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Leadership development techniques

Leadership
development
techniques

Mapping leadership development techniques with leadership capacities using a typology of development

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Abstract

Purpose – The purpose of this paper is to identify the different leadership development techniques used to develop leaders from the human resource development (HRD) and performance improvement (PI) literature, and to categorize the development techniques using Garavan *et al's* (2015) multifaceted typology of development where development has recently emerged in the literature as a “central and important process” (p. 360).

Design/methodology/approach – This literature review followed the guidelines for an integrative literature review presented by Torraco (2005) and Imel (2011). This literature review was a freestanding literature review designed to provide directions for future research and development within the HRD discipline.

Findings – This literature review categorized over 500 leadership development techniques and mapped them with previously identified leadership capacities into Garavan *et al's* (2015) development typology. Once mapped, the authors were able to identify the most common leadership capacities and related development techniques for each development domain in the typology.

Practical implications – This research provides a tool for identifying required leadership capacities and development techniques that could be used by scholars and scholar-practitioners to conduct further research, as an aid in designing future leadership development programs and as instructional materials in the classroom.

Social implications – Leadership is becoming a shared construct in today's literature. Leadership as a shared construct has multiple shareholders, both internal and external of the agent. To better meet the needs of these shareholders, this research provides tools for the scholar and scholar-practitioner for leadership development that can be catered to one's needs – as opposed to a one-size fits all strategy.

Originality/value – This paper highlights the HRD and PI literature, and provides a pragmatic tool for leadership development. This tool can be used by scholars for future research and for testing, as well as by scholar-practitioners for designing future leadership development programs.

Keywords Literature review, Typology, Leadership development, Leadership capacities, Leadership development spectrum, Leadership development techniques

Paper type Literature review



Leadership development continues to “evolve at an unforeseen pace” (Ardichvili *et al.*, 2016, p. 275) within the human resource development (HRD) literature. For example, Callahan and Rosser (2007) highlighted leadership development as a critical activity for HRD professionals, whereas Blakeley and Higgs (2014) presented developing responsible leaders

as one of HRD's critical interventions. In addition, [Thakadipuram \(2010\)](#) identified leadership development as being a critical global competency for HRD. Global leadership development has been identified as "one of the fastest growing trends" ([Ardichvili et al., 2016](#), p. 279) today with little attention to how these leaders are developed. Leadership development programs, at a minimum, need to address three leader capabilities: self-management, social and work facilitation ([Muir, 2014](#)). Yet there has been little research focused on tracking an individual leader through the process of development ([Muir, 2014](#)) and little research based on learning about the process of developing leaders (Day and O'Conner, as cited in [Muir, 2014](#)).

[MacKenzie et al. \(2014\)](#) identified that leadership, prior to the 2007 financial crisis, had focused on short-term gains with the mentality to "follow the crowd" (p. 37) without the ability, or willingness, to question strategy and organizational plans. [McCarthy \(2014\)](#) indicated that the role of leaders during the financial crisis was called into question, highlighting that leaders failed to live up to their responsibilities. [MacKenzie et al. \(2014\)](#) indicated that strategic human resource development (SHRD) partially contributed to the dysfunctional behaviors found in leaders during this crisis, ultimately failing in the role of leadership development. These dysfunctional behaviors led to a culture that viewed "reward/incentives" ([MacKenzie et al., 2014](#), p. 45) as the only acceptable outcome. The question arises then: Were the failures in the leadership development efforts or the wrong leadership capacities being developed?

Leadership development programs have been portrayed as being too linear, placing the emphasis on leadership at the individual (leader) level rather than at the distributed relational interactions ([Bolden and Gosling, 2006](#)) among agents. In today's age of globalization, information overload and complexity, leaders need to be able to operate in various types of environmental variation ([Godfrey-Smith, 1998](#)). Environmental variation suggests, according to [Godfrey-Smith \(1998\)](#), "that a rapid pace of environmental change makes individual adaptation necessary, while slower changes can be tracked" (p. 256). Leaders operating in today's complex environment need to be exposed to leadership development programs that provide them with the tools and knowledge to adapt to environmental variation. [Nesbit \(2012\)](#) also identified this developmental deficit by stating that these linear development programs could "seriously impede HRD efforts" (p. 204), calling for developmental programs to better address today's dynamic workplace. These calls are related to the private sectors; calls for a change in leadership and new forms of leadership development for the educational sector have also been made in the literature ([McCaughey-Smith et al., 2013](#)). Current leadership development programs need to be realigned to better meet the needs of innovation, complex problems and dynamic work environments while providing a culture that questions strategy and plans to better meet the demands of operating in dynamic work environments. Leaders have a direct effect on an organization's culture ([MacKenzie et al., 2014](#)) and must represent a culture that meets the demands of adaptation.

The primary purpose of the current paper is to identify the different leadership development techniques that could potentially be used to develop tomorrow's leaders. This research contributes to the leadership development literature by categorizing a large number of development techniques in one location. This research also benefits leadership development efforts by providing a tool that can be used to identify which leadership capacities are desired and cross-referencing a selection of development techniques that could be used. Scholars and scholar-practitioners can benefit from this research by being able to better identify what development techniques to use based on their leadership development needs, as opposed to following traditional linear development programs. The flexibility that

this selection of leadership development techniques provides to scholars and scholar-practitioners is one of its biggest benefits.

Methodology

This integrated literature review (Torraco, 2005, 2016) coded content relating specifically to leadership development techniques as identified in the literature. The literature chosen for this review was from the four Academy of Human Resource Development (AHRD) publications (*Advances in Developing Human Resources, ADHR*; *Human Resource Development International, HRDI*; *Human Resource Development Quarterly, HRDQ*; and *Human Resource Development Review, HRDR*) and from *Performance Improvement Quarterly* (PIQ). The literature was reviewed from 2000 to July 2015 using the search terms “leadership AND theory,” “team AND leadership,” “leadership AND development” and “team AND development”.

Using Garavan *et al.*'s (2015) development typology, the leadership development techniques were synthesized into a developmental typology or framework (Imel, 2011; Torraco, 2005). These leadership development techniques were matched to the respective typology matrix by associating the leadership capacity with its respective typology domain, then by identifying the appropriate leadership development techniques to accompany this typology domain. This leadership development typology provides a tool for scholars and scholar-practitioners for identifying appropriate leadership development techniques based on the organizations' need as identified in the leadership development typology.

Leadership development – it is collaborative

Callahan and Rosser (2007) made the distinction between leadership education and leadership development. Leadership education relates to the “delivery of content about leadership” (p. 269), whereas leadership development concentrates on “the process through which leadership knowledge, skills, and abilities are created” (p. 269). Hanson (2013) differentiated between leader development and leadership development stating that leadership development cannot take place without leader development. Gagnon *et al.* (2012) identified leadership development as being related to a process that affects the collective in a non-linear manner. Leadership development at the collective level involves one's capacity to collaboratively work with others and focus on shared networks and meaning (Gagnon *et al.*, 2012).

Hanson (2013) identified that many leadership development interventions or training programs are chosen using the cookbook approach, where one intervention is selected followed by the next sequential intervention, and so on. Trehan (2007) highlighted the point that research on leadership development has shown inconsistent and contradictory results, partially due to leadership development efforts taking an individual focus (as in leader development) rather than viewing leadership development as a social process. Leadership development as an intervention has traditionally approached leadership development in a linear manner, resulting in ineffective development for today's complex and global economy. New leadership development interventions need to be non-linear, an exercise in critical thinking and problem-solving, aid one's sense making capabilities that can be communicated to the collective (shared meaning; Hanson, 2013), as well as extending roles and responsibilities that are more distributed among followers. New leadership development programs need to refocus efforts from developing skill sets to developing mindsets (Kennedy *et al.*, 2013). Mindset focused leadership development efforts are concerned with three primary functions, personal, relational and contextual, ultimately requiring a “new

mindset, language, conceptual terrain, and relationally between participants, providers, and organizations” (Kennedy *et al.*, 2013, p. 12).

Hotho and Dowling (2010) highlighted the collaborative nature of leadership development in their research. They found that the participants of leadership development programs co-created their understanding of leadership, placing “leadership development as a collaborative process involving all stakeholders” (Hotho and Dowling, 2010, p. 625). Grandy and Holton (2013) supported the idea that leadership development should be viewed as a collective process rather than being viewed as an individualistic process. Leadership development, then, should be social, as well as “contextual, cultural, and dispersed” (Edwards and Turnbull, 2013a, p. 49).

Unfortunately, current leadership development practices have been institutionalized, focusing on the leader-in-training in dyadic relationships using pre-set pedagogy (Hotho and Dowling, 2010). Hotho and Dowling (2010) indicated that this continuing dyadic development trend exists even when current theories and leadership development models have moved to being more interactive, collaborative and problem-based learning environments. Recent research on creativity and innovation has identified that these processes are collaborative processes; “innovation is a process of collaboration and joint discovery” (Folkestad and Gonzalez, 2010, p. 118). By conducting a content analysis on literature (books and articles) related to innovation, Folkestad and Gonzalez (2010) identified the following themes:

Innovative culture is essential, team design is essential for innovation, diversity is vital to innovative teamwork, environment (team workspace) has a significant impact on innovation, a rapid team-based experimentation process is required, calculated failure should be encouraged, and reward systems must align (p. 124, emphasis in original).

Folkestad and Gonzalez (2010) further identified that creativity needs to be fostered through organizations via restructuring of organizational ecosystems around teamwork for innovation, breaking the trend of implementing institutionalized pre-set pedagogy practices. Likewise, Mumford and Gibson (2011) highlighted that one way of improving creativity in organizations is to improve leadership, calling for further research to be conducted to develop new interventions for improving leadership capabilities and creative efforts. This places an additional need for redesigning existing team and leadership development programs to lead these new innovative ecosystems.

In sum, leadership development needs to be collaborative while incorporating both leadership education and development characteristics. These development programs need to be mindset focused, incorporating critical thinking, problem-solving and sense-making training. Also, the knowledge, skills and abilities gained from such leadership development interventions should allow participants to be able to practice their skills as a method of reinforcing their learning.

It takes practice

Most companies use formal education for leadership development, contrary to research indicating that leadership development training (focusing primarily on leadership theory), without some type of application or practice, is ineffective (Callahan and Rosser, 2007). This component of application is consistent with social learning theory where “situated cognition originates with engagement in the activity itself” (Torraco, 2002, p. 454), and with action learning where learning is gained from action (Skipton Leonard and Lang, 2010). Gilley *et al.* (2010) contended that team participation improves the leadership skills of individual team members. The act-of-doing is a critical component to learning leadership skills. Hanson (2013)

highlighted practice as being a critical component to successful leadership development efforts. This point is highlighted by Microsoft's *Leadership in Action Program*, as outlined by [Waddill et al. \(2010\)](#). Microsoft's Leadership in Action Program had been designed around four key drivers identified from research, with the fourth driver being: "a rich, challenging on-the-job experience" ([Waddill et al., 2010](#), p. 270). This leadership development initiative emphasized solving actual problems (leadership by doing) by using action learning techniques, which allow leaders-in-training to practice their new leadership capacities ([Waddill et al., 2010](#)).

Leadership is viewed as a skill that can be learned over time with the right experiences. [Keller \(2007\)](#) highlighted leadership career experiences as helping leaders develop their skills and knowledge over time. [Mumford et al. \(2000\)](#) identified four specific career-related experiences to aid in developing leaders: "(1) job assignments that provide exposure to novel, challenging problems; (2) mentoring; (3) appropriate training; and (4) hands-on experience in solving related problems" (p. 24). Learning by doing ([Skipton Leonard and Lang, 2010](#)), has become "a familiar mantra in the training and development community" (p. 226).

Developing effective leaders in today's environment is recognized as a high priority with developing effective leaders as one of the core functions of HRD ([Weinberger, 2009](#)). To better develop tomorrow's leaders, leadership development interventions need to address real-world problems to reinforce learning.

The following section highlights the different leadership development techniques that were found in the literature. These development techniques are presented in the leadership development typology that was initially based on [Garavan et al.'s \(2015\)](#) developmental typology and cross-referenced with the leadership capacities identified by [Turner and Baker \(2018\)](#).

Leadership development techniques from the literature

The leadership development techniques that were identified from the current integrative literature review were combined into their respective development typology domain ([Garavan et al., 2015](#)). Each leadership development technique was then associated with the leadership capacities, presented by [Turner and Baker \(2018\)](#), and mapped into their respective development typology domains using [Garavan et al.'s](#) typology ([Table I](#)).

Development typologies

[Garavan et al. \(2015\)](#) defined development as "an unfolding process of growth that occurs in various ways along multiple trajectories at different levels of analysis, influenced by context and leading to a range of positive outcomes" (p. 364). This definition meets the needs of leadership addressing environmental variation in that it crosses multiple trajectories, as well as includes different levels of analysis (i.e. individual, team/group, organization and environmental). This definition also focuses on positive outcomes, which ultimately is the desired outcome for leaders regardless of whether the desired outcome is profit-driven, social or community-driven.

[Garavan et al.'s \(2015\)](#) multifaceted typology of development consists of two dimensions, structural and process. The structural dimension presents development as taking place within individuals or within interdependent units. Development at the individual level is considered structurally independent, whereas development involving collectives (e.g. teams, organizations and communities) is considered interdependent ([Garavan et al., 2015](#)). The process dimensions differentiate how development unfolds, either planned (e.g. rationalistic, goal focused and continuous) or emergent development (e.g. holistic, tentative and ambiguous; [Garavan et al., 2015](#)). [Garavan et al.'s \(2015\)](#) typology is represented by a two-by-two matrix with the structural dimensions along the vertical, independent (individual)

Development typology (Garavan <i>et al.</i> , 2015)	Leadership capacity (Turner and Baker, 2018)	Leadership development technique (current study)
<i>Autonomous</i> Independent/Emergent: development centered on individual, personal growth	Competencies*	Engaging the learner in the process Learn how to learn Real-world practice Sensemaking actions
	Change*	Challenging experiences Encourage mental rehearsal Increase proficiency and mastery Opportunities to self-identify outcomes Questioning established patterns
	Developmental skills*	Communication skills Enhancing self-development Growing skills Questioning established patterns Shaping the environment Self-reflection Testing assumptions and thought processes
	Individual personality traits or characteristics	Gender equity analysis Leader-identity development Self-motivation/regulation/awareness Skill-based approach to leadership
	Reflective skills*	Critical/collective reflection
	Coaching/mentoring	Action learning Building coaching and mentoring partnerships Internalized thinking Interpersonal skill development Utilization of action-oriented activities
	Change*	Using scenario-based interventions Action-oriented activities Integrate new and existing knowledge Questioning established patterns Responsive to change Testing assumptions and thought processes
	Conflict*	Mediated conflict Negotiation and conflict management Promote effective communication Provide ways to handle conflict Resolving conflicts Scenario planning Conflict resolution
	Culture/diversity/ identity*	Diversity training Creating a diverse network Cross-cultural issues Guided organizational diversity communications Managing diversity and providing opportunities for people to work in different sectors and cultures
	Customer service oriented	Immersive single-problem action learning session Learn to ask questions On-the-job experience One-on-one reflection meeting Feedback Real-world practice

(continued)

Table I.
Leadership
development
techniques and
capacities by
typology

Development typology (Garavan <i>et al.</i> , 2015)	Leadership capacity (Turner and Baker, 2018)	Leadership development technique (current study)	Leadership development techniques
<i>Acquisitive</i> Independent/Planned: individual development; contributes to personal, professional or organization	Moral/ethical*	Ethical and moral reasoning International affairs and codes of conduct Engagement Questioning established patterns	<hr/>
	Organizational learning/ learning organization	Continuously build a learning culture Focus on organizational and workplace learning Multisource feedback (360-degree) Organization learning and shared leadership	
	Reflective skills*	Group process skills Instructor-as-coach Peer-coaching Transparency Test-based development assessment	
	Social skills	Action-oriented activities Believed perceptions of others e-mentoring Feedback network of peers Improvisation games Method of social innovation Multisource feedback Self-perception Story choir Storytelling	
	Teamwork/team building*	Establish team norms Stakeholder collaboration Team-based development assessment Team charter Team-building/unity exercises and games Teamwork training	
	Change*	Action learning Developing practices attuned to a complex, indeterminate, and relational world Integrate new and existing knowledge Increase practice with increasing levels of complexity Questioning established patterns Simulation-based development Test-based development assessment	
	Conflict*	Coalition building Conflict resolution Develop awareness Promote effective communication Provide ways to handle conflict Recognize personal and professional identities	
	Community focused	Ethical and moral reasoning Managing diversity Provide opportunity for people to work in different sectors and cultures Stakeholder collaboration	

*(continued)***Table I.**

Development typology (Garavan <i>et al.</i> , 2015)	Leadership capacity (Turner and Baker, 2018)	Leadership development technique (current study)
	Critical thinking skills	Action- or experienced-learning Applying systems thinking Modeling Scenario planning Simulations Skills-based approach Stage-like progression of development
	Competencies*	Coaching/mentoring Critical reflection Develop managerial roles Developing networked relationships Networking
	Decision-making skills	Action learning circles Group coaching projects Immersive single-problem action learning sessions Solve real problems Group discussion and reflection Incorporating team building exercises and games Sensemaking actions
	Developmental skills*	Coaching Communication skills Group processes Peer-coaching learning circles Self-reflection
	Emotional intelligence	Coaching/mentoring Discussion/reflection EI training Experiential activities Reciprocal peer-coaching Self-reflection Team building exercises and games 360-degree EI inventory
	Entrepreneurial	Coalition building Conflict resolution Scenario planning Case enactment
	Innovative/creative	Formal and informal learning Knowledge acquisition techniques Leadership scenario enactment Questioning established patterns Simulation-based development Use of spaced practices
	Leadership qualities/ skills	Critical learning moments Peer-coaching learning circles Team building
	Listening/ communication skills	Communicating Encourage mental rehearsal Scenario planning Story choir Story teller and assistant Word at a time

Table I.

(continued)

Development typology (Garavan <i>et al.</i> , 2015)	Leadership capacity (Turner and Baker, 2018)	Leadership development technique (current study)	Leadership development techniques
	Management skills/ functions	Application of proven techniques Building ethical business skills Building management-employee trust Coalition building Coaching and mentoring Conflict resolution Role modeling	
	Moral/ethical*	Engagement Questioning established patterns	
	Performs effectively Political acumen	Learning plans Coalition building Conflict resolution Developing practices attuned to a complex, indeterminate and relational world International affairs and codes of conduct	
	Problem-solving skills	Facilitating problem-solving sessions Hands-on experience Problem solving Relational world Sensemaking actions	
	Reflective skills*	Testing assumptions and thought processes Group process skills Instructor-as-coach Peer-coaching Transparency	
	Strategic thinking skills	Test-based development assessment Action-oriented activities Development assignments General management knowledge in strategy Integrate new and existing knowledge Simulation-based development	
	Trust/trustworthiness	Blindfold buddy walk Cultivate a climate of transparency Foster trust Management-employee trust Role playing Trust-building activities	
<i>Networked</i> Interdependent/Planned: organizational and interorganizational development	Culture/diversity/ identity*	Align diversity and leadership with business goals Diverse groups Guide organizational diversity communications Gender equity analysis Identity development Leader identity development Mentor partnership–leader identity discover Managing diversity	
	Global orientation	Developing practices attuned to a complex, indeterminate and relational world Forging a partnership International affairs and codes of conduct Scenario planning	

(continued)

Table I.

Development typology (Garavan <i>et al.</i> , 2015)	Leadership capacity (Turner and Baker, 2018)	Leadership development technique (current study)
	Networking	Shaping the environment Stakeholder collaboration Diverse network Feedback network of peers Forging a partnership Network conditions Networking
	Teamwork/team building*	Stakeholder collaboration and coalition building Develop an understanding of the role and value of team leadership Develop belief in the power of teamwork Develop group process skills Establish team norms Group coaching projects High-potential teams Increase interest and commitment to teamwork Supportive of the team Team building/exercises/games Team charters Teamwork training Team unity

Table I. Note: * = Duplicate capacity

and interdependent, and with the process dimensions along the horizontal, emergent and planned. For the independent-emergent cell, the dimension of autonomous is presented; for the interdependent-emergent cell, the dimension of dialogic is presented; for the independent-planned cell, the dimension of acquisitive is identified; and for the cell interdependent-planned, the dimension networked is introduced (Garavan *et al.*, 2015).

Going clockwise (autonomous, dialogic, networked and acquisitive) around the two-by-two matrix, the first cell autonomous represents development centered on the individual and is considered unplanned. This development dimension focuses on “personal growth or becoming a certain kind of individual” (Garavan *et al.*, 2015, p. 368). The second cell, dialogic, identifies development that is emerging and unplanned, represented by “co-participation, mutual constitution, and sensemaking” (Garavan *et al.*, 2015, p. 369). The third cell, networked, focuses on developing teams or organizations as a whole, is planned and composed of “purposeful actions, discovered consequences, implications, reassessments and further action” (Garavan *et al.*, 2015, p. 371). Finally, acquisitive represents planned individual development, represented best by:

[...] developing new knowledge, skill, and behaviors that contribute to personal, professional job, or organizational resources [...] professional development [...] and organizationally focused development (Garavan *et al.*, 2015, p. 366).

Mapping development techniques, capacities and typologies

Leadership capacities, consisting of “the skills, behaviors and traits of leaders and the relations and social dynamics depicted within leadership roles” (Turner and Baker, 2018,

Leadership Capacities) were categorized into 31 sub-categories. These leadership capacity subcategories are provided in [Table I](#) under the column heading *Leadership capacity*. Each leadership capacity was placed into the appropriate development typology from Garavan *et al.*'s typology. The typology and descriptions are provided in [Table I](#) under the column heading *Development typology*. The authors identified which capacity belongs to what typology and positioned the appropriate capacity under the heading in [Table I](#). In some cases, there were specific leadership capacities that could be present in more than one typology domain. For example, *Reflective skills* could be developed in both the autonomous (individual, personal growth) and dialogic (collective and co-constructed) domains. Any capacities that were listed more than once have been highlighted with an asterisk in [Table I](#).

From the same body of literature that the leadership capacities were captured, the authors identified the different leadership development techniques present in the literature. There were well over 500 leadership development techniques identified in the literature, including some that were identified more than once. The leadership development techniques were then associated with their respective leadership capacity and are listed in [Table I](#) under the column heading *Leadership development technique*. There are some instances in which the leadership capacity is listed more than once; in these cases, the leadership development technique was referenced based on the typology domain. For example, Teamwork/team building was listed for both the Dialogic domain (collective and co-constructed) and for the Networked domain (organizational and interorganizational). However, the leadership development techniques for each domain listed under their respective leadership capacity were slightly different due to the contextual differences in each domain.

The leadership development techniques included in [Table I](#) were selected by the researchers to provide a preview of relevant development techniques available for each domain within the typology. The section that follows provides further development techniques and sources that were specifically relevant to each domain within the typology. Not all of the development techniques could be listed in this article because of space considerations; however, the researchers felt that the more relevant techniques have been portrayed.

Autonomous

The development techniques identified in the autonomous matrix are those related to individual and personal growth development that is unplanned (emergent). The autonomous development techniques included those identified to aid in developing the following skills: competencies, change, development, individual personality traits or characteristics and reflective. Competencies development techniques include engaging the learner in the process, real-world practice (Skipton Leonard and Lang, 2010), learn how to learn (Waddill *et al.*, 2010), sensemaking actions (Ligon *et al.*, 2011). Change involved challenging experiences, opportunities to self-identify outcomes (Watkins *et al.*, 2011), encourage mental rehearsal, increase proficiency and mastery (Skipton Leonard and Lang, 2010) and questioning established patterns (Kennedy *et al.*, 2013).

Developmental skills techniques included communication skills (Waddill *et al.*, 2010), questioning established patterns, testing assumptions and thought processes (Kennedy *et al.*, 2013), enhancing self-development skills (Nesbit, 2012), growing skills, shaping the environment (Djibo *et al.*, 2010) and self-reflection skills (Drodge and Murphy, 2002; Waddill *et al.*, 2010). Individual personality traits or characteristics could be developed through gender equity analysis (White, 2012), leader-identity development (Muir, 2014), self-motivation, self-regulation, self-awareness (Espedal, 2004) and skill-based approach to leadership (Williams and Foti, 2011). Reflective skills could be developed using collective

reflection (Watkins *et al.*, 2011), critical reflection (Johnson, 2008; Muyia and Kacirek, 2009) and reflection (Muyia and Kacirek, 2009).

Dialogic

The dialogic development techniques included those related to developing the following skills: coaching/mentoring, change, conflict, culture/diversity/identity, customer service oriented, moral/ethical, organizational learning and learning organization, reflective, social and teamwork/team building. Some of the development techniques associated with coaching/mentoring included: action learning techniques (Hanson, 2013), utilization of action-oriented activities (Watkins *et al.*, 2011), building coaching and mentoring partnerships (Egan, 2013; Goldman *et al.*, 2013; Muir, 2014), internalized thinking (Hanson, 2013), interpersonal skill development (Watkins *et al.*, 2011) and utilization of scenario-based interventions (McWhorter *et al.*, 2008). Change can be developed through the following techniques: action-oriented activities (Watkins *et al.*, 2011), integrate new and existing knowledge (Skipton Leonard and Lang, 2010), questioning established patterns, testing assumptions and thought processes (Kennedy *et al.*, 2013) and responsive to change (Gravells, 2006). Development techniques relating to conflict resolution techniques included mediated conflict (Warzynski, 2005), negotiation and conflict management (White, 2012), promote effective communication, provide ways to handle conflict (Gilley *et al.*, 2010), resolving conflicts (Carden and Callahan, 2007), scenario planning, coalition building and conflict resolution (Anderson, 2013). Development techniques for culture/diversity/identity could include diversity training, managing diversity and providing opportunities for people to work in different sectors and cultures (Andreadis, 2002); cross-cultural issues (Ma Rhea, 2013); guided organizational diversity communications (Kormanik and Chyle Rajan, 2010); and creating a diverse network (Waddill *et al.*, 2010).

Customer service oriented could be developed through immersive single-problem action learning session, learn to ask questions, on-the-job experience, one-on-one reflection meeting (Waddill *et al.*, 2010), feedback and real-world practice (Skipton Leonard and Lang, 2010). Moral/ethical development techniques included ethical and moral reasoning, international affairs and codes of conduct (Andreadis, 2002), engagement (Blakeley and Higgs, 2014) and questioning established patterns (Kennedy *et al.*, 2013). Organizational learning and learning organization development techniques included continuously build a learning culture, focus on organizational and workplace learning (Watkins *et al.*, 2011), multisource feedback and 360-degree feedback (Geroy *et al.*, 2005; Nesbit, 2012; Skipton Leonard and Lang, 2010) and organization learning and shared leadership (Clarke, 2013). Reflective skills were developed through group process skills (Skipton Leonard and Lang, 2010; Waddill *et al.*, 2010; Watkins *et al.*, 2011), peer-coaching, instructor-as-coach (Waddill *et al.*, 2010), transparency (Watkins *et al.*, 2011) and test-based development assessment (Skipton Leonard and Lang, 2010).

Social skills included action-oriented activities, feedback network of peers (Watkins *et al.*, 2011), believed perceptions of others, self-perception (Stead, 2014), e-mentoring, multisource feedback (Antes and Schuelke, 2011), improvisation games, story choir, storytelling (Gagnon *et al.*, 2012) and methods of social innovation (Andreadis, 2002). Teamwork/team building includes established team norms, team-based development assessment, team charter (Skipton Leonard and Lang, 2010), stakeholder collaboration (Andreadis, 2002), teamwork training (Watkins *et al.*, 2011), team-building exercise and games (Keller, 2007), team unity and team building (Gilley *et al.*, 2010) and teamwork training (Watkins *et al.*, 2011).

Acquisitive

Within the acquisitive typology, development techniques involved those that are planned and developed individual skills relating to professional and organizational goals. The identified development techniques for the acquisitive domain included developing the following skills: change, conflict, community focused, critical thinking, competencies, decision-making, developmental, emotional intelligence, entrepreneurial, innovative/creative, leadership qualities, listening/communication, management functions, moral/ethical, performing effectively, political acumen, problem-solving, reflective and strategic thinking, as well as building trustworthiness.

Development of change skills/interventions could be conducted through the following techniques: action learning, integrate new and existing knowledge, increase practice with increasing levels of complexity, test-based development assessment, simulation-based development (Skipton Leonard and Lang, 2010), developing practices attuned to a complex, indeterminate and relational world and questioning established patterns (Kennedy *et al.*, 2013). Techniques relating to conflict and conflict resolution included coalition building and conflict resolution (Andreadis, 2002), development of awareness, promotion of effective communication, provide ways to handle conflict (Gilley *et al.*, 2010), recognition of personal and professional identities and conflict resolution (Carden and Callahan, 2007). The development techniques from the literature relating to community-focused capacities were ethical and moral reasoning, managing diversity and providing opportunity for people to work in different sectors and cultures, to stakeholder collaboration (Andreadis, 2002).

Critical thinking development techniques included action or experienced-based learning, applying systems thinking (Muyia and Kacirek, 2009), experiential learning (Ligon *et al.*, 2011; Skipton Leonard and Lang, 2010; Watkins *et al.*, 2011), modeling (Saban *et al.*, 2000), scenario planning (Andreadis, 2002), simulations (Antes and Schuelke, 2011), skills-based approach (Williams and Foti, 2011), stage-like progression of development (Ligon *et al.*, 2011) and transformative learning (Johnson, 2008). Competencies that are individual and professional or organizational focused could be developed using the following techniques: coaching/mentoring, critical reflection (internal and external; Nesbit, 2012), develop managerial roles, developing networked relationships and networking (Espedal, 2004). Decision-making techniques included: action learning circles, group coaching projects, immersive single-problem action learning sessions, solve real problems (Waddill *et al.*, 2010), group discussion and reflection (Keller, 2007), incorporating team building exercises and games (Keller, 2007) and sensemaking actions (Ligon *et al.*, 2011). Developmental skills could be enhanced using the following techniques: coaching skills (Drodge and Murphy, 2002; Waddill *et al.*, 2010), communication skills (Waddill *et al.*, 2010), group processes (Shelton *et al.*, 2010; Waddill *et al.*, 2010) and self-reflection skills (Drodge and Murphy, 2002; Waddill *et al.*, 2010) through peer-coaching learning circles (Waddill *et al.*, 2010).

Emotional intelligence development techniques included coaching/mentoring skills, self-reflection skills (Drodge and Murphy, 2002), discussion/reflection (Geroy *et al.*, 2005; Keller, 2007; Muyia and Kacirek, 2009), experiential activities, mentoring, team-building exercises and games (Keller, 2007), EI training, 360-degree EI competency inventory (EIC; Muyia and Kacirek, 2009), 360-degree feedback (Geroy *et al.*, 2005), mentor partnership, mentoring leader identity development (Muir, 2014) and reciprocal peer coaching (Goldman *et al.*, 2013). Entrepreneurial skill techniques involved coalition building, conflict resolution, scenario planning (Andreadis, 2002) and case enactment (Bagheri and Pihie, 2011). Innovative and creative techniques identified were knowledge acquisition techniques, formal and informal learning (Watkins *et al.*, 2011), leadership scenario enactment (Bagheri and Pihie, 2011), questioning established patterns (Kennedy *et al.*, 2013), use of spaced practice and

simulation-based development (Skipton Leonard and Lang, 2010). Leadership qualities were developed through the following techniques: critical learning moments (Muir, 2014), peer-coaching learning circles (Waddill *et al.*, 2010) and team building (Germain and McGuire, 2014; Gilley *et al.*, 2010; Keller, 2007; Skipton Leonard and Lang, 2010). Listening and communication development techniques included encouraging mental rehearsal (Skipton Leonard and Lang, 2010), communicating (Ridgway, 2001), scenario planning (Andreadis, 2002), story choir, story teller and assistant and word at a time (Gagnon *et al.*, 2012).

Managerial skills and functions included application of proven techniques (Espedal, 2004), building ethical business skills (Muyia and Kacirek, 2009), building management–employee trust (Gilley *et al.*, 2010), coalition building and conflict resolution (Andreadis, 2002), coaching and mentoring skill development (Drodge and Murphy, 2002) and to role modeling (Ligon *et al.*, 2011). Moral and ethical development techniques included engagement (Blakeley and Higgs, 2014) and questioning established patterns (Kennedy *et al.*, 2013). Performs effectively was developed through learning plans (Andreadis, 2002). Political acumen was developed using coalition building and conflict resolution, international affairs and codes of conduct (Andreadis, 2002) and developing practices attuned to a complex, indeterminate and relational world (Kennedy *et al.*, 2013). Problem-solving skill development included hands-on experience solving problems (Keller, 2007), facilitating problem-solving sessions (Warzynski, 2005), problem-solving (Waddill *et al.*, 2010), relational world (Kennedy *et al.*, 2013), sensemaking actions (Ligon *et al.*, 2011), solving real problems (Waddill *et al.*, 2010; Watkins *et al.*, 2011), real-world practice (Skipton Leonard and Lang, 2010; Waddill *et al.*, 2010) and testing assumptions and thought processes (Kennedy *et al.*, 2013). Reflective skills were developed through group process skills (Skipton Leonard and Lang, 2010; Waddill *et al.*, 2010; Watkins *et al.*, 2011), peer-coaching, instructor-as-coach (Waddill *et al.*, 2010), transparency (Watkins *et al.*, 2011) and test-based development assessment (Skipton Leonard and Lang, 2010).

Developing strategic thinking skills included the following techniques: action-oriented activities, general management knowledge in strategy (Watkins *et al.*, 2011), development assignments, integrate new and existing knowledge and simulation-based development (Skipton Leonard and Lang, 2010). Finally, trustworthiness development techniques included blindfold buddy walk, role playing (Keller, 2007), foster trust, cultivate a climate of transparency (Germain and McGuire, 2014), management–employee trust (Gilley *et al.*, 2010) and trust-building activities (Shelton *et al.*, 2010).

Networked

The networked domain relates to organizational and interorganizational development and involves development of culture/diversity/identity, global orientation, networking and teamwork or team-building skills. Within this domain culture/diversity/identity could be developed using the following development techniques: align diversity and leadership with business goals, guide organizational diversity communications (Kormanik and Chyle Rajan, 2010), gender equity analysis, diverse groups (White, 2012), identity development (Ligon *et al.*, 2011), mentor partnership–leader identity discover, leader identity development (Muir, 2014) and managing diversity (Andreadis, 2002). Global orientation could be developed through international affairs and codes of conduct, scenario planning, stakeholder collaboration (Andreadis, 2002), developing practices attuned to a complex, indeterminate and relational world (Kennedy *et al.*, 2013), forging a partnership and shaping the environment (Drodge and Murphy, 2002).

Networking techniques include diverse network (Waddill *et al.*, 2010), feedback network of peers (Watkins *et al.*, 2011), forging a partnership (Drodge and Murphy, 2002), network conditions (Clarke, 2013), networking (Espedal, 2004) and stakeholder collaboration and

coalition building (Andreadis, 2002). Teamwork or team-building skills could be developed with the following: develop an understanding of the role and value of team leadership, develop belief in the power of teamwork, increase interest and commitment to teamwork, team building, team unity (Gilley *et al.*, 2010), develop group process skills, group coaching projects, high-potential teams (Waddill *et al.*, 2010), establish team norms, team charters (Skipton Leonard and Lang, 2010), supportive of the team (Germain and McGuire, 2014), team-building exercise and games (Keller, 2007) and teamwork training (Watkins *et al.*, 2011).

Discussion

Leadership development is a collective, social process (Edwards and Turnbull, 2013a, 2013b; Folkestad and Gonzalez, 2010) that is most successful when it is performed *in situ* addressing real-world problems while addressing all of the complexity's experienced by today's leaders. Leadership development is no longer an activity that can focus primarily on one individual as it must account for social interactions that take place in a dynamic environment. Also, one must consider for new organizational structures and ecosystems (e.g. teams, globally focused; Folkestad and Gonzalez, 2010). These efforts must be non-linear and provide sensemaking capabilities to better address today's complexity (Hanson, 2013) with more distributed leadership methods in mind. Leadership development is contextual (Kennedy *et al.*, 2013) and development designs should account for contextual issues with all stakeholders in mind (Hotho and Dowling, 2010).

In viewing the information provided in Table I, there were many duplicate leadership capacities highlighted. These duplicate capacities included competencies, change, developmental skills, reflective skills, conflict, culture/diversity/identity, moral/ethical and teamwork/team building (Table I). Duplicate capacities for both independent/individual domains (autonomous and acquisitive) included change, competencies, development skills and reflective skills; for both interdependent/collective domains (dialogic and networked) included culture/diversity/identity; and for both emergent domains (autonomous and dialogic) included change and reflective skills; with no duplicates between the two planned domains (acquisitive and networked).

These duplicates, by domains, are provided in Table II. They offer leadership development scholars and scholar-practitioners with the capacities that could give the most

Autonomous (independent/emergent – individual)	Dialogic (interdependent/emergent – social)
Change ^{a,c}	Change ^c
Competencies ^a	Conflict
Development skills ^a	Culture/diversity/identity ^b
Reflective skills ^{a,c}	Moral/ethical
	Reflective skills ^c
	Teamwork/team building
Acquisitive (independent/planned – individual)	Networked (interdependent/planned – org/interorg)
Change ^a	Culture/diversity/identity ^b
Conflict	
Competencies ^a	
Developmental skills ^a	
Moral/ethical	
Reflective skills ^a	

Notes: ^a= Independent duplications; ^b= interdependent duplications; ^c= emergent duplications; modified from Garavan *et al.* (2015)

Table II.
Duplicated
leadership capacities
by independent,
interdependent and
emergent domains

benefit when designing a leadership development program according to independent or interdependent capacities. For example, when planning to develop leaders in either the autonomous or acquisitive domains (independent), the most common leadership capacities for development are change, competencies, developmental skills and reflective skills. To develop these capacities, one could consider the leadership development techniques listed in [Table I](#) for each of these leadership capacities. Likewise, for maximum benefit when looking at developing leaders for either the dialogic or networked domains (interdependent), the most common leadership capacities to be developed relates specifically to culture/diversity/identity. The development techniques recommended for culture/diversity/identity can be found in [Table I](#) per each domain. Last, if one wanted to design a leadership development program for the autonomous or dialogic domains (emergent), the most common leadership capacities are change and reflective skills; the appropriate development techniques can be found in [Table I](#). There were no common capacities for the planned domains, possibly due to the lack of literature relating to the networked domain as highlighted by Garaven *et al.* (2015). However, the level of analysis from individual to organizational/interorganizational is too big to compare, making the leadership capacity and development requirements vastly different for these two domains.

While the data presented in the current article are current, it still has its limitations in that it only represents a small quantity of the literature in the vast field of leadership and leadership development. The coverage for the current study included the HRD and performance improvement fields of study. While the 15-year coverage is sufficient for a research study, it still comes with some limitations, especially for researchers and students who reside in disciplines outside of these fields of study. Future research studies are recommended to continue this line of research by collecting leadership capacities and development techniques from other bodies of literature. A more comprehensive developmental typology will then become available after a few studies have contributed to this research.

The leadership capacities and development techniques presented in the current study, although from refereed journals, were collected from a variety of different types of articles. These articles included conceptual, literature reviews, theoretical and quantitative and qualitative empirical studies. The information provided does not report which development techniques had been shown to be more effective compared to other methods due to empirical testing. Future research is recommended to conduct meta-analysis studies that identify which development techniques are most useful for each of the presented domains in the typology. Future research studies could also conduct experimental studies looking at the different development techniques within a specific domain from the typology.

Conclusion

The current article identified different leadership development techniques from the disciplines of HRD and PI. This research incorporated great depth over a 15-year period including 155 journal articles that identified over 550 leadership development techniques. By using [Garaven *et al.*'s \(2015\)](#) development typology, the authors were able to map leadership capacities from [Turner and Baker \(2018\)](#) with specific leadership development techniques from the current study. In summary, researchers, scholars and scholar-practitioners can use this comprehensive leadership typology to conduct future research, as an aid in designing future leadership development programs, and as instructional materials in the classroom.

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