Chapter 4
Pointing Out Conceptual and Measurement Issues in Studies on 'Learning Motivation' and 'Training Motivation' in Workplace Settings. A Literature Review

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Abstract Today's workplace presents rapid changes highlighting the importance for workers to engage in continuous learning. Given the central role of motivation in learning process, it is important to start with developing a good understanding of the way it is defined and measured in the literature. In the present study, we focus specifically on 'learning motivation' and 'training motivation', as constructs describing motivation for workplace learning in empirical studies. We analyze the way these both constructs are conceptualised, measured and relate to other variables studied in the selected articles. Inclusion criteria capture empirical studies on training and learning motivation in the context of work. Based on a total of 47 articles, our results suggest that there is no clear distinction between the examined constructs. Moreover, there is a lack of reference to motivational and learning theories in the way 'learning motivation' and 'training motivation' are, both, defined and measured. The article discusses results and brings suggestions that might clarify and overcome the issues related to the use of various terminology with no clear conceptual difference.

Keywords Workplace · Motivation · Learning motivation · Training motivation · Review

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4.1 Introduction

During the last decade, continuous workplace learning has become an essential tool to maintain employees' employability as well as organizations' competitiveness (Fenwick, 2006, 2008; Marsick & Volpe, 1999a, b). As workplace learning has been linked to improvements in productivity and performance (Ashton & Sung, 2002), there is much interest in investigating the determinants of workplace learning. Employees' motivation for learning is considered to be one of the most important predictors of participation in learning activities (Colquitt et al., 2000; Noe, 1986; Stipek, 1996; Tannenbaum & Yukl, 1992; Walberg & Uguroglu, 1980; Wlodkowski, 2008; Zull, 2002) and training outcomes (Colquitt et al., 2000; Quinones, 1995). The centrality of motivation to workplace learning is rarely debated given the robust findings that motivation is positively related to an array of personal and organizational outcomes.

In literature there is no single definition or unified approach to refer to motivation for workplace learning. Moreover, there is also a problem in the use of terminology. Different terms might be employed to describe the same phenomena or the same terms might be used when meaning something different. Given the central role of motivation in workplace learning outcomes, it is important to develop a good understanding of the meaning behind the terms that are used in the literature. In the present review we focused specifically on « learning motivation » and « training motivation » as terminology to describe motivation for workplace learning. We are interested to know how both terms are conceptualised and measured and to compare their nomological networks.

4.2 Theoretical Framework

Motivation for workplace learning consists of two components: 'workplace learning' and 'motivation'. We will first describe the concept of workplace learning. Then, the concept of motivation is discussed as it occurs in workplace settings. Finally, we present the three research questions leading this review.

4.2.1 Workplace Learning

Workplace learning has been investigated in a variety of study fields and disciplines, such as higher education, adult education, vocational education and organizational theories (Boud & Garrick, 1999, 2001; Hager, 1999, 2004a, b; Manuti et al., 2015). Consequently, it has generated numerous definitions and understandings of workplace learning and the meaning of workplace learning is still subject to debate. Following Jacobs and Park (2009, p. 134), workplace learning is "the process used by individuals when engaged in training programs, education and development

courses, or some type of experiential learning activity for the purpose of acquiring the competence necessary to meet current and future work requirements". According to this definition, workplace learning is an inclusive term for different learning activities relevant for work-related tasks executed in different types of learning contexts. Literature on workplace learning proposes two major types of learning contexts: formal and informal learning. Formal learning is defined as structured learning that takes place 'off-the-job' (e.g., lectures, conferences, trainings) or outside the work environment, typically in classroom-based formal educational settings (Marsick & Volpe, 1999a, b; Marsick & Watkins, 2001; Marsick et al., 2006). Eraut (2000) describes several characteristics of formal learning: a prescribed learning framework, an organized learning event or package, the presence of a designated teacher or trainer, the award of a qualification or credit and the external specification of outcomes. Informal learning is conceptually rooted in experiential learning theory and was differentiated from formal learning by Watkins and Marsick (1992) in their theory of learning in organizations. Following, Marsick and Watkins (1999, 2001) informal learning takes place "wherever people have the need, motivation, and opportunity for learning" (2001, p. 28) and that it "is usually intentional but not highly structured and includes self-directed learning, networking, coaching, mentoring, and performance planning that includes opportunities to review learning needs" (2001, pp. 25–26). Informal learning is described as being less pre-structured and more in control of the learner than formal learning (Watkins & Marsick, 1992). It is also reported to be embedded in daily work activities of the employee and therefore is often a by-product of some other activity occurred in an implicit, reactive, or deliberate way (Eraut, 2007; Livingstone, 2001, 2006; Lohman, 2006). Despite these two types of learning contexts, the distinction of formal and informal learning remains an object of debate in the workplace learning literature. Several authors (e.g., Billett, 2001a, b; Colley et al., 2002) point out that informal learning has often been defined in opposition to formal learning (any learning that is not formal) and lacks a clear definition.

In the present article, we examine whether researchers refer to different contexts when using « learning motivation » and « training motivation » as terminology to describe motivation for workplace learning. More specifically, we expect that « training motivation » might refer to employees' motivation to learn from formal workplace learning settings only whereas « learning motivation », which is much more broad-based, refers to employees' motivation to learn from formal and informal workplace learning settings.

4.2.2 Motivation as It Occurs in Workplace Settings

Literature on work motivation considers the complexity of motivation by taking into account the interactions between cognition, affect and behavior (Latham & Pinder, 2005). Work motivation is commonly described as "the set of internal and external forces that initiate work-related behavior, and determine its form, direction, intensity, and duration" (Pinder, 2008, p. 11). This definition brings several important

insights. First, it admits the influence of contextual (e.g., job characteristics) as well as individual (e.g., needs) factors on work-related behavior. Work motivation refers then to the psychological mechanisms and processes that connects the individual and the environment. Second, this definition highlights that work motivation triggers work-related behavior. Third, motivation is also reported in this definition as regulatory for the quantity of displayed efforts and their duration and therefore affecting persistence. It is this distributional aspect of motivation in the allocation of resources that accounts mostly for behavioral change (Kanfer et al., 2008). Kanfer (1990) points out that most contemporary theories recognize the dynamic nature of motivation, even though these theories differ as to the kind of processes they refer to. Motivation has been theorized by many different disciplinary backgrounds and this has generated a number of different interpretations about the underlying processes it constitutes (Self-determination theory, Expectancy theories, Goal orientation theories etc.) and led, especially in educational psychology to insights on motivation in the context of education. In this review we will not focus on the application of these different theoretical perspectives in the workplace context and will exclusively orient our search upon the use of "learning motivation" and "training motivation" in organizational literature. Since workplace learning is considered to be a work-related behavior, we examine in the present article if definitions of "learning motivation" and "training motivation" are described like work motivation is commonly defined (cfr. Pinder, 2008) and thus refer to' psychological processes that connect internal and external forces that initiate learning behavior or training behavior and determine its form, direction, intensity, and duration'.

The present review aims to examine through a systematic approach the terms "learning motivation" and "training motivation". More specifically, this review focuses on the following research questions:

RQ1: How are training and learning motivation conceptualized?
RQ2: How are training and learning motivation measured?
RQ3: Do training and learning motivation present different nomological networks?

4.3 Method

In order to ensure the transparency of the methodology and to enhance the reproducibility of the study, different stages were followed as suggested by Fink (2014). First, inclusion and exclusion criteria were formulated. Then, searching terms were formulated and pretested in order to attain the optimal balance between the external and internal validity. Finally, we proceeded to the identification of relevant publications. In the following paragraphs, the different stages are described in more details.

4.3.1 Inclusion and Exclusion Criteria

Inclusion and exclusion criteria were defined before conducting the search process. First, to provide an insight into recent scientific literature, the time span was restricted to publications from 1990 through 2019. To ensure a high quality of productions, only peer-reviewed articles were retained. Then, in accordance with one of our research goals related to the analysis of measurement instruments used in the operationalization of workplace learning motivation, only quantitative empirical studies were retained. Finally, we only included articles exclusively focusing on a workers population. Therefore, articles reporting on trainees were not taken into account as the sample could include students as well.

4.3.2 Literature Search and Selection Process

Several trials were performed in order to define an optimal combination of keywords (Fink, 2013, 2014) in terms of sensitivity (capacity of integrating a high number of relevant studies) and specificity (capacity to present a low number of irrelevant studies). We also noticed that "pre-training" was often used as a synonym of "training motivation" and/or of "learning motivation" in the title, key-words and/or abstract. Therefore "pre-training" was also included in our search terms. The final keywords combination (all*(motivation) AND all*(learn* OR train* OR pre-train* OR pre-train*) AND all*(work* OR employ*))[1] was entered in three data-sources (PsycINFO, PsycARTICLES, ERIC) available in the authors' institution, by using the Proquest interface. The duplicates were not allowed from the initial search. Finally, irrelevant topics and classifications, detailed in the Table 4.1, were excluded from the search analyses at an early stage. The initial search resulted in a total number of 807 articles (PsycINFO = 517; PsycARTICLES = 86; ERIC = 204). Articles were first screened on basis of their titles and abstracts. This first selection resulted in a total of 121 articles which was reduced to 47 articles after text reading. The important difference between the first and the second selection is mainly due to the sample that was mostly composed of students or trainees without specifying whether these trainees were also working at the same time.

4.3.3 Sample Analysis

Definitions of pre-training, training and learning motivation in our sample of articles presented two types of definitions. A conceptual definition refers to a clearly stated definition describing the nature of the concept, whereas an operational definition refers to a definition given through the measurement instrument. Each type of

[1] all* = title, abstract and keywords

Table 4.1 List of excluded topics and classifications from research process on ProQuest interface

Excluded topics
Student motivation, student attitudes, college students, rats, higher education, academic achievement motivation, high school students, animal learning, elementary school students, adolescent development, undergraduate students, college faculty, classroom environment, student characteristics, teacher student relationship
Excluded classifications
Drug & Alcohol Rehabilitation, sports, Psychotherapy & Psychotherapeutic Counseling, Substance Abuse & Addiction, Classroom Dynamics & Student Adjustment & Attitudes, Neuropsychology & Neurology, Physical & Somatoform & Psychogenic Disorders, Childrearing & Child Care, Psychoanalytic Theory, Cognitive & Perceptual Development, Human Factors Engineering, Behavior Disorders & Antisocial Behavior, Psychoanalytic Therapy, Developmental Disorders & Autism, Group & Family Therapy, Psychological Disorders, Schizophrenia & Psychotic States, Rehabilitation, Medical Treatment of Physical Illness, Neurological Disorders & Brain Damage, Affective Disorders, Criminal Rehabilitation & Penology, Marriage & Family, Physiological Psychology & Neuroscience, Religion, Consumer Attitudes & Behavior, Educational/Vocational Counseling & Student Services, Linguistics & Language & Speech, Home Care & Hospice, Sexual Behavior & Sexual Orientation, Architectural Engineering, Structural Design, and Properties (General) (CE), Clinical Psychological Testing, Design Principles (MT), Behavior Therapy & Behavior Modification, Cognitive Therapy, Immunological Disorders, Literature & Fine Arts, Behavioral and Cognitive Neuroscience, Eating Disorders.

Table 4.2 Summary of categorization of training and learning motivation conceptualization

		Defined				
		Theory-based (12)		Not theory-based (21)		
	Not defined	Conceptual (5)	Operational (7)	Conceptual (20)	Operational (1)	Total
Training motivation	8	2	6	6	1	23
Learning motivation	6	3	1	14	–	24
Total	14	33				**47**

definition is theory-based if it was defined based on at least one motivational theoretical framework. A definition was categorized as not theory-based in case it was self-defined or adopted from another article without referring to a theoretical framework. Consequently, four types of definitions were distinguished: *conceptual theory-based*, c*onceptual not theory-based*, *operational theory-based* and *operational not theory-based.* A count was established in Table 4.2. Moreover, the categorization for each article is reported in Table 4.3.

Table 4.3 Conceptualization and operationalization of training and learning motivation

Author (Year)	Reported definition (Reference/s)	Type of definition					Measurement instrument	
		C	C-TB	O	O-TB	N dim	N items	Content of reported items (Reference/s)
Training Motivation								
1. Bartlett and Klein (2001)	Level of motivation toward participation in training and development activities (n.r.)	x	–	–	–	1	11	n.r. (Noe & Schmitt, 1986)
2. Bertolino et al. (2011)	Tendency to engage in training and development activities, to learn training content, and to embrace the training experience (Carlson et al., 2000; Noe, 1986)	x	–	–	–	1	2	(1) I will be able to apply on my job what I learn in the training activities (2) Gaining the skills provided by training activities will positively affect my performance (Truxillo & Weather, 2005, adapted).
3. Cannon-Bowers et al. (1995)	n.r.		–	–		3	12	(1) If I am successful in recruit training it will better enable me to perform my job in the Navy (Lawler, 1973; Vroom, 1964)
4. Carlson et al. (2000)	Degree to which an individual perceive training as a useful and important opportunity (n.r.).	–	–	x	–	1	17	(1) I am willing to invest effort to improve skills and competencies related to my job (Noe & Wilk, 1993).
5. Chiaburu and Marinova (2005)	n.r.	–	–	–	–	1	10	(1) I try to learn as much as I can from training programs (Noe & Schmitt, 1986).
6. Chung et al. (2017)	Pre-training motivation to learn refers to the trainees' desire to learn the content of training programs before participating in a training program (n.r.)	x	–	–	–	1	4	(1) I am willing to exert considerable effort in diversity programs in order to improve my skills and knowledge (Noe & Schmitt, 1986).
7. Clark et al. (1993)	n.r.	–	–	–	–	1	9	n.r. (Noe & Schmitt, 1986)
8. Facteau et al. (1995)	n.r.	–	–	–	–	1	9	(1) I try to learn as much as I can from training courses (Baldwin & Karl, 1987; Hicks, 1983; Noe and Schmitt, 1986).

(continued)

Table 4.3 (continued)

Author (Year)	Reported definition (Reference/s)	Type of definition					Measurement instrument	
		C	C-TB	O	O-TB	N dim	N items	Content of reported items (Reference/s)
9. Guerrero and Sire (2001)	Multidimensional construct: self-efficacy and instrumentality (Bandura, 1986; Sire, 1993).	–	–	–	x	2	17	(1) I have good learning abilities It takes me time to assimilate the content of training (2) It takes me times to assimilate the contents of training (3) I find it hard to understand theoretical explanations (4) If the course is too abstract, I easily get lost (5) I find writing easy (6) I can easily memorize the course materials (7) I am able to follow even if the trainer goes quickly (8)–(17) Importance of training results for personal satisfaction, autonomy at work, personal knowledge, acquisition of skills, self-confidence at work, efficiency at work, adaptation at work, salary increase, personal advancement, my future (Guthrie & Schwoerer, 1994; Quinones, 1995; Baldwin & Karl, 1987).
10. Hassan et al. (2010)	Goal directed inspiration derived from trainees' personal needs and the decision processes they use to satisfy those needs. (Blanchard & Thacker, 2004)	–	x	–	–	1	6	n.r. (Noe & Wilk, 1993).

11. Kim et al. (2016)	n.r.	–	–	–	–	1	8	(1) I try to learn as much as I can from education/training programs (2) I am willing to make efforts to improve my skills and competencies for learning purposes (Bartlett, 2001; Noe & Schmitt, 1986).
12. Machin and Fogarty (2004)	Trainees' intensity of desire to acquire new skills and their intentions to acquire new skills during training.	x	–	–	–	1	9	(1) I aim to master all of the required skills during training (self-developed).
13. Naquin and Holton (2002)	Training motivation and transfer motivation are components of motivation to improve work through learning (Baldwin et al., 2000; Naquin & Holton, 2002).	–	–	–	x	1	7	n.r. (Weinstein et al., 1994).
14. Patrick et al. (2012)	Motivation to train consists in, instrumentality and motivation to learn (n.r.).	–	–	–	x	3	11	(1) It is desirable for me to do well during this course. (*valence*) (2) I expect this course to help me to develop coaching skills that are useful for my career as an instructor. (*instrumentality*) (3) I will try to learn as much as I can during this course. (*motivation to learn*) (Colquitt & Simmering, 1998; Matthieu et al., 1992; Noe & Schmitt, 1986, adapted)
15. Scaduto et al. (2008)	Intensity and persistence of efforts that trainees apply in learning-oriented improvement activities before, during, and after training (Burke & Hutchins, 2007)	x	–	–	–	1	15	(1) I try to learn as much as I can from training programs (Noe & Schmitt, 1986).

(continued)

Table 4.3 (continued)

Author (Year)	Reported definition (Reference/s)	Type of definition					Measurement instrument	
		C	C-TB	O	O-TB	N dim	N items	Content of reported items (Reference/s)
16. Setti et al. (2015)	The direction, intensity and persistence of learning-directed behaviors in training contexts (Kanfer & Ackerman, 2004) and the tendency to engage in training and development activities, to learn training content and to embrace the training experience (Carlson et al., 2000)	x	–	–	–	1	3	(1) I believe the training activity is useful for workers who occupy a job position similar to mine (Truxillo & Weathers, 2005)
17. Smith et al. (2008)	Process that determines how energy is used to satisfy needs (Latham & Pinder, 2005)	–	x	–	–	1	3	(1) I will expend effort to learn the material presented in this training program. (2) I am planning to focus during the training program. (3) I intend to work consistently during this program (Perugini & Bagozzi, 2001)
18. Switzer et al. (2005)	n.r.	–	–	–	–	1	9	(1) I look forward to actively participating in training. (2) I try to learn as much as I can from training. (3) I use my own time to prepare for training courses by practicing and completing assignments.(Facteau et al., 1995).
19. Tannenbaum et al. (1991)	Training motivation includes expectancy, instrumentality and valence (n.r.)	–	–	–	x	3	18	(1) If I am successful in recruit training it will better enable me to perform my job in the Navy (*expectancy*) (2) Getting good duty stations and assignments (*instrumentality and valence*)

20. Tharenou (2001)	Training motivation consists in motivation through expectation (expectancy, instrumentality, valence) and motivation to learn (n.r.)	–	–	–	x	4	26	(1) attending T&D gives me good ideas (2) Believe can improve my K&S by participation in T&D (3) Can understand most material in T&D programs I attend (4) Use information & behaviors learnt in T&D programs on job (5) Think T&D programs help me improve my skills *Instrumentality for* (1) reaching career goals (2) obtaining a pay increase (3) increasing my job security (4) Introducing change to my workplace (5) Gaining promotion or advancement (6) Gaining opportunities to pursue different career paths (7) Obtaining praise from supervisor.
								Importance for (1) Reaching career goals (2) Pay increase (3) Job security (4) Change to my workplace (5) Promotion or advancement (6) Opportunities for different career paths (7) Supervisor praise.

(continued)

Table 4.3 (continued)

Author (Year)	Reported definition (Reference/s)	Type of definition					Measurement instrument	
		C	C-TB	O	O-TB	N dim	N items	Content of reported items (Reference/s)
								Motivation to learn (1) Try to learn as much as can from T&D (2) Believe tend to learn more T&D program than others (3) Usually motivated to learn skills emphasized in T&D programs (4) Would like to improve my skills (5) Willing exert effort in T&D programs to improve skills (6) Taking T&D courses not high priority for me (7) Willing to invest effort to improve job skills & competencies (Noe & Schmitt, 1986; Burke & Day, 1986; Gritz, 1993; Tharenou, 1997; Maurer & Tarulli, 1994; Noe & Wilk, 1993; Tannenbaum et al., 1991).
21. Tracey et al. (2001)	n.r.	–	–	–	–	1	9	(1) If I can't understand some part of (title of training program), I will try harder (Vroom, 1964)
22. Tsai and Tai (2003)	n.r.	–	–	–	–	1	16	(1) I try to learn as much as I can from training program. (2) Taking training courses and seminars is not a high priority for me. (3) I'm willing to exert considerable effort in the training program in order to prove my skills (Noe & Wilk, 1993)

23. Zaniboni et al. (2011)	Training motivation is function of three variables: expectancy, instrumentality and valence (Vroom, 1964)	–	–	–	x	3	9	(1) Attending training activities, I want to improve technical/practical knowledge in my job. (2) I feel that it is important to take part in training programs in order to strengthen my problem-solving skill. (3) I think it's important to learn new things from training activities. (4) I believe the training activity is useful for workers who occupy a job position similar to mine. (5) Usually I am able to apply to my job what I learn in training activities.
								(6) Acquiring new skills thanks to training activities, positively influences my performances. (7) If I am involved in training activities, I am confident I can master aspects of my job. (8) If I am involved in training activities, I am confident to learn the new knowledge taught in the training activities. (9) If I am involved in training activities, I am confident I can improve my ability of initiative (Truxillo and Weathers, 2005)
Learning Motivation								
24. Alvelos et al. (2015)	Motivation to learn is defined as trainee's determination to learn the training contents (Noe & Schmitt, 1986)	x	–	–	–	1	3	(1) I try to give my best in the training program, even if I don't like it. (Weinstein et al., 1994).

(continued)

Table 4.3 (continued)

Author (Year)	Reported definition (Reference/s)	Type of definition					Measurement instrument	
		C	C-TB	O	O-TB	N dim	N items	Content of reported items (Reference/s)
25. Al-Eisa et al. (2009)	Specific desire of a trainee to learn the content of the training program and to fully embrace the training experience (Noe & Schmitt, 1986; Carlson et al., 2000)	x	–	–	–	1	4	(1) I am very much excited about attending this program. (2) I am interested in learning the training material that will be covered in this program. (3) I will try to learn as much as I can from this program (4) I am motivated to learn the training material that will be emphasized in this program (Yi & Davis, 2003, adapted)
26. Cheng & Ho (2001)	Specific desire of a learner to learn the content of a training program (Noe, 1986; Noe & Schmitt, 1986)	x	–	–	–	1	4	(1) I tried to learn as much as I could from the MBA program (n.r.)
27. Chiaburu and Lindsay (2008)	n.r.	–				1	n.r.	(1) I am willing to exert considerable effort in training programs in order to increase my skills (Noe & Schmitt, 1986)
28. De Lange et al. (2010)	Degree to which workers report that their job motivates them to learn new behavior patterns and skills on their job, or that they have to solve problems at their job (Taris & Kompier, 2004)	–	x	–	–	1	7	(1) In my work, I feel challenged by new problems. (2)I look for solutions for problems of colleagues. (3) I continue to work on a problem until it is resolved (Van Mierlo et al., 2001)
29. Garavan, Carbery, O'Malley and O'Donnell (2010)	Degree to which an employee desires to participate in, and learn from, a training activity (Noe, 1986)	x	–	–	–	1	16	(1) I try to learn as much as I can from training programs. (2) I would like to improve my skills

30. Govaerts et al. (2018)	Trainees' desire to learn the content of the training programme (Noe & Schmitt, 1986)	x	–	–	–	1	4	(1) I am motivated to learn the training material that will be emphasised in this program. (Al-Eisa et al., 2009)
31. Harris and Cole (2007)	Willingness for personal change	–	x	–	–	3	6	(1) My leadership skills need improving (perceived need to change) (2) If I try, I can become a better leader (efficacy for change) (3) Becoming a better leader is important to me (valence of change) (Armenakis et al., 1993)
32. Kochoian et al. (2017)	Learning motivational beliefs : learning self-efficacy and learning value (Bandura, 1992; Eccles & Wigfield, 2000, 2002)	–	x	–	–	2	7	(1) I am confident in my ability to learn complex skills (Armstrong-Stassen, 2008) (2) Relative score of work-related goals' prioritization (Zacher & Frese 2009)
33. Kontoghiorghes (2002)	n.r.	–	–	–	–	n.r.	n.r.	n.r.
34. Kyndt et al. (2016)	Willingness and the desire to participate in training and development and to take on experiences to learn (Major et al., 2006)	x	–	–	–	1	n.r.	(1) Sometimes I'm afraid that I may not understand the content of an activity as thoroughly as I'd like (Elliot & McGregor, 2001)
35. Major et al. (2006)	Desire to engage in training and development activities,to learn training content, and to embrace the training experience. (Carlson et al., 2000; Noe,1986)	x	–	–	–	1	17	(1) I am willing to exert considerable effort in training programs in order to improve my skills (Noe & Wilk, 1993)
36. Ng (2015)	Individual's desire to attend, participate and learn the content of a training program (Colquitt et al., 2000; Facteau et al., 1995)	x	–	–	–	1	7	(1) I am interested to attend training programs. (adopted from Chiaburu & Tekleab 2005; Facteau et al. 1995; Switzer et al., 2005)

(continued)

Table 4.3 (continued)

Author (Year)	Reported definition (Reference/s)	Type of definition					Measurement instrument	
		C	C-TB	O	O-TB	N dim	N items	Content of reported items (Reference/s)
37. Ng and Ahmad (2018)	Trainee's desire to attend, participate, and learn in training programs (Colquitt et al., 2000; Machin & Treloar, 2004; Noe, 1986)	x	–	–	–	1	n.r.	n.r. (based on Naquin & Holton, 2002; Weinstein et al., 1994
38. Noe and Wilk (1993)	Employees' desire to learn the content of training and development activities (Noe, 1986)	x	–	–	–	1	8	(1) I try to learn as much as I can from training programs (Noe & Schmitt, 1986)
39. Park et al. (2018)	One's desire to learn the content of training and development activities (Noe, 1986)	x	–	–	–	1	4	n.r. (Noe & Schmitt, 1986)
40. Roberts et al. (2018)	The extent to which trainees are motivated to acquire knowledge and understand the training material (Noe & Schmitt, 1986)	x	–	–	–	1	7	(1) I would like to improve my skills (Noe & Schmitt, 1986)
41. Rowold (2007)	Trainee's specific desire to learn the content of the training program (Noe, 1986)	x	–	–	–	1	5	(1) I will try to learn as much as I can from the training program. Noe & Schmitt, 1986 (adapted)
42. Smy et al. (2016)	n.r.	–	–	–	–	1	3	(1) I am keen to make use of the learning and development opportunities during this course (2) I will try to learn as much as I can during this course (3) I am motivated to learn the material during this course (Noe & Schmitt, 1986).

43. Vanthournout et al. (2014)	Motivation to participate in learning : autonomous motivation controlled motivation, a-motivation (Deci & Ryan, 2000)	–	–	–	x	3	20	(1) I am motivated to learn at work because that's what others (supervisors, colleagues, customers, family, friends, etc.) expect me to do (Vansteenkiste et al., 2009, adapted)
44. Vignoli and Depolo (2019)	n.r.	–	–	–	–	1	4	(1) I am interested in learning the training material that will be covered in this program (Al-Eisa et al., 2009).
45. Walsh et al. (2013)	Specific desire on the part of the trainee to learn the content of the training program (Noe & Schmitt, 1986)	x	–	–	–	1	4	(1) I would be motivated to learn the skills emphasized in sexual harassment training (2) I would try to learn as much as I could from sexual harassment training. Noe & Schmitt, 1986
46. Warr et al. (1999)	n.r.	–	–	–	–	1	6	(1) Generally, I am enthusiastic about learning new things (Warr & Bunce, 1995).
47. Warr and Birdi (1998)	n.r.	–	–	–	–	1	5	(1) I am keen to make use of the learning and development activities (2) I want to take up a course of my own choice this year (3) I am very enthusiastic about learning new things (4) I am willing to attend work-related courses during my own time (5) I would participate in learning and development knowing there was no guarantee of promotion or a pay increase (n.r.)

Note: *n.r.* not reported, *C* conceptual definition, *C-TB* conceptual theory-based definition, *O* operational definition, *O-TB* operational theory-based definition

4.4 Results

Table 4.4 describes the selected articles, in terms of sample characteristics and number of measurement points. In 68% (32/47) of cases, researchers used a sample higher to 200 participants. A total of 49% (23/47) of articles do not communicate participants' age, gender and/or their educational level. Most of articles realized one unique point of measurement (66%), 26% have realized 2 measurement points and 8% measured their variables 3 times.

The number of articles on training motivation (23/47) was almost equivalent to the articles using the term learning motivation (24/47, see Table 4.2).

4.4.1 How Are Training and Learning Motivation Conceptualized?

As reported in Table 4.2 (summary, see details in Table 4.3), in total 33 articles on 47 (68%) provide a definition of the used concept (training or learning motivation). Among these articles, 12 articles providing a theory-based definition (26% of the total sample) of which more studies with an operational definition (7/12, defined through a measurement instrument) than a conceptual definition (5/12, based on one or several concepts). When the provided definition is not based on any theoretical background, the definition tends to be however more conceptual (20/21, self-defined, or referring to self-defined definitions of other authors) than operational (1/21), self-defined, based on the used measurement instrument). It also appears that training motivation counts more theory-based definitions (8/12) than learning motivation (4/12). When learning motivation is used, the majority of provided definitions are self-defined (14/24), with no reference to any theoretical background.

Based on Table 4.3, we observe that theory-based definitions refer, at least partly, to the Expectancy-Value Theory (see articles n°14; 19; 20; 23; 32), Goal Theory (10; 17), Self-Efficacy Theory (9; 32), Work Improvement Theory (13), Active Problem Solving Theory (28), Change Theory (31) and Self-Determination Theory (43).

In terms of content, self-defined conceptual definitions of training motivation refer to *motivation to participate in training* (1), *desire to learn training content* (2; 12; 16), *desire to learn before training* (6), *persistence and intensity of efforts for learning before, during and after training* (15; 16), and *perceiving training as useful and important* (4). Self-defined definitions of learning motivation refer to notions of *trainees' desire and/or determination to learn training content* (24; 25; 26; 29; 30; 35; 36; 37; 38; 39; 40; 41; 45), *desire to participate in a training activity* (29; 34; 35; 36; 37). Therefore, based on the content of definitions not refering to any theoretical background, we observe that training and learning motivation are used as synonyms. Indeed, in this case, training and learning motivation refer both to training contexts, without taking into account the diversity of learning contexts.

Table 4.4 Description of studies included in the literature review

Author (Year)	Sample characteristics						N of measurements
	N	Country	Sector, Profession	Age	Gender (majority)	Education	
1. Alvelos et al. (2015)	202	Portugal	Private, Insurance employees	20–30 years old (36%)	Female (59.9%)	Diploma holder (47%)	1
2. Al-Eisa et al. (2009)	287	Saudi Arabia	Public, Managers	65% < 40	Male (68.3%)	Diploma holder (60%)	2
3. Bartlett (2001)	337	U.S.A.	Public, Nurses	n.r.	Female (94.7%)	At least a 4-year college degree (49.6%)	1
4. Bertolino et al. (2011)	252	Italy.	Public, Administration employees	M = 40.60 SD = 8.30	Female (64%)	High school diploma (72.5%)	1
5. Cannon-Bowers et al. (1995)	666	U.S.A.	Public, Militaries	M = 19.84 SD = 2.43	Male (55%)	n.r.	1
6. Carlson et al. (2000)	158	U.S.A.	Warehousers	M = 44.4	Male (58%)	n.r.	1
7. Chiaburu and Lindsay (2008)	254	U.S.A.	n.r., service organization	n.r.	n.r.	n.r.	1
8. Chiaburu and Marinova (2005)	186	U.S.A.	n.r., Employees	n.r.	n.r.	n.r.	1
9. Chung et al. (2017)	160	U.S.A.	Mixed	n.r.	Female (60.3%)	n.r.	1
10. Clark et al. (1993)	245	U.S.A.	Mixed	n.r.	Female (51%)	n.r.	1
11. De Lange et al. (2010)	1237	Netherlands	Mixed	48.5% > 45 year	Male (69.5%)	Lower vocational (40.5%)	1
12. Facteau et al. (1995)	967	U.S.A.	Public, state government supervisors and managers	M = 45.4 SD = 8.7	n.r.	At least 4-year college degree (50%)	1
13. Garavan et al. (2010)	557	Ireland	Mixed	*	Female (57%)	*	1
14. Govaerts et al. (2018)	111	Belgium	Mixed	M = 40.6 SD = 10.3		Post-secondary degree (71.2%)	1
15. Guerrero and Sire (2001)	335	France	Machinery and nuclear, employees	M = 36	Male (100%)	At most BP or CAP	1

Table 4.4 (continued)

Author (Year)	Sample characteristics						N of measurements
	N	Country	Sector, Profession	Age	Gender (majority)	Education	
16. Harris and Cole (2007)	74	U.S.A.	Private, employees	n.c.	n.c.	n.c.	2
17. Hassan et al. (2010)	24	Pakistan	Private health company, area managers	n.r.	Male (87.5%)	n.r.	2
18. Cheng & Ho (2001)	81	China	Mixed	30–40 (70.4%)	Male (77.8%)	Higher education	1
19. Kim et al. (2016)	389	Korea	Mixed	M = 33.11 SD = 6. 67	Male (68.6%)	Higher education (79.8%)	1
20. Kochoian et al. (2017)	560	Belgium	Mixed	M = 40.2 SD = 12.6	Male (58%)	Higher education (77%)	1
21. Kyndt et al. (2016)		Belgium	Healthcare Institutions	M = 40.64 SD = 12.02	Female (80.79%)	Higher education (71.7%)	1
22. Kontoghiorghes (2002)	192	U.S.A.	Public, health care insurance	n.r.	Female (86.4%)	Bachelor degree (39.5%)	
23. Machin and Fogarty (2004)	T1 : 89 T2 : 104	Australia	Public, police	n.r.	n.r.	n.r.	2
24. Major et al. (2006)	368	U.S.A.	Financial service organization	88% < 55	n.r.	46% 4-year college degree	2
25. Naquin and Holton (2002)	239	U.S.A.	Private, health insurance company	M = 35.5 SD = 10.52	Female (71.5%)	n.r.	1
26. Ng (2015)		Malaysia	Government agency (administrative and technical employees)	20–29 years old (29.7%)	Balanced	Malaysian Certificate of Education (45.4%)	1
27. Ng and Ahmad (2018)	131	Malaysia	Public Administration	30–39 years old (51.1%)	Female (67.9%)	Malaysian Certificate of Education (38.2%)	1

28. Noe and Wilk (1993)	1008	U.S.A.	Health care providers, bank respondents public engineering firm	*	*	*	1
29. Park et al. (2018)	216	U.S.A.	Employees in educational institutions	>50 years old (46.8)	Female (70.8%)	n.r.	1
30. Patrick et al. (2012)	232	U.K.	Public, military instructors	M = 33.84	Male (87%)	n.r.	2
31. Roberts et al. (2018)		Multinationa	Energy industry (engineers)	<35 years old (65%)	Male (78%)	At least bachelor degree	1
32. Rowold (2007)	84	Germany	Call center agents	M = 27.8 SD = 6.61	Balanced	High school (60.7%)	3
33. Scaduto et al. (2008)	495	U.S.A.	n.r , employee	>40 (49%)	Male (76%)	College education (47%)	2
34. Setti et al. (2015)	2215	Italy	Financial institution	55–60 (87.7%)	Male (76.3%)	n.r. (mostly managers)	1
35. Smith et al. (2008)	90	Australia	Non-profit charity organization, employees	M = 41	Female (66%)	n.r.	2
36. Smy et al. (2016)	578	U.K.	Public, Militaries	M = 20.35 SD = 2.87	Male (86%)	n.r.	1
37. Switzer et al. (2005)	68	U.S.A.	Nationwide insurance Firm	n.r.	Female (57%)	n.r.	2
38. Tannenbaum et al. (1991)	666	U.S.A.	Public, Militaries	M = 19.84 SD = 2.43	Male (55%)	n.r.	2
39. Tharenou (2001)	1705	Australia	Mixed, white collars	25–54 (53%)	Male (52%)	At least under-graduated (56%)	2
40. Tracey et al. (2001)	420	U.S.A.	Private, hotel managers	M = 31	Female (51%)	n.r.	1

(continued)

Table 4.4 (continued)

Author (Year)	Sample characteristics						N of measurements
	N	Country	Sector, Profession	Age	Gender (majority)	Education	
41. Tsai and Tai (2003)	T1 : 184 T2 : 149	Taiwan	Private, bank employees	M = 31.70 SD = 8.43	M = 0.34 SD = 0.48	n.r.	2
42. Vanthournout et al. (2014)	202	Belgium	Non-academic knowledge-intensive Organization, employees	41–50 (32%)	Male (75%)	Higher education (72%)	1
43. Vignoli and Depolo (2019)	566	Italy	School principals' evaluators	n.r.	Female (69.6%)	n.r.	3
44. Walsh et al. (2013)	119	U.S.A.	Mixed	M = 41.9 SD = 10.7	Female (69.7%)	Undergraduate or graduate degree (52.5%)	3
45. Warr and Birdi (1998)	123	U.K.	Motor-vehicle dealership, technicians	n.r.	Male (100%)	n.r.	1
46. Warr et al. (1999)	T1 : 163 T2 : 163 T3 : 123	U.K.	Motor-vehicle dealership, technicians	n.r.	Male (100%)	n.r.	1
47. Zaniboni et al. (2011)	268	Italy	Administration, technical bureau, accounting office	M = 40.10; SD = 8.30	Female (64%)	n.r.	1

Note: *n.r.* not reported, *BP* Brevet Professionnel, *CAP* Certificat D'aptitude Professionnelle, *n.c.* not collected to assure anonymity, * data presented as depending on other variables

Finally, overall, articles presenting a theory-based definition tend to have an adequacy between the conceptualization and the operationalization of motivation. For non theory-based operational definitions, we also observe correspondence between conceptualisation and operationalisation as the definition refers to the dimensions used in the measurement instrument. However, 40% of the articles (19/47) in our sample do not report a definition and/or items' examples. Consequently, the adequacy between the definition and the measurement instrument is difficult to evaluate.

4.4.2 How Are Training and Learning Motivation Measured?

In order to examine how training motivation and learning motivation are operationalized, we analyse which measurement instrument has been used and the number of items selected.

Based on Table 4.3, 21 articles on 47 report to use directly or indirectly (via a second source) and at least partially the scale of Noe and Schmitt (1986). This represents 45% of the total sample. More specifically, this scale is used in 12 out of 23 articles (1; 4; 5; 6; 7; 8; 10; 11; 14; 15; 20; 22) for training motivation. It is the case of learning motivation in 9 articles out of 24 (27; 29;35; 38; 39; 40; 41; 42; 45).

Although the scale is mostly taken from Noe and Schmitt (1986), the length of the scale differs from one study to another. Three of these articles (14, 20; 25) report a mixed scale combining the scale from Noe and Schmitt (1986) with another one. Other studies do not report any reference (12; 26; 47).

Then, for what concerns the scale dimensionality, most scales (80%) present a unidimensional structure. Among the articles, using several dimensions (between 2 and 4), 6 concern training motivation and include the following dimensions: *instrumentality* (9; 14; 19; 20; 23), *expectancy* (19; 20; 23), *motivation to learn* (14; 20), *valence* (23), and *self-efficacy* (9). One article counts 3 dimensions but does not report which dimensions are used (3). Concerning learning motivation, only 3 articles report a multidimensional questionnaire, referring to *perceived need to change* (31), *efficacy to change* (31), *valence of change* (31), *learning value* (32), *learning self-efficacy* (32), *autonomous motivation* (43), *controlled motivation* (43), and *a-motivation* (43).

Finally, 43 out 47 studies report the number of items they used to measure training and learning motivation and which varies between 2 to 26 items. Training motivation is reported to be measured with at least 10 items in 45% (9/23) of studies. This is the case for only 12.5% (3/24) of the studies for learning motivation. Most of studies also provide at least one example of the used items (85%).

4.4.3 Do Training and Learning Motivation Present Different Nomological Networks?

Table 4.5 summarizes antecedents and consequences of training and learning motivation examined in the selected studies.

Table 4.5 Antecedents and consequences of training and learning motivation

Study	Role of motivation	Antecedents	Consequences
Training motivation			
1. Bartlett (2001)	Correlation	Organizational commitment	
2. Bertolino et al. (2011)	Dependent	Proactive Personality Age (moderator)	–
3. Cannon-Bowers et al. (1995)	Mediator	Cognitive ability Attitudes Organizational commitment Intent to remain Self-efficacy Academic self-efficacy Physical self-efficacy Demographics Gender Age Family history	Training performance
4. Carlson et al. (2000)	Dependent	Organizational commitment Training self-efficacy Self-esteem Achievement motivation Flexibility Attitudes toward training	–
5. Chiaburu and Marinova (2005)	Mediator	Supervisor support Peer Support Performance approach goal orientation Performance avoid goal orientation Mastery approach goal orientation Mastery avoid goal orientation Training Self-Efficacy	Skill Transfer
6. Chung et al. (2017)	Dependent	Perceived Ethnic Discrimination Ethnic Dyadic Dissimilarity	–
7. Clark et al. (1993)	Dependent	Career utility Job utility	
8. Facteau et al. (1995)	Mediator	Training Reputation Intrinsic Incentives Compliance Extrinsic Incentives Career Exploration Career Planning Organizational Commitment Subordinate Support Peer Support Supervisor Support Top Management Support Task Constraints	Perceived training transfer

(continued)

Table 4.5 (continued)

Study	Role of motivation	Antecedents	Consequences
9. Guerrero and Sire (2001)	Mediator	Voluntary participation Information on training programme Supervisor support Age Seniority	Satisfaction with training Learning from training (knowledge)
10. Hassan et al. (2010)	Independent	–	Training effectiveness
11. Kim et al. (2016)	Dependent	Career Commitment Ethical behavior Perception of organizational politics	–
12. Machin and Fogarty (2004)	Dependent	Positive affect Negative Affect Climate for transfer : Goal cues Social cues Task cues Positive reinforcement Negative reinforcement Extinction Pre-training self-efficacy	–
13. Naquin and Holton (2002)	Dependent	Neuroticism Conscientiousness Agreeableness Positive affect Negative affect Extraversion Openness Work commitment	–
14. Patrick et al. (2012)	Mediator	Being on one's chosen job	Motivation to transfer Post-training self-efficacy Knowledge acquisition
15. Scaduto et al. (2008)	Mediator	Leader member exchange	Training transfer Training maintenance Training generalization
16. Setti et al. (2015)	Dependent	Learning goal orientation Performance goal orientation Proactive personality	–
17. Smith et al. (2008)	Mediator	Performance goal orientation Learning goal orientation Self-efficacy Valence Expectancy	Affective reaction Utility reaction Intention to transfer
18. Switzer et al. (2005)	Mediator	Training reputation Self-efficacy Managerial support	Perceived training transfer

(continued)

Table 4.5 (continued)

Study	Role of motivation	Antecedents	Consequences
19. Tannenbaum Mathieu et al. (1991)	Independent	–	Post-training attitudes Organizational commitment Academic self-efficacy Training Motivation
20. Tharenou (2001)	Independent Mediator Moderator	– Supervisor support Work environment Job challenge Supervisor support Employer support Lack of barriers	Participation in training and development
21. Tracey et al. (2001)	Mediator	Job involvement Organizational commitment Work environment (supervisor, management and organizational support) Pre-training self-efficacy	Affective reactions Utility reactions Declarative knowledge Application-based knowledge
22. Tsai and Tai (2003)	Dependent	Training assignment Perceived importance	–
23. Zaniboni et al. (2011)	Mediator	Performance goal orientation Learning goal orientation Job support	Intention to transfer
Learning motivation			
24. Alvelos et al. (2015)	Mediator	Perceived Content Validity Transfer Design Social Support	Positive Transfer
25. Al-Eisa et al. (2009)	Independent Mediator	– Self-efficacy Supervisor support	Transfer intention
26. Cheng & Ho (2001)	Mediator	Job involvement Career commitment	Learning transfer
27. Chiaburu and Lindsay (2008)	Mediator	Training instrumentality Training self-efficacy	Motivation to transfer Training transfer
28. De Lange et al. (2010)	Dependent	Job demands Job control Supervisor Support Active problem solving	Positive Transfer
29. Garavan et al. (2010)	Mediator	Perceived barriers and enablers Self-Efficacy	Participation in e-learning
30. Govaerts et al. (2018)	Control variable	–	Training retention Transfer
31. Harris and Cole (2007)	Independent	–	Stage of changes
32. Kochoian et al. (2017)	Dependent	Chronological age Occupational future time perspective	–

(continued)

Table 4.5 (continued)

Study	Role of motivation	Antecedents	Consequences
33. Kontoghiorghes (2002)	Dependent Independent	Learning environment Job design Quality management Organization commitment and satisfaction	Training transfer
34. Kyndt et al. (2016)	Independent	–	Generic learning outcomes Organisational level learning outcomes Job-specific learning outcomes
35. Major et al. (2006)	Mediator	Proactive personality Neuroticism Extraversion Openness Agreeableness Conscientiousness	Development activity
36. Ng (2015)	Mediator	Supervisory practices	Training transfer
37. Ng and Ahmad (2018)	Mediator	Conscientiousness Extraversion Agreeableness Perceived organizational support Supervisor support Peer support	Training transfer
38. Noe and Wilk (1993)	Mediator	Organizational membership characteristics Self-Efficacy Social support Situational constraints	Development activities
39. Park, Kang, and Kim (2018)	Mediator	Supervisor support Developmental needs awareness	Training readiness Motivation to transfer Job performance
40. Roberts et al. (2018)	Mediator	Proactive Personality Conscientiousness	Transfer intentions
41. Rowold (2007)	Independent	–	Declarative knowledge
42. Smy et al. (2016)	Dependent	Perceptions of transformational instructor behavior Valence Instrumentality	–
43. Vanthournout et al. (2014)	Mediator	Workplace climate factors Supervision Independence choice	Approaches to learn at the workplace Deep approach to learning Surface-rational approach to learning Surface-disorganized approach to learning

(continued)

Table 4.5 (continued)

Study	Role of motivation	Antecedents	Consequences
44. Vignoli and Depolo (2019)	Mediator	Proactive personality Gender Role	Motivation to transfer Transfer of training
45. Walsh et al. (2013)	Correlation	Sexual harassment myth endorsement Pessimism about sexual harassment change	
46. Warr et al. (1999)	Independent	–	Gains in knowledge Reported competence Perceived value
47. Warr and Birdi (1998)	Correlation	Individual factors Age Gender Education level Job grade Learning confidence Environment factors Management support Co-worker support Non-work support Shift working Time constraints	

First, we observe that training motivation (11/23) and learning motivation (12/24) are considered as mediators in 49% of studies. Training motivation presents a various range of antecedents, including social support (5; 8; 9; 18; 20; 21; 23) and self-efficacy (3; 4; 5; 12; 17; 18; 21) as the most studied antecedents. Other frequent reported antecedents were personality factors (2; 3; 13; 16; 35; 37; 40; 44) and goal orientation (5; 17; 23). Concerning learning motivation, scholars focus mostly on social support (24; 25; 28; 37; 38; 39), personality-related factors (35; 37; 40; 44), self-efficacy (27; 29; 38) and job-related variables (26; 28; 33) as antecedents.

In terms of consequences, training motivation is studied mostly in relation to training transfer and training effectiveness-related variables (3; 5; 8; 10; 15; 17; 18; 23), as well as to knowledge-related variables (9; 14; 21). For learning motivation, scholars focused also on variables related to transfer (24; 25; 26; 27; 30; 33; 36; 37; 39; 40; 44), as well as to variables related to knowledge acquisition and development (30; 34; 35; 38; 41; 46).

Following these observations training motivation and learning motivation cannot be clearly distinguished on basis of their nomological network as their most frequently reported antecedents and consequences overlap substantially (Fig. 4.1).

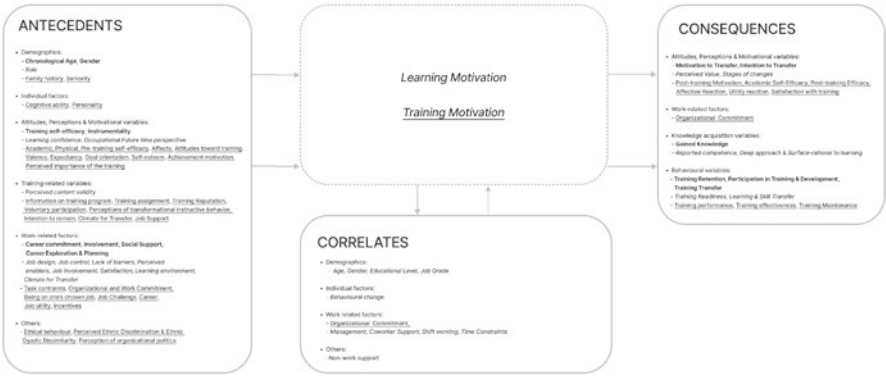

Fig. 4.1 Nomological network of learning motivation and training motivation

4.5 Discussion

The present literature review investigated workplace learning motivation as reported in empirical peer-reviewed studies examined in working populations. We focused our search specifically on the use of « learning motivation » and « training motivation » as terminology to describe motivation for workplace learning. Our main interest was to know how both terms are conceptualised and measured and to compare their nomological networks. Through the analyses of their conceptualisation and operationalisation, conclusions can be made as to what extent these terms, as used in organizational literature, actually refer to 'workplace learning' (i.e. include a variety of learning contexts) and 'motivation' (i.e. refer to the psychological mechanisms and processes that connects the individual and the environment and its regulatory character in the distribution of effort)

4.5.1 Workplace Learning as Reflected in Workplace Learning Motivation

First, our results show that the study of workplace learning motivation refers to workplace learning in formal learning contexts (e.g., training) irrespective of whether "learning motivation" or "training motivation" is used in the study. Therefore, the studies within our sample do not explore motivation in relation to both formal and informal learning activities in a variety of workplace learning contexts. We recommend to consider workers' motivation in relation to informal learning contexts in conceptualising and operationalizing workplace learning motivation. A broader reflection is needed in organizational literature on the conceptualization of learning by integrating insights from the workplace learning literature. For

instance, Lee et al. (2004, p. 5) present the categorization of Stern and Sommerlad of different approaches on 'workplace learning' based on the degree to which 'learning' and 'work' are separated: the workplace as a site for learning; the workplace as a learning environment; and learning through work. The first approach involves the spatial separation of learning from work with structured learning activities organised off the job (in-company training). In the second approach, learning is also planned and organised but takes place within the work environment and is largely 'on the job'. Following the third approach, learning is inextricably linked to working and occurs through task execution and social interaction with colleagues in the workplace. These different approaches should be reflected in future organisational literature on workplace learning motivation. We invite scholars studying workplace learning motivation to clarify their approach on learning in general and workplace learning in particular.

4.5.2 Motivation as Reflected in Workplace Learning Motivation

The concept of motivation has also different definitions depending on the discipline and research approach applied by scholars. Scientists commonly agree that motivation represents a complex process that connects the individual and the environment and that directs energy toward the accomplishment of a goal (Pinder, 2008). Also, independently of its object (e.g. general human motivation, work motivation, learning motivation), motivation is a hypothetical construct (Fenouillet, 2011; Kanfer et al., 2008; Pinder, 2008; Vallerand & Thill, 1993). A hypothetical construct is "any concept referring to a process or phenomenon, the existence of which cannot be empirically demonstrated but which nevertheless seems to be required on theoretical grounds or for pragmatic descriptive purposes" (Richards, 2009, p. 99). In other words, hypothetical constructs refer to labels that are used to express processes or entities which are actually presumed to exist but that we are unable to observe or measure directly (Kunz & Pfaff, 2002). The necessity to conceptualize and operationalize motivation through motivational constructs has been well recognized in the larger literature on work motivation as well as in educational research with the existence of numerous theories focusing on different motivational components rather than on motivation as a global concept.

In the present article, we examined whether the organizational literature in specific has taken into account the complexity of motivation through the way workplace learning motivation has been conceptualized and operationalized up to now. We found that only few studies refered to existing motivational theories when defining motivation. Some studies do not provide a definition or define training or learning motivation through the measurement instrument they use. In that case, it is often challenging to assess whether the complex motivational process is accounted for. In educational psychology there is a well-developed literature stream regarding motivation. Insight from this research domain, could be

applied and integrated in research on workplace learning motivation in organizational literature. For instance, the Expectancy-Value Theory of Eccles and Wigfield (1998, 2000) conceptualizes learning motivation through motivational beliefs and is applied in studies on adult learners (Bourgeois et al., 2009) but also more recently in workers (Kochoian et al., 2017). As these motivational theories are, up to now, mostly used in scholarly context where formal learning takes place, the informal learning should also be taken in to account when transferring motivational theories to the workplace context.

4.5.3 Training Motivation or Learning Motivation? Toward the Use of One Generic Concept: Workplace Learning Motivation

Our results did not allow us to differentiate training and learning motivation from the conceptual and operational level or on basis of their nomological network. Many studies (45%) in organisational literature on training motivation and learning motivation are based on the work of Noe and Schmitt (1986). These authors developed a general scale on 'trainees' attitudes' of which eight items assess trainees' motivation to learn. In the different reported studies, there is no reference to any motivational theory at all which provides us with little background upon the development of the scale. Moreover, authors report only one item as example item. Other terms such as "pre-training" are used as synonyms for learning and training motivation.

In future studies, we suggest to use workplace learning motivation as an umbrella construct that encompass learning motivation, training motivation, as well as all variations of training motivation, such as pre-training and post-training motivation. Currently, several terms are employed to describe the same concept. We suggest to refer to workplace learning motivation when it concerns both formal and informal learning and to refer to pre-training and training motivation for formal (training) contexts. Then, pre-training should be used in (quasi) experimental designs to indicate the first measurement of training motivation while post-training motivation to the measurement of training motivation at the end of a training. Post-training motivation should also be differentiated from transfer motivation. A review on this differentiation may be of added value.

4.5.4 Limitations

This study has several limitations. First, our research terms included only "learning motivation" and "training motivation" and did not target other terms used in the organisational literature, such as "motivation to participate in training" or "motivation for learning and development activities". For workplace learning in

more informal contexts specific types of learning such as reflection, experimenting, mentoring might be relevant especially when extending the review to other domains. In the same line, we focused on articles mentioning the generic term "motivation". A review integrating research that use key components of learning motivation as conceptualized in the well-established theoretical frameworks, such as learning goals or learning self-efficacy might be added. Second, as the search terms were defined only in English, the present literature review is limited to English-speaking literature. It is therefore not clear whether the issues outlined in this review appear in other-speaking literature. In this case, other databases should be considered (e.g., Francis for French-speaking literature). Third, we focused on the literature linked to workers. Therefore, more general literature on adult learners was not taken into account. Also, studies conducted in samples composed of students (e.g., Klein et al., 2006) or trainees, when it was not specified if these trainees were workers, were not included. The same happened with articles mixing students and workers in their sample (e.g., Baldwin et al., 1991). Fourth, quantitative studies only were taken into account in this review. Qualitative studies should be included in future reviews.

In conclusion, the traditional way to conceive workplace learning in organisational literature still tends to be associated with learning in formal training courses. It is then not surprising that the term "learning motivation" is associated with formal learning contexts. We would like to point out the importance to bring a more refined conceptual understanding of workplace learning in organisational studies on workplace learning motivation. We also suggest that future research systematically adopts an established motivational theoretical framework so to clearly conceptualize workplace learning motivation, which at the same time serves as a guideline for a more fine-grained measurement of the concept. This avoids inconsistencies between the conceptualization and operationalization of the concept. Finally, we would advise to use the terms "pre-training" and "training motivation" for specific training contexts, whereas "learning motivation" as a general term that includes motivation in all different learning contexts.

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