

# Overview: Why and How Does Reflection Matter in Workplace Learning?

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## Abstract

### The Problem.

While reflection is central to adult learning processes and theories, its meaning and definitions vary. Authors approach reflection from different perspectives and assumptions.

### The Solution.

This article is a conceptual map to guide the reader through key definitions and perspectives discussed in upcoming articles. We provide a compass for reflection, critical reflection, reflective practice, and how these terms apply to learning from experience, meaning-making, and action in the workplace. We also show how different perspectives or lenses can impact a human resource development (HRD) practitioner's approach to reflection and present several studies looking at reflection and reflective practices.

### The Stakeholders.

This article should help HRD practitioners and others engaged in supporting workplace learning to gain clarity about how to conceptualize reflection and reflective practices and become familiar with the different ways reflection is understood by authors of upcoming articles.

## Keywords

workplace learning, reflection, critical reflection, reflective practice, learning from experience, perspectives on reflection

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## **Introduction**

Every day, individuals engage in work activities that generate new behaviors or ways of thinking that involve learning. Workers can fall behind in their capacity to perform without constant updating of knowledge and skills (Hart, 2019; Noe et al., 2014). Yet, workplaces are better known for action, not reflection. People are paid for results; reflection may even be interpreted as “a waste of time.” Following this argument, the question arises: how should attention be paid to reflection?

Marsick et al. (2020) describe and illustrate ways that work and learning have become more dynamically integrated to support discovery and knowledge creation. Learning can be separate from work, but it is increasingly coterminous or seamlessly integrated. Hagel and Brown (2017) make the case for shifting from “scalable efficiency” to “scalable learning” because “it is about bringing people together to generate new knowledge” (p. 2), not just one of many inputs to business success. Likewise, Edmondson (2012), argues for a shift from “organizing to execute” to “organizing to learn.” And Wolfson et al. (2019) cite their field-based study (2018) to “suggest that . . . informal field-based learning (IFBL), can be used as a low-cost alternative to, or perhaps in conjunction with, formal learning to improve employee performance” (p. 1).

Drawing on Kolb (2015) and Schön (1983), many argue that reflection is important for effective learning and performance. In a complex, constantly changing environment, reflection is needed for deep learning, problem solving, and innovation.

When and how can reflection be applied and leveraged to improve effectiveness in the workplace? Reflection is only one of many inputs to learning (Fenwick, 2000; Lundgren et al., 2017). Reflection is largely unobservable because it may occur within people’s minds and evidence for the effectiveness of reflection is mixed. Qualitative, descriptive studies describe its value. However, Roessger (2014, 2015) shows that little empirical evidence exists confirming whether—and if so how—reflective practice leads to instrumental learning outcomes, for example, increased skill or competencies for problem solving or performance.

The purpose of this article—in this special Issue—is to help human resource development (HRD) practitioners, and others who support workplace learning, to understand different approaches to reflection and reflective practices, and how to leverage them. We seek to help readers conceptualize, administer, and assess such practices at work, whether in schools, health care, or offices. We next introduce definitions, perspectives, and contexts of reflection that are discussed by authors of upcoming articles in this special Issue. We then show how different perspectives or lenses can impact an HRD practitioner’s approach to reflection and present several studies looking at reflection and reflective practices.

## **What Is Reflection?**

As introduced in the Preface to this Issue, reflection is central to adult learning theory and practice (Boud et al., 2006; Fenwick, 2008; Kolb, 2015; Mezirow, 1991, 2012). The reflection terminology used and how the process of meaning-making or sense-making is described, however, varies greatly, as pointed out by Jordi (2011) and

reviewed in some depth by Roessger (2014). Academic descriptions of reflection commonly begin with Dewey (1933, 1938) and the process of examining and re-examining experience, as discussed in numerous monographs and handbooks on reflection (Brookfield, 2017; Fook & Gardner, 2007; Moon, 2004; Reynolds & Vince, 2004).

Moon (2004) defines reflection as “a form of mental processing—like a form of thinking—that we may use to fulfill a purpose or to achieve some anticipated outcome” (p. 82). We can also simply “be reflective,” which may lead to unexpected outcomes. Reflection is useful when we encounter volatile, uncertain, complex, and ambiguous situations where there is not one obvious solution. We use reflection as a process to further grapple with our experiences, prior-held ideas, and understandings of the world for sense-making and sense-giving (Rouleau, 2005).

For Mezirow (1991), reflection is not that simple. He distinguishes between reflection without change to fundamental ways we understand experiences, and reflection that may cause us to question those basic understandings. Individuals can reflect on “content” of what they think and feel, or “process” of how they act, feel, or think (Mezirow, 1991, pp. 107–108). “Premise reflection,” or critical reflection, requires deep questioning of frameworks we use to interpret experiences, often called assumptions, when encountering disorienting dilemmas—that can result in transformative learning. Critical reflection depicts a process of identifying, examining, and questioning frames of reference that guide how one understands experience with the aim to change one’s worldview (Merriam et al., 2007). Brookfield (2017) encourages us to identify how we came up with our assumptions, beliefs, and frames of reference. He suggests they are strongly influenced by social structures. Critical reflection is the impulse for “conscientization” (Freire, 1974): the dialogic process that prompts awareness of socially constructed forces that influence how we think, act, and react to influence social change. Critical reflection has been criticized as a “rational process” that omits or underplays emotions, feelings, and intuitions that can lead to learning (Brookfield, 2000; Dirkx et al., 2006; Taylor, 2000). Opinions differ on the collaborative nature of critical reflection. While some describe it as an individual act (Fook, 2010), others suggest that people need collective, dialogic processes to see and question their assumptions (Brookfield, 2000; Freire, 1974; West, 2010).

Reflection and critical reflection are related to reflective practice, that is, the application of reflection to professional work for the purpose of decision making, problem solving, and development (Roessger, 2014). Reflective practice closely aligns with two dominant paradigms in HRD: performance and learning (Swanson & Holton, 2009). Both action learning (O’Neil & Marsick, 2007) and action research (Coghlan & Brannick, 2014) are workplace processes that integrate reflection into professional practice. Other reflective practices include note taking, journal writing, multisource feedback giving, coaching, and mentoring (Raelin, 2000).

## **Different Perspectives on Reflection**

Fenwick’s (2000) valuable review of literature distinguishes five different lenses on cognition: constructivist, psychoanalytic, situative, critical-cultural, and enactivist depending on epistemological assumptions about learning. Based on Fenwick’s work,

**Table 1.** Comparison of Six Perspectives on Reflection.

Perspectives	Role of reflection	Key activities	Trigger for reflection	Outcomes
Constructivist	Requirement for learning/meaning-making	Rational analysis, reflective and interpretative questioning	Need, disorienting experience, dialogue, intervention, etc.	New meaning, reframing of problem/question
Constructive-developmental	Increase complexity in meaning-making (way of knowing)	"Immunity X-Ray" (uncovering hidden competing commitments and big assumptions)	Optimal conflict work demands higher than developmental capacity	Renegotiation of the subject/object balance in favor of more object (what one can see) and less subject (what is unseen)
Psychoanalytic	Facilitate resolution of intrapersonal conflict	Introspection, verbalization through symbols and metaphors	Therapy, external intervention, dissonance	Resolved intrapersonal conflict, new capacities to adapt
Situative	"Just" a learning (by doing) experience	Participating, experiencing, collaborating, and communities of practice	Participation, collaboration, tools/artifacts in situation	Input for further learning experiences/sense-making
Critical-cultural	Critical view of culture/system as historically developed	Deconstruction, discourse, questioning of assumptions	Challenge, power dynamics, disparity, inequality	Resistance to dominant structures, struggle for power
Enactivist	"Just" part of the process, mindful awareness	Embedded, attentive listening, also: ecological, participatory	Ongoing, embedded in system	Co-emerging and evolving; not special or separate from other learning experiences

Source. Adapted from Fenwick (2000), Kegan and Lahey (2009), and Lundgren et al. (2017).

Lundgren et al. (2017) went further in the literature to make distinctions among these approaches vis-a-vis reflection's role in learning, key processes, its focus and/or context, reflection triggers, issues of power and emotions, and outcomes (pp. 315–316). In Table 1, we summarize how reflection is approached within each of those five perspectives. We also add another perspective on reflection from constructive-developmental theory (Kegan, 1994; Kegan & Lahey, 2009).

HRD scholars and practitioners commonly adopt a constructivist approach that focuses on individual meaning-making processes in learning (Lundgren et al., 2017). In this Issue, this perspective is well-represented, that is, authors refer to reflection as a process through which the learner can construct new understandings and new meanings from past experiences.

Seminal adult and workplace learning scholars such as Boud et al. (2006), Kolb (2015), Schön (1983), Mezirow (1991), and Marsick and Watkins (2018) have grounded their work in the constructivist perspective. From the constructivist perspective, reflection is considered a conscious and explicit process (Lundgren et al., 2017). Reflective activities from this lens engage the learner in revisiting and re-interpreting the meaning of experiences.

Constructive-development theory (Kegan, 1994; Kegan & Lahey, 2009, 2010) is also concerned with meaning-making. Kegan sees meaning-making as a capacity which can develop and increase in complexity over time. As a meaning-making system (also called "way of knowing" or WoK) becomes more complex, so does the capacity for

perspective-taking. Drago-Severson (2009, 2012) refers to the self-authoring WoK as the “reflective-self”—which can look at multiple ideas and points of views and organize them according to an internal standard. Kegan and colleagues have developed a reflective method called “Immunity X-Ray,” helping learners uncover hidden competing commitments and underlying assumptions in goal-pursuit (Kegan & Lahey, 2010).

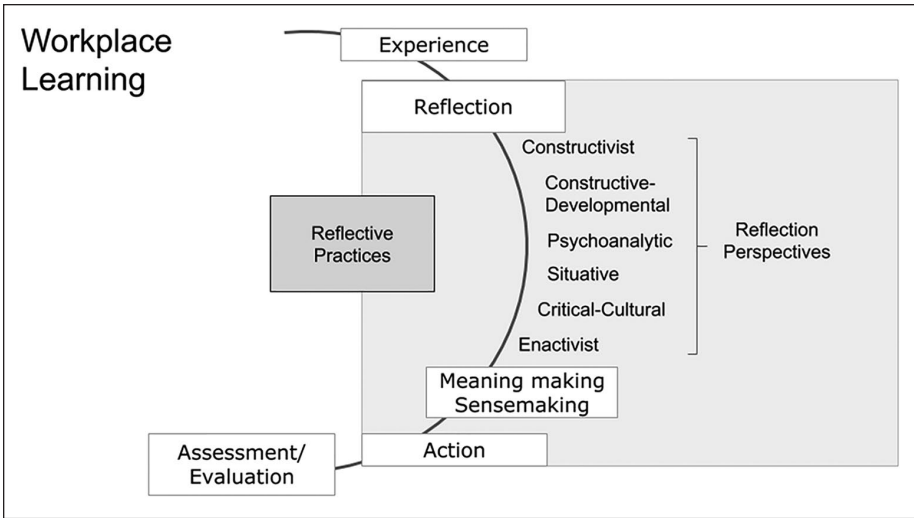
Many workplace learning studies rest on the situative perspective, which is rooted in Vygotsky for whom learning is “a social process, and what is learned are socially and historically constructed knowledge and activities” (Scully-Russ & Boyle, 2018, p. 41). Reflection is not located in individual minds but takes place through and in social interaction. The situated perspective is represented by Etienne Wenger’s (1998) concept of Communities of Practice—groups of people with shared interests who interact as they engage in common work and thereby create meaning, identity, and community. Learning occurs naturally through shared practices. Brown et al. (1989) argue that “learning and acting are interestingly indistinct, learning being a continuous, lifelong process resulting from acting in situations” (p. 33). Situated cognition, they say, is “in part a product of the activity, context, and culture in which it is developed and used” (p. 32). This view is shared by Billett (2002) who emphasized *collective agency and shaping* of individuals through socially embedded, interactive norms and resources. Billett’s workplace pedagogy is based on “the intentional and indirect guidance . . . of everyday workplace activities,” workplace affordances that provide “opportunities to participate . . . and access guidance,” and individual choices through engagement (p. 30). Reflection supports making choices and negotiating opportunities and power dynamics that affect resource distribution.

An emerging perspective, based on complexity theory, and referred to by several articles in this issue, is the enactivist perspective. From this perspective, learning and meaning-making are co-emergent through mutual interaction of the learner and environment or context with each changing, possibly in divergent ways, through their interconnections (Van den Berg, 2013). In this context, reflection is considered a continuous process of developing mindful awareness as individuals interact together as holistic systems. It is *within* this interaction of systems that people continuously realign their affective and cognitive experience (Lundgren et al., 2017).

## How Reflection Links to Action

Using different lenses, human resource developers can make choices about how to support reflection when engaging in reflective practices in situations such as this one (see Figure 1).

Reflection can support individual meaning-making and collective sense-making (Weick, 1995). Sense-making can be co-created through “co-reflective practices” (Watkins et al., 2011, p. 211). See Figure 1. Sense-making is preparation for action; it “is both about cognition and behavior” (Kraft et al., 2018, p. 72). Collective sense-making is especially important in times of change when leaders seek to influence the organizational narrative to align understanding toward desired action (Kraft et al., 2018) which they do by sense-giving (Gioia & Chittipeddi, 1991).



**Figure 1.** Reflection in the workplace in the context of experience, action, and learning.

Meaning-making (individual) and sense-making (collective) call for reflection. Reflection is linked to action—past actions that shape meaning-making; present action that embodies knowing; or imagined future action that influences direction and intention. Taylor and Marieneau (2016) point out that “thinking is just the final step in a long process of knowing that goes on within the body—the body-brain—before we can discover that we know something” (p. 56). In addition, we constantly assess whether or not we are reaching our goals—whether that be conscious or unconscious, intentional, or ad hoc, accurate or inaccurate.

Neuroscience points to “a *body-brain* connected with and responsive to every part of the body by . . . the peripheral nervous system. And every part of the body contributes to all the functions of the brain we commonly call *mind*” (Taylor & Marieneau, 2016, p. 34). Attending primarily to “rational, cognitive activities effectively diminishes the powerful potential of intentionally learning with and through the body—which is, ironically, the only way the brain can ever learn” (p. 57).

We filter experiences through existing associations stored as images, metaphors, and “videos.” The body-brain recognizes patterns and suggests “best solutions” based on what has worked before. If we react quickly, we act on limited information, biases or beliefs, or generic popular practices. We engage in sense-making and sense-giving to share and compare interpretations in combination with action. Work practices can shape these discussions. Agile technology practices, for example, brings employees across functions together to talk, and create customer workshops to chart experiences, make sense of preferences, and imagine new products.

We learn what we know through action (Brown et al., 1989). Polanyi (1966) observed that “we can know more than we can tell.” Schön (1983) used Polanyi’s idea

of tacit knowing to describe reflection-in-action. Authors in this Issue in the situated or enactivist modes examine embodied knowing experienced in and through action.

### *Illustration*

We further illustrate how different perspectives or lenses can impact an HRD practitioner's approach to reflection through the example of Team Bernardino (pseudonym). Team Bernardino is a cross-functional team working on a complex and ambiguous project. In observed meetings, it appeared that team members understood very different things about the problem at hand, leading to conflict and tension. The coach considered whether reflection would help the team going forward, and if so, what good reflective practices might look like?

Working with a constructivist lens, a learning and development facilitator might suggest the team conduct an after-action review to look at key goal(s). Team members might discover their goals are different, leading to misalignment in action and results. They might re-negotiate goals, actions, and coordination.

Using a constructive-developmental perspective, the facilitator might pay attention to the fact that different WoK might be present in the team each bringing different perspective-taking capacities and orientations to work and invite each WoK to become more aware and gently challenge its own meaning-making system.

Using a psychoanalytic perspective, a consultant might filter Team Bernardino's performance data through unconscious drivers and motivations that account for things that go wrong in achieving goals. They might use the arts to help leaders depict and discuss subconscious struggles they experience, for example, competition for attention or ego-related drives emanating from past socialization.

A critical-cultural facilitator might prefer the lens of power dynamics rooted in unexamined beliefs based in identity, gender, race, class, or other dynamics. The facilitator could use body sculpting, an acting technique used in theater of the oppressed (Boal, 1985) to help participants create a group sculpture and then animate the sculpture in ways that shift power dynamics.

A situated facilitator might focus on how the team acts when they use different tools. They might ask members to draw pictures of the situation or use Lego sets to build representations, and then discuss use of tools in their work. Are they using them in new ways? What if they used different tools?

Finally, an enactivist might ask Team Bernardino to examine the structure of its human activity system (Tkachenko & Ardichvili, 2017) based on socio-cultural theory. Activity theory analyzes interactions among instruments (tools, signs), a subject, the sense-making made of an object of focus, implicit or explicit rules of operation, division of labor, and the community itself. Engeström's (1987) model of deconstructing the human activity system could be used, starting with the socially constructed object that brings people together. Intersecting triangles are used to graph tensions and relationships. Team Bernardino could use this framework to analyze dynamics underlying particular situations that have caused dysfunctional tension.

## **Studies on Reflection and Reflective Practices**

We finish this article by presenting a selection of studies which analyze reflection and reflective practice in the context of work and education. We selected a few of those studies to provide an overview of the breadth and depth of existing research (see Table 2). We first present studies that explore reflection and learning contexts (Section A in Table 2); we then showcase studies that have operationalized reflection in different ways (Section B); we finally introduce studies that examine the link between reflective activities and learning outcomes (Section C).

Observing—from a situative perspective—how police officers in Sweden work and learn using tools in their communities of practice shows what reflection means in this specific context, that is: the police car (Lundin & Nuldén, 2007). Ethnographic research within an anesthesiology department in Central Europe (Jordan, 2010) or participatory action research involving counselors at a nongovernment organization in Australia (Keevers & Treleaven, 2011) show reflection-in-action and practice-based outcomes.

Findings of highly contextualized workplace learning studies are often hard to transfer into other workplace settings. Therefore, some researchers have developed standardized research instruments through surveys that operationalize: a person's ability to reflect (Aukes et al., 2007), reflective thinking (Kember et al., 2000), or critically reflective work behaviors (Van Woerkom, 2004). Such survey instruments and coding schemes are often developed in health care education settings where the assessment of reflection is part of the curriculum.

Finally, it is not easy to operationalize and measure reflection and its links to learning and performance for many reasons. Roessger (2014) found little, if any, empirical evidence linking reflection to instrumental learning outcomes in five literature reviews with this focus. He did find “some empirical support for reflective activities in instrumental learning” and “that reflective activities may affect learners' performance” (p. 27). The mixed results from studies he reviewed led him to conclude that “the relationship between reflective activities and instrumental learning outcomes remains unclear” (p. 27).

Nonetheless, we include here some studies that examine whether reflection leads to increased learning outcomes. Table 2 highlights one study that confirmed significant increases in learning outcomes of engineering students in Germany who participated in reflective activities as part of their problem-solving process (Wetzstein & Hacker, 2004). In other studies, moderate effects of reflective journaling on learning (Chirema, 2007; Hayward et al., 2007) or no effects of reflective teaching methods on educational outcomes (Lowe & Kerr, 1998) were observed.

## **Implications for HRD Practitioners**

While more research is needed, we showed that reflection is closely linked to action, and that it is especially valuable in these complex times where the environment is constantly changing. Reflection supports meaning-making and sense-making, and as



**Table 2. Overview of Selected Studies on Reflection and Reflective Practices.**

Scope	Author(s) (Year)	Purpose of study	Methodology and sample (N)	Setting and country	Salient results
A. Studies that explore reflection/learning contexts	Lundin and Nulidén (2007)	To research how professional tools of police officers trigger workplace learning	Ethnographic case study; extensive observations and interviews	Police officers while on duty (in their police car) in Sweden	Reveals how the use of specific tools result in conversations that are a vital part of the learning of police officers situated in their community of practice
	Jordan (2010)	To investigate how a department uses organizational practices to help new employees become reflective practitioners	12-month field study; observations via shadowing, narrative interviews (N = 7) and document analysis	Novice nurses at a department of anesthesiology and intensive care in a Central European hospital	Contributes to a deeper understanding of factors that impede the learning process of novice nurses, and how organizations can foster reflection
	Keever and Treleaven (2011)	To discuss how organizing practices of reflexivity and collective mindfulness are encouraged and sustained	Participatory action research framework; ethnographic observations, transcripts of dialogues, participation in workplace activities, analysis of training documents	Counselors at a small, nongovernment organization that provides services to women and children who have experienced sexual assault in Australia	Employs a relational, practice-based approach that shows reflective practice as "foreground entanglement, co-production and the relational qualities of practice." (p. 505)
B. Studies that operationalize reflection	Kember et al. (2000)	To develop a simple instrument that examines the extent to which students engage in reflective thinking	Instrument development (N = 303)	Undergraduate and postgraduate students in health sciences in Hong Kong	Questionnaire measuring four constructs of reflective thinking: habitual action, understanding, reflection, and critical reflection
	Aulkes et al. (2007)	To develop a scale that measures the personal reflection ability	Instrument development (N = 350 and 583 for different steps in the process)	Medical students and faculty in the Netherlands	Groningen Reflection Ability Scale (GRAS) covering three aspects of personal reflection: self-reflection, empathetic reflection, and reflective communication
	Van Woerkom and Croon (2008)	To operationalize critical reflection in the workplace using a measure of critically reflective work behaviors	Exploratory, cross-sectional, quantitative (N = 1,670)	Employees after secondary/tertiary education in the Netherlands	Instrument measuring six dimensions of critically reflective work behavior: critical opinion-sharing, asking for feedback, challenging group-think, openness about mistakes, experimentation, and career awareness

(continued)

Table 2. (continued)

Scope	Author(s) (Year)	Purpose of study	Methodology and sample (N)	Setting and country	Salient results
C. Studies that examine reflective activities and learning outcomes	Lowe and Kerr (1998)	To examine the effect of reflective teaching methods on educational outcomes in a nursing biological sciences course	True experiment (N = 60, including control group)	Reflective teaching methods in nursing education in the United Kingdom	Participants in the reflective teaching methods course performed no better in comparison to the conventional instruction methods course
	Wetzstein and Hacker (2004)	To examine whether reflective verbalizations improve design problem solving, and solution quality	Experimental study (N = 60, including control group)	Question-based reflective verbalizations with students in engineering education in Germany	Students who participated in reflective activities produced significantly higher quality designs than those given filler nonreflective tasks; this effect was significant across different problem-solving strategies
	Chirema (2007)	To examine the use of reflective journals in promoting reflection and learning in post-registration nursing students	Cross-sectional, journal entries and interviews (N = 42 journals; N = 20 interviews)	Reflective journaling of part-time postregistration students in nursing in the United Kingdom	Postregistration nursing students' journal entries were useful as evidence of reflective thinking; study suggests usefulness of journals for promoting reflection and learning (although some students appear to benefit from it more than others)
	Hayward et al (2007)	To examine the effect of teaching physical therapist students a model of reflective practice	Quasi-experimental study with pretest and posttest (N = 86)	Reflective journaling of physical therapist students in the United States	Physical therapist students who participated in reflective activities were better able to acquire new skills and knowledge in the workplace than students who did not; participation in reflective activities had no effect on students' abilities to use existing skills and knowledge to make sense of and investigate workplace phenomena

Source. Adapted from Justice et al. (2019), Lundgren and Poell (2016), and Roessger (2014).

such helps guide action toward goals. Reflection also enables employees to explore their and others' thinking as they experiment with solutions, adjust actions, and reframe problems.

An important aspect to consider for anyone operationalizing reflection is how reflection and learning are understood. The six main perspectives we presented through examples show how those can lead to different reflective practices and outcomes.

Reflection often requires asking powerful questions and testing taken-for-granted assumptions. When adapting reflective practices, one needs to keep in mind that the practices which use a critical reflection orientation can be challenging to the organization (Nicolaides & Poell, this Issue; Walker & Oldford, this Issue). The output from a critical reflective practice can create "noise" as participants are being asked to rethink deeply held assumptions discussion (O'Neil & Marsick, 2014).

The utility of reflection in the workplace appears to change based on its context, measures, and expected outcomes. When promoting reflection in their organization HRD practitioners should recognize that managers can play an important role in developing reflection by encouraging employees to record and share their experiences (Hart, 2019), using self-questioning (McLagan, 2017), or by exhibiting "reflective mentality" (Hilden & Tikkamäki, 2013). At the same time, HRD practitioners need to realize that some managers might not be ready to hear challenging questions from subordinates or to accept views other than those of the organization or the direction the manager has already committed.

Although research suggests reflection does help to enhance the transfer of learning in the workplace (Sparr et al., 2017), more knowledge about measures and outcomes is needed (Roessger, 2014, 2015). Still, in a context where organizations operate with limited time and resources, reflection is an intervention which can be implemented without dramatic structural changes and can produce strategic and long-lasting impact.

## Conclusion

In this article, we examined why and how reflection matters in the workplace and while doing so sought to provide a map that guides the reader through key definitions and perspectives of reflection discussed in upcoming articles. Those provide more examples of the different ways reflection and workplace learning can be approached in a variety of contexts and situations. In a well-regarded *Harvard Business Review* article published in 1991, organizational learning and action science scholar Chris Argyris (1991) said: "solving problems is important. But if learning is to persist, managers and employees must also look inward" (pp. 4–5). We believe this has never been truer.

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