other hand, can be understood as an environment in which "organizational learning is structured so that teamwork, collaboration, creativity, and knowledge processes have a collective meaning and value". These individuals work together to solve problems and generate creative and innovative solutions.

Sun (2003, p. 160) posited that organizational learning is generally conceptualized as a *process* by most authors and refers to a "collective learning and improving process aiming to build up a learning organization". A learning organization could be understood as a "living organism" – one that is continuously learning and/transforming (Sun, 2003, p. 160). It could also be thought of as a climate, culture or a powerful learning environment that "inspires, facilitates and empowers the learning of its members so as to enhance its capacity for change, adaptability, improvement and competition" (Sun, 2003, p. 160). Based on these points, it can be concluded that organizational learning refers to a collective knowledge that is created, accumulated and communicated to the members of the organization, whereas a learning organization could be described as an environment in which individuals work collaboratively to create shared knowledge necessary to solve organizational problems and develop innovative solutions.

Benefits of developing a learning organization
Senge (1990, 2006) has been credited for popularizing the learning organization concept in the 1990s, although some research work on the topic had been conducted in the 1980s. To excel in today's competitive work environment, Senge (2006, p. 4) argued, it is no longer possible to just "figure it out" from the top and have other members follow the orders set forth by the top managers. Organizations that aspire to be successful in the future should be able to "tap people's commitment capacity to learn at *all* levels" of the organization (p. 4; emphasis in original). In his book *The Fifth Discipline: The Art and Practice of the Learning Organization*, Senge (1990, 2006) recommended that organizations develop the following five core disciplines if they are to become learning organizations: systems thinking, personal mastery, mental models, building shared vision and team learning. The goal of the learning organization is to have all employees understand and operate within these five core disciplines to develop a body of organizational knowledge, which consequently translates to organizational success (Confessore and Kops, 1998).

Senge (2006, p. 12) maintained that once the five disciplines have been successfully developed, organizations will be able to observe fruitful results. For instance, systems thinking allows firms to have an understanding of the challenges that they have to overcome to move from one place to the next. Having a shared vision fosters commitment among employees in the long term, whereas mental models – that is, our generalizations and assumptions of the world – allow us to be open and "unearth" our ways of thinking about the world. Further, team learning instigates harmony and collaborativeness among employees, and personal mastery enables individuals to have the drive to continually learn and see how their actions affect the world.

Marsick and Watkins (2003) developed the Dimensions of Learning Organization Questionnaire (DLOQ), in which they delineated seven dimensions:

(1) creating continuous learning opportunities;

(2) promoting inquiry and dialogue;

(3) encouraging collaborative learning;

(4) creating systems to capture and share learning;

(5) fostering a collective vision;

(6) connecting the organization to the environment; and

(7) providing strategic leadership for learning.

These action imperatives are aimed at promoting the values of continuous learning, knowledge creating and sharing, systematic thinking and a learning culture. Key anticipated results from implementing these imperatives include improved financial and knowledge performance (Marsick and Watkins, 2003).

In an attempt to identify the relationship between the learning organization concept and firms' financial performance, Ellinger *et al.* (2002) carried out a survey of 400 midlevel managers at US manufacturing firms. Their findings suggested that there is a positively significant relationship between the learning organization concept and the financial performance of firms and that embracing practices and strategies that are congruent with the learning organization concept could be significantly advantageous to organizations. Yang *et al.* (2004) used the DLOQ in their study of 836 participants from multiple organizations and found that the dimensions of the learning organization explained a significant variance in both financial performance and knowledge performance. In another study, Davis and Daley (2008) found significant relationships between learning organization behaviors and business performance measures (net income per employee, percentage of sales from new products and knowledge performance and self-reported financial performance). Chang and Lee (2007) adopted Senge's (2006) model in their study of 134 participants from multiple industries in Taiwan and found that the concept of the learning organization had a significantly positive effect on employees' job satisfaction. Furthermore, Dirani (2009) examined the relationships among the learning organization culture, employee job satisfaction and organizational commitment in the Lebanese banking sector. Results of his study showed positive and significant correlations among these variables, implying that the concept of the learning organization is also significant and applicable in a non-Western context.

The findings discussed above offer important implications to organizations seeking to establish a learning organization culture. In particular, they suggest that an organization's success can be attributed to its capability and aspiration to become a learning organization. This aspiration provides impetus to the organization's goal of fostering collaborative learning and creating continuous learning opportunities for employees. The learning organization also instigates a sense of unity among members of the organization through building a shared vision, team learning and endorsing creativity and innovation, thereby contributing to the success of the organization in today's tumultuous work environment.

Connections between self-directed learning and the learning organization
The extant research on SDL and the learning organization offers some interesting insights on the connections between the two constructs (Cho, 2002; Confessore and Kops, 1998; Ellinger, 2004; Guglielmino and Guglielmino, 2008). Major contributions to research examining the parallels between the two concepts have been made by Confessore and Kops (1998, pp. 370-371), who argued that the SDL literature presents "a picture of an environment that self-directed learners and training experts prefer – an environment very similar to those described as occurring in learning organizations". Confessore and Kops (1998, p. 371) identified a number of characteristics that are evident in both literature streams:

- tolerance for errors, support of experimentation and risk taking and an emphasis on creativity and innovation;
- the use of a participative leadership style and delegation of responsibility to organizational members;
- support for learning initiatives that are linked to organization's goals and values;
- encouragement of open communication and of information systems that provide for collaboration and teamwork and that use both internal and external learning resources; and
- provision of opportunities and situations for individual learning.

In investigating these analogous features, Confessore and Kops (1998, p. 371) emphasized the interplay between organizational context and learning and viewed the relationship between SDL and the learning organization as "symbiotic". In other words, the organization's mission, vision, goals, values, culture, norms and work environment influence the extent to which SDL take places within the organization; conversely, SDL within a learning organization "must account for the learning needs of both the individual and the organization" (Confessore and Kops, 1998).

Cho (2002) largely supported the views expressed by Confessore and Kops (1998) and emphasized that self-directed learners are more likely to interact with other colleagues and their environment rather than act in isolation. As Cho (2002, p. 469) argued, "the bridges that connect SDL and the learning organization are their interdependent and collective aspects". Similarly, Guglielmino and Guglielmino (2008, p. 293) reviewed existing literature that links SDL to workplace performance and concluded that "self-directed learners are the lifeblood of the learning organization". Other scholars have contended that SDL is an essential feature of the learning organization and that such individual learning capability needs to be fostered if group- and organizational-level learning is to take place (Ellinger, 2004; Guglielmino and Guglielmino, 2001). Consequently, it is important to further our investigation – both conceptually and empirically – of the connections between the two concepts and identify the relevant tools and practices aimed at promoting SDL in a way that is congruent with promoting the learning organization.

Promoting self-directed learning in a learning organization
The purpose of this section is to explore the ways in which organizations could promote SDL in congruence with the development of a learning organization. As Figure 1 suggests, the practices examined in this paper are:

- building and communicating a shared vision among employees at all levels;
- fostering collaboration, interaction and teamwork;
- empowering employees through participatory work practices;
- encouraging and providing opportunities for continuous learning; and
- utilizing relevant technologies in the workplace.

In essence, our conceptual model proposes that successful implementation of the five practices is necessary to creating appropriate conditions for SDL in a learning organization.
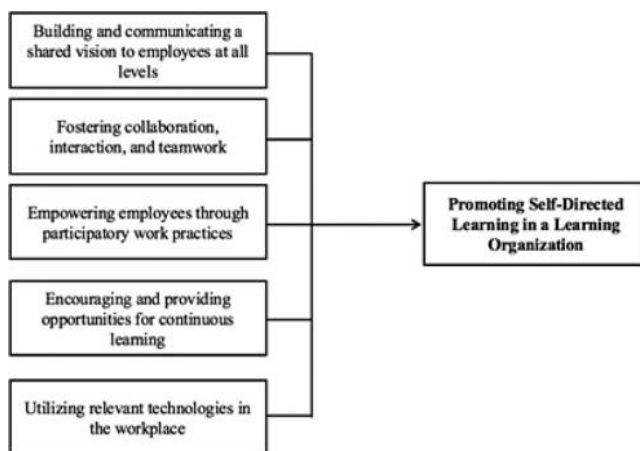
Figure 1.
Practices aimed at
promoting SDL in a
learning organization

Building and communicating a shared vision
It is widely acknowledged that a learning organization is one that empowers people to
work toward a collective vision (Marsick *et al.*, 2014; Senge, 2006; Yang *et al.*, 2004).
Shared vision is a fundamental characteristic of successful organizations such as Apple,
Ford and AT&T because it "provides focus and energy for learning" (Senge, 2006,
p. 192) to everyone associated with the organization. Shared vision allows members to
remain focused and have a sense of commitment to the organization. It reinforces
people's aspirations such that their work becomes part of pursuing a bigger goal, and
improves the relationships between the members of the organization. Ultimately, it is
impossible to have a learning organization without shared vision (Senge, 2006). Watkins
and Marsick (1993) echoed these thoughts, contending that learning must be captured
and collected in systems to keep what is learned in the organizational memory and that
a learning organization depends on the participation of many individuals who are
empowered to learn toward a collective vision. Similarly, Marquardt (1996) studied a
number of learning organizations and found that each of these organizations developed
and implemented a clearly defined strategy to communicate the vision of learning
organization to all stakeholders within and outside of the organization.

Shared visions, however, also emanate from personal visions (Senge, 2006).
Organizations seeking to develop a shared vision need to continually encourage each
member to collaborate in the development of the learning organization's vision. One of
the underlying principles is that it eliminates the traditional notion that a vision has to
be passed down from the top hierarchy and that it places importance on the position of
each member of the organization (Senge, 2006). Hence, managers have to recognize that
the vision of the organization is also the personal vision of the members (Senge, 2006).

This notion of personal vision is highly related to the characteristics of SDL. The
significance of setting individual goals is supported by a great deal of research on SDL
(Knowles, 1984; Grow, 1991; Brockett and Hiemstra, 1991). Employees should be
empowered to address their own learning needs and be willing to take risks that might
be prone to potential mistakes but also create valuable learning experiences (Watkins
and Marsick, 1993). In addition, supervisors serve as a great resource for self-directed
learners. They should assist employees in creating SDL initiatives that are congruent

with the goals of the organization, provide them with the resources needed to accomplish their objectives and offer counseling to learners in relation to self-study and problem solving. When people develop personal visions, the vision could potentially become collective (Senge, 2006).

Fostering collaboration, interaction and teamwork
Humanistic adult education, from which SDL is derived, strives to foster the development and growth of the individual. However, self-development and growth do not occur in isolation from others (Elias and Merriam, 2005). Growth is best nurtured in a cooperative, collaborative and supportive environment through such activities as group projects, discussions and committees (Elias and Merriam, 2005).

One of the most discernible connections between SDL and the learning organization is collaboration and teamwork. Senge (2006) asserted that team learning is absolutely pivotal to the learning organization because teams are the fundamental learning unit in modern workplaces. As Senge (2006, p. 10) contended, "unless teams can learn, the organization cannot learn". Similarly, one of Watkins and Marsick's (1993) action imperatives for the learning organization is fostering collaboration and team learning. The authors maintained that "teams, groups, and networks can become the medium for moving new knowledge throughout the learning organization" (Watkins and Marsick, 1993, p. 14). Team learning presents opportunities for organizational members to work collaboratively and enhances the organization's ability to "achieve a unified action on common goals" (Watkins and Marsick, 1993, p. 14). Collaborative structures allow organizations to explore different avenues of work knowledge, and possessing this attribute is fundamental for organizations to thrive. Marquardt (1996) also recognized the importance of collaboration and interaction, proposing that job rotation and team mixing are effective ways for maximizing knowledge transfer within the learning organization. Marquardt (1996) argued that organizations should consider transferring individuals or teams possessing the knowledge (technical, interpersonal or managerial knowledge) to other units or departments because these "new" individuals or teams could deliver new insights, provide fresh approaches and raise questions on existing practices that could lead to new ways of handling a problem (Marquardt, 1996).

Although the literature on SDL tends to focus on the individual as a learner, several prominent authors agree that SDL does not necessarily impose isolation in the learning process (Brockett and Hiemstra, 1991; Costa and Kallick, 2004; Cho, 2002; Della-Dora and Blanchard, 1979; Knowles, 1984; Grow, 1991). Knowles (1984) argued that supervisors should create a climate of mutual respect, collaboration and support if SDL is to be fully enhanced. Learners should have a strong sense of unity and be willing to share knowledge with each other. Brockett and Hiemstra (1991) also maintained that educators and trainers should set a climate that is conducive to learning and that helps learners become acquainted with each other. Similarly, Grow (1991) proposed a Staged Self-Directed Learning model in which self-directed learners go through four main stages: dependent learners, interested learners, involved learners and self-directed learners. Instructors, therefore, should provide adequate assistance to these learners and serve as a great resource for them to shift from one stage to another and ultimately become self-directed learners. According to Grow (1991, p. 134), "being dependent does not mean being a loner; many independent learners are highly social and belong to clubs or other informal learning groups".

Costa and Kallick (2004) maintained that to fully develop self-directed learners, trainers or supervisors should design work tasks in ways that foster collaboration, teamwork and shared responsibilities. Such interactions as listening, consensus-seeking, being respectful of others and making concessions, and supporting team members allow the group and the individual to continue to grow and become effective self-directed learners. Similarly, Confessore and Kops (1998) recommended that employees at all levels of the organization be encouraged to network and communicate with their colleagues to exchange ideas and perspectives, gather relevant data and information and expand their skills and expertise. Finally, according to Cho (2002), learning strategies that are based on interaction with others and with the environment are vital to creating and maintaining a learning organization. The interdependent and collective characteristics of SDL are largely consistent with those of the learning organization, which evidences the importance of fostering collaboration, interaction and teamwork in enhancing SDL and achieving the goal of building a learning organization.

Empowering employees through participatory work practices
Over the past two decades, there has been a proliferation of research and practices associated with participatory work systems, which could be attributed to the changing nature of work and the trend toward more "flatter" organizational structures (Butts *et al.*, 2009, p. 122). One example of these participatory work practices is the employee empowerment approach, which refers to a set of practices aimed at providing employees with information, rewards, job-related knowledge and authority to go about doing their work (Fernandez and Moldogaziev, 2013). There is growing evidence suggesting that such practices can lead to increased performance, innovativeness, job satisfaction, organizational commitment and employee engagement (Fernandez and Moldogaziev, 2013; Guthrie *et al.*, 2002; Pil and MacDuffie, 1996; Rana, 2015).

Employee empowerment is especially crucial for organizations looking to foster SDL in the workplace (Confessore and Kops, 1998; Gibbons, 2002) and embracing the learning organization concept (Ellinger, 2004; Marquardt, 1996; Marsick *et al.*, 2014; Watkins and Dirani, 2013; Yang *et al.*, 2004). Confessore and Kops (1998) emphasized the use of participative leadership style and delegation of responsibility to organizational members as major attributes that are reflected in both bodies of literature. The authors argued that managers and HRD professionals should enhance employee participation in the development, planning and evaluation of their personal learning projects (Confessore and Kops, 1998). Ellinger *et al.* (1999) identified various empowering behaviors by managers who perceived themselves to be facilitating learning, including asking thought-provoking questions to encourage employees to derive their own solutions, transferring ownership to employees and serving as valuable resources to employees. Ellinger *et al.*'s (2002) empirical study found support for a positive relationship between empowerment and the learning organization concept. Gibbons (2002, p. 93) posited that for learners to be self-directed, supervisors must encourage and empower them to take on the task of managing their own activities and then "teach them to motivate themselves as an essential aspect of continuing self-direction". Yang *et al.* (2004) found that employee empowerment – an important dimension of the learning organization – was significantly correlated with organizational knowledge and financial performance. Furthermore, Raemdonck *et al.* (2012, p. 584) found that "stimulating

participatory staff policy" was significantly predictive of SDL among low-qualified employees. Organizations, they argued, should promote participative management and foster work environments in which employees are encouraged to participate in key organizational decision-making processes.

Learning organizations recognize that empowered employees are crucial for global success; hence, they allocate significant resources of time, money and people to fulfill this goal of empowerment and help employees take their own initiatives and learn (Marquardt, 1996). As Marquardt (1996, p. 186) argued:

> […] employees need to be empowered (to possess the necessary freedom, trust, influence, opportunity, recognition, and authority) and enabled (to possess the necessary skills, knowledge, values, and ability) so that they can contribute at their optimal level to the organization.

Similarly, Davis and Daley (2008) delineated a set of empowering leadership practices that enable employees to take self-directed actions and that would contribute to the maintaining of the learning organization. Those leadership responsibilities include creating an environment for ownership for employees, supporting each member in being responsible for their own performance, transferring ownership for work to the relevant employees and coaching the development of individual capability and competence.

Encouraging and providing opportunities for continuous learning

The capacity of an organization to learn depends upon a number of key learning dimensions such as individual learning capacities, collective learning capacities, structural learning capacities and the ability of the leadership to learn and to promote learning (Finger and Brand, 1999). In the contemporary work environment, organizations can no longer be expected to design and provide sufficient training and development initiatives to ensure that their members have cultivated the newest knowledge and are fully exploiting the most cutting-edge technologies (Guglielmino and Guglielmino, 2001). Managers, organizations and HRD professionals are becoming leaders, mentors and a resource for learning within the organization. Thus, organizational members are increasingly being expected to assume the majority of responsibility for their own continuous learning, identifying their learning needs and goals, exploring resources and evaluating their own learning process and outcomes (Guglielmino and Guglielmino, 2001). As Marquardt (1996, p. 184) stated, "in building a learning company, ongoing learning should become a habit, a joy, a natural part of work for everyone".

Marquardt (1996) delineated a set of strategies for expanding individual, team, and organizational levels of learning:

- encouraging experimentation, recognizing and praising learners;
- rewarding learning, spreading the word about new learnings; and
- applying new learnings in different places throughout the organization.

In addition, learning initiatives that are related to the organization's goals and values need to be encouraged and supported (Confessore and Kops, 1998). Ellinger et al. (1999) argued that HRD practitioners, managers and leaders could systemically and developmentally increase the learning capacity of their organization through the development of an effective learning infrastructure. In building this learning

infrastructure, the organization could train and teach the managers and supervisors to be facilitators, coaches and guides in learning (Ellinger *et al.*, 1999). In a qualitative study of clinical supervisors, for instance, Embo *et al.* (2014) found that supervisors played an important role in facilitating the active involvement in clinical learning and SDL of midwifery students. In Ellinger *et al.*'s (1999) study, managers reported their activities as attempting to establish learning departments by being actively involved in departmental meetings, fostering mentoring relationships with employees and providing employees with informal learning activities such as job matrices and participation in interview processes.

In addition, HRD professionals should help organizations develop well-articulated initiatives and strategies and communicate these plans to employees to ascertain that there is a good alignment between employees' SDL activities and the goals of the organization (Confessore and Kops, 1998). Useful initiatives include increasing employee participation in planning and performance appraisals that emphasize individual learning and development, and aligning learning contracts with individual development plans, which can help facilitate SDL within the organization (Confessore and Kops, 1998; Ellinger, 2004). Finally, HRD professionals should strive to identify the learning and development needs of each individual based on their job definition, work context and expertise (Karakas and Manisaligil, 2012). Effectively enhancing SDL experiences would require HRD practitioners and managers to recognize individual differences and have an understanding of the employees' learning styles, career goals, performance expectations and development needs (Confessore and Kops, 1998; Karakas and Manisaligil, 2012). This will enable HRD practitioners to develop a close working relationship with employees and allow them to create a better alignment between the individuals' learning activities and the organization's mission and goals.

Utilizing relevant technologies in the workplace
Advances in technology have had a significant impact on the acquisition, transfer and sharing of knowledge in the modern society, not least within the field of HRD. Lim *et al.* (2014), for instance, delineated several types of technological systems that have been adapted to develop knowledge management systems, including case-based reasoning systems, group decision support systems, social network analysis and online communities of practice. Bennet and McWhorter (2014, p. 567) underscored the importance of "Virtual HRD", which is grounded in the notion of "developing technology to create an environment for optimal learning, performance, and growth of individual and organizational capacity". To wit, HRD should create a technology-enabled environment that fosters the learning capacity and performance of all organizational members (Bennet and McWhorter, 2014).

Leveraging SDL within a learning organization requires support and encouragement of open communication and of information systems that provide opportunities for collaboration and teamwork and platforms for individual learning (Confessore and Kops, 1998). Such opportunities have significantly increased as a result of improved workplace technologies, such as computer networks and the internet (Confessore and Kops, 1998). The proliferation of online learning, social networking tools, Web 2.0 technologies and social media have given rise to new learning environments that are more versatile, convenient, interactive and collaborative, which have consequently increased self-directed learners' responsibility and control (Karakas and Manisaligil, 2012).

Karakas and Manisaligil (2012, p. 714) investigated the changing landscape of SDL within the context of Web 2.0 technologies – "web-based interactive and connective read/write technologies" – and examined the roles that HRD professionals play in such a globally connected workplace. The authors identified five major transformations impacting the landscape of learning in today's digital era: virtual collaboration, technological convergence, global connectivity, online communities and digital creativity. To these ends, HRD professionals and managers should recognize the importance of digital tools in promoting SDL in a learning organization and provide adequate resources, empowerment, free spaces and an organizational culture that support SDL of employees (Karakas and Manisaligil, 2012). Organizations could promote SDL by designing seminars, webinars and e-learning modules that provide employees with opportunities to customize their learning; offering training to employees on the use of social media, digital tools and other relevant learning technologies; and building a technological infrastructure and platforms on which employees can engage in SDL (Karakas and Manisaligil, 2012).

The proliferation of online collaboration tools has also engendered the development and rise of the so-called Virtual Communities of Practices (VCoPs) – defined as communities in which "members share and co-create knowledge in online discussions and other forms of knowledge exchange" (Ardichvili, 2008, p. 541). Consistent with the dimensions of the learning organization, online knowledge sharing is widely recognized as an important form of collective learning (Ardichvili, 2008; Rosenberg, 2005). Thus, these VCoPs have the potential to significantly contribute to the development of SDL within a learning organization. Ardichvili (2008) posited that HRD professionals play an important role in establishing and maintaining VCoPs – through removing barriers for employees' participation and supporting their unique contribution to these communities. Ardichvili (2008) identified three main enablers of participation in VCoPs: supportive culture, trust and tools. First, HRD professionals should seek to enrich members' sense of belonging to these communities, by promoting an environment that champions the exchange of ideas and information, creating time and space for members to share their stories and expertise, informing members of the importance of storytelling and training them on how to develop and share these stories. Furthermore, because of the limited opportunities for face-to-face interactions, HRD professionals should pay considerable attention to activities that help foster a sense of community and belonging, which may include holding occasional face-to-face meetings for community members and providing opportunities for regular live video-conferences. Second, to ensure trust and integrity within the communities, HRD professionals should make procedures and expectations that are associated with the goals of the maintaining the learning organization transparent to members by clearly communicating and providing access to these rules, norms and expectations. Finally, to minimize barriers resulting from lack of technological proficiency, HRD professionals could provide training on the use of these digital tools and strive to obtain feedback from members for the purpose of improving access and ease of use of these tools (Ardichvili, 2008).

Other technologies that could be utilized to promote SDL in a learning organization include Massive Online Open Courses (MOOCs; Beigi et al., 2015; Billsbury, 2013), the Individual Learning Plan (ILP; Revill and Terrell, 2005) and online platforms such as Moodle, Google Docs and Wikispaces (Sze-Yeng and Hussain, 2010). MOOCs could serve as a great resource for SDL given that they are free and can be accessed or taken by any employee as long as they have access to the internet. MOOCs are cost-effective

(Beigi *et al.*, 2015) and enable participants to share information, make connections and benefit from a rich diversity of opinions (Billsbury, 2013). Another potentially useful online learning tool is the ILP, a Web-based platform that enables individuals to create documents and learning projects that can be authored, shared and negotiated by the participants and the facilitator (Revill and Terrell, 2005). The ILP provides participants with the opportunities to build a learning portfolio, design their own learning projects and activities and modify their learning goals in negotiation with the supervisor (Revill and Terrell, 2005). Also, other Web technology platforms such as Moodle online discussion forums, Google Docs and Wikispaces could be highly beneficial to self-directed learners. Findings from Sze-Yeng and Hussain's (2010) study revealed that these platforms empowered SDL among adult learners and that the participants acquired new skills, knowledge and attitude through SDL in these blended learning environments. These sample online technological tools may provide avenues for organizational members to undertake their SDL projects in congruence with the learning goals supported and reinforced by the organization.

Conclusion and implications for research and practice

It has been widely acknowledged that knowledge creation and continuous learning at the individual, group and organizational levels serve as a critical source of sustainable competitive advantage for organizations operating in today's turbulent environment (Ellinger *et al.*, 1999; Senge, 2006; Swanson and Holton, 2009). In line with this, organizations are increasingly embracing the concept of the learning organization – one in which members collectively learn and continually develop their skills and competences to accomplish desired organizational goals (Marquardt, 1996; Senge, 2006) – mainly because this notion of the learning organization has been shown to be related to various important outcomes such as employee satisfaction, organizational commitment, firms' productivity and financial performance (Davis and Daley, 2008; Dirani, 2009; Ellinger *et al.*, 2002). Needless to say, individuals play a crucial role in contributing to the development of this collective knowledge base. As organizations attempt to establish and maintain a learning organization, employees are increasingly being challenged to assume more responsibility of their own learning in order to remain knowledgeable and competitive. Thus, in recent years, HRD scholars and researchers have come to recognize the important role of promoting SDL in the workplace to develop and sustain the so-called learning organization (Cho, 2002; Confessore and Kops, 1998; Ellinger, 2004).

This paper contributes to the important discussion of SDL and the learning organization and proposes a number of related tools and practices aligned with the goals of the learning organization. Specifically, we argued that organizations that recognize the importance of the SDL and learning organization concepts should strive to promote the following practices: building and communicating a shared vision to employees at all levels; fostering collaboration, interaction and teamwork; empowering employees through participatory work practices; encouraging and providing opportunities for continuous learning; and utilizing relevant technologies in the workplace. First of all, organizations should encourage and assist individuals in developing their personal SDL goals that are aligned with the organization's vision. Second, managers and HRD professionals should recognize the interdependent and collective characteristics of SDL and the learning organization and encourage learning initiatives that are based on collaboration, interaction and teamwork. Third, organizations could empower

employees and support them in their personal SDL projects by providing resources, trust, recognition, authority and reward. Fourth, managers and HRD professionals should assist members in embarking on their own continuous learning by encouraging experimentation, rewarding learning and creating performance appraisals that emphasize learning and development. Finally, organizations should utilize related workplace technologies – such as VCoPs, MOOCs, the ILP and Moodle online discussion forums – that encourage open communication, provide opportunities for collaboration and teamwork and offer platforms for individual learning.

As far as future research is concerned, the current body of literature would benefit from empirical research that investigates the relationships among these practices, SDL and the learning organization in different contexts. In addition, future research could focus on specific case studies of firms that utilize any or all of these practices as part of their organization development initiatives and strategies. Finally, given that implementing these practices may take a significant amount of time and resources, longitudinal studies would provide unique insights into how SDL can be developed in a learning organization.

References

Ardichvili, A. (2008), "Learning and knowledge sharing in virtual communities of practice: motivators, barriers, and enablers", *Advances in Developing Human Resources*, Vol. 10 No. 4, pp. 541-554.

Beigi, M., Wang, J. and Shirmohammadi, M. (2015), "AHRD! Take the opportunity and pioneer vocational MOOCs", *Human Resource Development International*, Vol. 18 No. 2, pp. 203-2012.

Bennet, E.E. and McWhorter, R.R. (2014), "Virtual HRD", in Chalofsky, N.E., Rocco, T.S. and Morris, M.L. (Eds), *Handbook of Human Resource Development*, John Wiley & Sons, Hoboken, NJ, pp. 567-589.

Billsbury, J. (2013), "MOOCs: fad or revolution", *Journal of Management Education*, Vol. 37 No. 6, pp. 739-746.

Boyer, S.L., Edmondson, D.R., Artis, A.B. and Fleming, D. (2013), "Self-directed learning: a tool for lifelong learning", *Journal of Marketing Education*, Vol. 36 No. 1, pp. 20-32.

Brockett, R.G. and Hiemstra, R. (1991), *Self-Direction in Adult Learning: Perspectives on Theory, Research, and Practice*, Routledge, New York, NY.

Butts, M.M., Vandenberg, R.J., DeJoy, D.M., Schaffer, B.S. and Wilson, M.G. (2009), "Individual reactions to high involvement work processes: investigating the role of empowerment and perceived organizational support", *Journal of Occupational Health Psychology*, Vol. 14 No. 2, pp. 122-136.

Candy, P.C. (1991), *Self-Direction for Lifelong Learning: A Comprehensive Guide to Theory and Practice*, Jossey-Bass, San Francisco, CA.

Chang, S.C. and Lee, M.S. (2007), "A study on relationship among leadership, organizational culture, the operation of learning organization and employees' job satisfaction", *The Learning Organization*, Vol. 14 No. 2, pp. 155-185.

Cho, D. (2002), "The connection between self-directed learning and the learning organization", *Human Resource Development Quarterly*, Vol. 13 No. 4, pp. 467-470.

Cho, D. and Kwon, D.B. (2005), "Self-directed learning readiness as an antecedent of organizational commitment: a Korean study", *International Journal of Training and Development*, Vol. 9 No. 2, pp. 140-152.

Clardy, A. (2000), "Learning on their own: vocationally oriented self-directed learning projects", *Human Resource Development Quarterly*, Vol. 11 No. 2, pp. 105-125.

Confessore, S.J. and Kops, W.J. (1998), "Self-directed learning and the learning organization: examining the connection between the individual and the learning environment", *Human Resource Development Quarterly*, Vol. 9 No. 4, pp. 365-376.

Costa, A.L. and Kallick, B. (2004), *Assessment Strategies for Self-Directed Learning*, Sage, Thousand Oaks, CA.

Davis, D. and Daley, B.J. (2008), "The learning organization and its dimensions as key factors in firms' performance", *Human Resource Development International*, Vol. 11 No. 1, pp. 51-66.

Della-Dora, D. and Blanchard, L.J. (1979), *Moving toward Self-Directed Learning: Highlights of Relevant Research and Promising Practice*, Association for Supervision and Curriculum Development, Alexandria, VA.

Dirani, K.M. (2009), "Measuring the learning organization culture, organizational commitment and job satisfaction in the Lebanese banking sector", *Human Resource Development International*, Vol. 12 No. 2, pp. 189-208.

Dixon, N.M. (1999), *The Organizational Learning Cycle: How We Can Learn Collectively*, 2nd ed., Gower, Brookfield, VT.

Elias, J.L. and Merriam, S.B. (2005), *Philosophical Foundations of Adult Education*, 3rd ed., Krieger, Malabar, FL.

Ellinger, A.D. (2004), "The concept of self-directed learning and its implications for human resource development", *Advances in Developing Human Resources*, Vol. 6 No. 2, pp. 158-177.

Ellinger, A.D., Ellinger, A.E., Yang, B. and Howton, S.W. (2002), "The relationship between the learning organization concept and firms' financial performance: an empirical assessment", *Human Resource Development Quarterly*, Vol. 13 No. 1, pp. 5-21.

Ellinger, A.D., Watkins, K.E. and Bostrom, R.P. (1999), "Managers as facilitators of learning in learning organizations", *Human Resource Development Quarterly*, Vol. 10 No. 2, pp. 105-125.

Embo, M., Driessen, E., Valcke, M. and van der Vleuten, C.P.M. (2014), "A framework to facilitate self-directed learning, assessment and supervision in midwifery practice: a qualitative study of supervisors' perceptions", *Nurse Education in Practice*, Vol. 14 No. 4, pp. 441-446.

Fernandez, S. and Moldogaziev, T. (2013), "Using employee empowerment to encourage innovative behavior in the public sector", *Journal of Public Administration Research and Theory*, Vol. 23 No. 1, pp. 155-187.

Finger, M. and Brand, S.B. (1999), "The concept of the 'learning organization' applied to the transformation of the public sector: conceptual contributions for theory and development", in Esterby-Smith, M., Burgoyne, J. and Araujo, L. (Eds), *Organizational Learning and the Learning Organization*, Sage, Thousand Oaks, CA, pp. 130-156.

Garrison, D.R. (1997), "Self-directed learning: toward a comprehensive model", *Adult Education Quarterly*, Vol. 48 No. 1, pp. 18-33.

Gibbons, M. (2002), *The Self-Directed Learning Handbook: Challenging Adolescent Students to Excel*, Jossey-Bass, San Francisco, CA.

Grow, G. (1991), "Teaching learners to be self-directed", *Adult Education Quarterly*, Vol. 41 No. 3, pp. 125-149.

Guglielmino, L.M. and Guglielmino, P.J. (2008), "Productivity in the workplace: the role of self-directed learning and the implications for human resource management", *International Journal of Human Resources Development and Management*, Vol. 8 No. 4, pp. 293-305.

Guglielmino, P.J. and Guglielmino, L.M. (2001), "Moving toward a distributed learning model based on self-managed learning", *SAM Advanced Management Journal*, Vol. 66 No. 3, pp. 36-43.

Guglielmino, P.J., Guglielmino, L.M. and Long, H.B. (1987), "Self-directed learning readiness and performance in the workplace: implications for business, industry, and higher education", *Higher Education*, Vol. 16 No. 3, pp. 303-317.

Guthrie, J.P., Spell, C.S. and Nyamori, R.O. (2002), "Correlates and consequences of high involvement work practices: the role of competitive strategy", *The International Journal of Human Resource Management*, Vol. 13 No. 1, pp. 183-197.

Hiemstra, R. (2000), "Self-directed learning: the personal responsibility model", in Straka, G.A. (Ed.), *Conceptions of Self-Directed Learning: Theoretical and Conceptual Considerations*, Waxmann, New York, NY, pp. 93-108.

Karakas, F. and Manisaligil, A. (2012), "Reorienting self-directed learning for the creative digital era", *European Journal of Training and Development*, Vol. 36 No. 7, pp. 712-731.

Kerka, S. (1999), *Self-Directed Learning: Myths and Realities*, ERIC, Columbus, OH, No. 3.

Knowles, M.S. (1975), *Self-Directed Learning: A Guide for Learners and Teachers*, Association Press, New York, NY.

Knowles, M.S. (1980), *The Modern Practice of Adult Education: From Pedagogy to Andragogy*, Cambridge, New York, NY.

Knowles, M.S. (1984), *Andragogy in Action: Applying Modern Principles of Adult Learning*, Jossey-Bass, San Francisco, CA.

Lim, D.H., Song, J.H. and Yoon, S.W. (2014), "Trends and issues in integrating knowledge management and organizational learning for workplace performance improvement", in Chalofsky, N.E., Rocco, T.S. and Morris, M.L. (Eds), *Handbook of Human Resource Development*, John Wiley & Sons, Hoboken, NJ, pp. 369-385.

McNamara, C. (2008), "Strong value of self-directed learning in the workplace: how supervisors and learners gain leaps in learning", available at: http://managementhelp.org/trng_dev/methods/slf_drct.htm (accessed 7 January 2015).

Marsick, V.J. and Watkins, K.E. (2003), "Demonstrating the value of an organization's learning culture: the dimensions of the learning organization questionnaire", *Advances in Developing Human Resources*, Vol. 5 No. 2, pp. 132-151.

Marsick, V.J., Nicolaides, A. and Watkins, K.E. (2014), "Adult learning theory and application in HRD", in Chalofsky, N.E., Rocco, T.S. and Morris, M.L. (Eds), *Handbook of Human Resource Development*, John Wiley & Sons, Hoboken, NJ, pp. 40-61.

Marquardt, M.J. (1996), *Building the Learning Organization: A Systems Approach to Quantum Improvement and Global Success*, McGraw-Hill, New York, NY.

Merriam, S.B. (2001), "Andragogy and self-directed learning: pillars of adult learning theory", *New Directions for Adult and Continuing Education*, No. 89, pp. 3-13.

Mezirow, J. (1985), "A critical theory of self-directed learning", *New Directions for Adult and Continuing Education*, No. 25, pp. 17-30.

Nonaka, I. and Takeuchi, H. (1995), *The Knowledge Creating Company*, Oxford, New York, NY.

Pil, F.K. and MacDuffie, J.P. (1996), "The adoption of high-involvement work practices", *Industrial Relations*, Vol. 35 No. 3, pp. 423-455.

Raemdonck, I., Gijbels, D. and van Groen, W. (2014), "The influence of job characteristics and self-directed learning orientation on workplace learning", *International Journal of Training and Development*, Vol. 18 No. 3, pp. 188-203.

Raemdonck, I., van der Leeden, R., Valcke, M., Segers, M. and Thijssen, J. (2012), "Predictors of self-directed learning for low-qualified employees: a multi-level analysis", *European Journal of Training and Development*, Vol. 36 No. 6, pp. 572-591.

Rana, S. (2015), "High-involvement work practices and employee engagement", *Human Resource Development International*, Vol. 18 No. 3, pp. 308-316.

Ravid, G. (1987), "Self-directed learning in industry", in Marsick, V.J. (Ed.), *Learning in the Workplace*. Croom Helm, London, pp. 101-118.

Revill, G. and Terrell, I. (2005), "Learning in the workplace: a new degree online", *Innovations in Education and Teaching International*, Vol. 42 No. 3, pp. 231-245.

Rosenberg, M. (2005), *Beyond E-Learning: Approaches and Technologies to Enhance Organizational Knowledge, Learning, and Performance*, Pfeiffer, San Francisco, CA.

Senge, P.M. (1990), *The Fifth Discipline: The Art and Practice of the Learning Organization*, Doubleday, New York, NY.

Senge, P.M. (2006), *The Fifth Discipline: The Art and Practice of the Learning Organization*, 2nd ed., Doubleday, New York, NY.

Sun, H.C. (2003), "Conceptual clarifications for 'organizational learning', 'learning organization' and 'a learning organization'", *Human Resource Development International*, Vol. 6 No. 2, pp. 153-166.

Swanson, R.A. and Holton, E.F. (2009), *Foundations of Human Resource Development*, 2nd ed., Berrett-Koehler, San Francisco, CA.

Sze-Yeng, F. and Hussain, R.M.R. (2010), "Self-directed learning in a socioconstructivist learning environment", *Procedia-Social and Behavioral Sciences*, Vol. 9, pp. 1913-1917.

Tough, A. (1971), *The Adult's Learning Projects: A Fresh Approach to Theory and Practice in Adult Learning*, Ontario Institute for Studies in Education, Toronto, ON.

Tough, A. (1978), "Major learning efforts: recent research and future directions", *Adult Education Quarterly*, Vol. 28 No. 4, pp. 250-263.

Tseng, C. (2013), "Connecting self-directed learning with entrepreneurial learning to entrepreneurial performance", *International Journal of Entrepreneurial Behavior & Research*, Vol. 19 No. 4, pp. 425-446.

Watkins, K. and Marsick, V. (1993), *Sculpting the Learning Organization: Lessons in the Art and Science of Systematic Change*, Jossey-Bass, San Francisco, CA.

Watkins, K.E. and Dirani, K.M. (2013), "A meta-analysis of the dimensions of a learning organization questionnaire: looking across cultures, ranks, and industries", *Advances in Developing Human Resources*, Vol. 15 No. 2, pp. 148-162.

Wen, H. (2014), "The nature, characteristics and ten strategies of learning organization", *International Journal of Educational Management*, Vol. 28 No. 3, pp. 239-298.

Yang, B., Watkins, K.E. and Marsick, V.J. (2004), "The construct of the learning organization: dimensions, measurement, and validation", *Human Resource Development Quarterly*, Vol. 15 No. 1, pp. 31-55.

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