
| RESEARCH ARTICLE

Mapping Workplace-related Teachers' Informal Learning: A Review

Mohamed Bouaissane¹ ✉ Mustapha Mourchid² and Hind Brigui³

¹PhD candidate, Department of English Studies, Faculty of Languages, Letters and Arts/ IbnTofail University, Kenitra, Morocco

³Associate Professor of Applied Linguistics and TEFL, Department of English Studies, Faculty of Languages, Letters and Arts/ IbnTofail University, Kenitra, Morocco

Corresponding Author: Mohamed Bouaissane, **E-mail:** mohamed.bouaissane@uit.ac.ma

| ABSTRACT

This article is based on the assumption that much of human learning is caught not taught (Davies, 1998). People oftentimes learn informally in the workplace without being aware of this complex process. However, though much learning is informal and tacit, there has been very little empirical research on teachers' informal learning in the workplace. Much attention, on the other hand, has been, and is still, given to formal learning. The aim of this study is to shift researchers, educationalists and stakeholders' attention from teachers' formal and structured learning to teachers' informal workplace learning. It should be acknowledged, however, that formal and informal learning should not be viewed as dichotomized and mutually exclusive. They should instead be viewed as a continuum, equally important and complementary. The present systematic review of the literature shows that teachers' informal learning is inextricably linked to the workplace and that teachers' informal learning outcomes are context-related, which indicates that the workplace is profoundly complex. The review also shows that research on teachers' informal learning, though limited, is primarily qualitative. This study ends up by calling for more research on teachers' informal learning that employs mixed methods design with larger sample sizes.

| KEYWORDS

Workplace Learning, Informal Learning, Contextual Factors, Teachers' Learning

| ARTICLE INFORMATION

ACCEPTED: 22 December 2022

PUBLISHED: 29 December 2022

DOI: 10.32996/jweep.2022.4.3.11

1. Introduction

Teachers' continuous professional development by means of formal activities has been widely discussed in the teacher learning and professional growth literature (Borko, 2004; Eraut, 2004; Kyndt, et al., 2016). However, there has been very little empirical research on teachers' informal learning that is jointly constructed outside the institutionalized, systematic and formal training or education (Coffield, 2000; Eraut, 2004; Gorard et al. 1999; Hoekstra et al., 2009; Kyndt et al. 2014).

Informal learning refers to the unsystematic, unstructured, tacit and unorganized learning that occurs in the workplace and everyday work-related activities that contribute to a change in the teacher's behavior and/or cognition (Crouse, Doyle, & Young, 2011; Doyle, Reid, & Young, 2008; Eraut, 1997; Gorard et al. 1999; Hara, 2001; Hoekstra et al., n.d.; Kyndt et al. 2016; Matthews, 1999; Meirink et al., 2009).

Informal learning in the workplace is acknowledged as important across different contexts because much learning is caught not taught (Davies, 1998). However, there is a tendency by policy makers and researchers to focus more on formal learning and ignore learning that takes place outside formal instructions (e.g. Gorard et al. 1999; Coffield, 2000). Interestingly, this study intervenes to shift stakeholders' attention from teachers' formal learning and training to informal learning that takes place in the workplace. It should be noted that the workplace involves a number of complexities and variables that are often overlooked and taken for granted. However, these factors play a direct role in the amount and quality of professional learning, skills and ideas that teachers accumulate.

Copyright: © 2022 the Author(s). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) 4.0 license (<https://creativecommons.org/licenses/by/4.0/>). Published by Al-Kindi Centre for Research and Development, London, United Kingdom.

The central assumption underpinning this paper is that teachers' informal learning should be central in teachers' learning and education research. Much of human learning is accumulated in everyday life and in daily activities. Informal learning has always been going on, and still goes on, and will continue to go on in every moment of our lives (Gorard, et al., 1999). It is continuous, notably significant and meaningful both to students and teachers' learning (e.g., Bakkenes et al., 2010; Henze, Van Driel, & Verloop, 2009; Hoekstra & Korthagen, 2011; Lewin, Scrimshaw, Somekh, & Haldane, 2009; Van Eekelen, Vermunt, & Boshuizen, 2006). Formal learning opportunities, on the other hand, are argued to be fragmented, superficial and irrelevant to the teachers' immediate needs and context (Borko, 2004), which makes them relatively insignificant to the teachers' teaching practices and students' learning (e.g., Borko, 2004; Burns, 2008; Fraser, 2010; Hoekstra et al., 2007; Jurasaitė-Harbison, 2009; Poulson & Avramidis, 2003).

2. Literature review: teachers' informal learning and antecedents

2.1 Definition of informal learning

Informal learning has often been contrasted with formal learning. The latter refers to the structured and planned activities in terms of objectives, place, time and duration (Eraut, 2004; Kyndt, et al., 2014; Kyndt, et al., 2016). Participants are intentionally engaged in these activities to enhance and improve their knowledge, competences and/ or behaviours (Eraut, 2004; Kyndt, 2016). However, informal and formal learning should never be considered dichotomized and different. Given the fact that relying solely on one form of learning is insufficient, formal and informal learning should be considered as a continuum, complementary and equally important (Kyndt et al., 2016). Informal learning has been defined by Kyndt et al. (2014) as:

Informal learning is characterized by a low degree of planning and organizing in terms of learning context, learning support, learning time, and learning objectives. Informal learning opportunities are not restricted to certain environments. The learning results from engagement in daily work-related activities in which learning is not the primary goal. Informal learning is undertaken autonomously, either individually or collectively, but without an instructor. It often happens spontaneously and unconsciously. (pp. 2393–2394)

Informal learning is also defined as "non-trivial (...) [non-taught] learning [that] already goes on, and has always gone on, outside formal programmes of instruction" (Gorard, et al., 1999, p. 01). Similarly, Beinar and Mith (1998) defined it as "deliberately trying to improve your knowledge about anything or teach yourself a skill without taking part in a taught course" (p. 200).

2.2 Scarcity of research on teachers' informal learning

Teachers' professional development has been widely discussed in the literature with reference to formal continuous professional development activities (Borko, 2004; Eraut, 2004; Kyndt et al., 2016). However, there has been very little scholarly research on teachers' informal and workplace learning (Coffield, 2000; Eraut, 2004; Gorard et al. 1999; Hoekstra et al., 2009; Kyndt et al. 2014). According to Kyndt (2016) "a lot is known about teacher development by means of formal learning activities;" however, research on "teachers' everyday learning is limited" (p. 01).

Informal learning is argued to be the most frequently used form of learning, and it remarkably promotes and enhances teachers' productivity and retention. Yet, it has been given very little space in scholarly research on teachers' education. Though "several studies suggest that informal learning is the most frequently used type of workplace learning" (Hara, 2001; Hicks, Bagg, Doyle, & Young, 2007; Leslie, Aring, & Brand, 1998; Skule & Reichbron, 2002 (as cited in Kyndt, et al. 2016, p. 02)) "[p]ublic discourse about training not only neglects informal learning but denies complexity by over-simplifying the processes and outcomes of learning and the factors that give rise to it" (Eraut, 2004, p. 26).

There is a tendency by researchers to ignore informal and workplace learning. Though they may explicitly acknowledge its importance, they tend to focus more on formal, certified and institutionalized learning (Gorard et al., 1999; Coffield, 2000). Gorard et al., (1999) further argue that lifelong learning had become rather narrowly focused in the literature as it excludes learning that takes place outside of formal instruction. Following the same line of reasoning, Fraser, (2010) and Kwakman (2003) argue that insights into the informal learning activities teachers undertake is generally lacking.

It should be noted that if informal learning is further ignored, as it appears to be, the learning society may eventually disappear and be replaced by a certified society (Ainley, 1998). However, certification is not always an accurate predictor of qualification (Gorard et al. 1999), which reinforces doubts about certified societies and necessitates that research places more importance on informal learning in the workplace.

2.3 Statement of the problem

As previously mentioned, there has been very little academic research on teachers' informal learning in the workplace (e.g. Ainley, 1998; Coffield, 2000; Eraut, 2004; Fraser, 2010; Gorard et al. 1999; Hoekstra et al., 2009; Kwakman, 2003; Kyndt et al. 2014; Kyndt et al., 2016). Even though a lot is already known about teacher development by means of formal learning activities (Borko, 2004),

research on teachers' everyday learning is notably limited (Hoekstra, Brekelmans, et al., 2009), and "a systematic overview of these learning activities and their outcomes within the specific context of teachers' professional development is lacking" (Kyndt et al. p. 02).

Additionally, researchers, educationalists and policy makers tend to ignore informal learning that takes place outside formal institutions and structured systems, and focus more on formal structured learning in formal institutions (Coffield, 2000; Gorard et al., 1999).

Most importantly, research on informal learning, though notably limited (Fraser, 2010; Kwakman, 2003), is dominated by qualitative studies that employ life-history interviews with very small-scale sample sizes, which poses the question of generalizability and representativeness of the results attained. This is clearly demonstrated by Kyndt, et al., (2016) who state that research on informal teacher learning is primarily qualitative and "that a mixed-method approach seems appropriate" (p. 31).

It should be also noted that though teachers' informal learning in the workplace is considered important, complete understanding into the informal learning activities teachers undertake is surprisingly lacking (Fraser, 2010 ; Kwakman, 2003).

As a response to these scholars' calls, this study seeks to achieve the following goals:

1. To explore research that has been carried out on teachers' informal learning in the workplace;
2. To invite researchers, policy makers and educationalists to draw more attention on teachers' informal learning; and
3. To call for more research on teachers' informal learning that goes beyond solely using qualitative designs to research that employs mixed methods designs with larger sample sizes, so that a better understanding of teachers' informal learning in the workplace can be achieved.

3. Professional development: Internal / External Variables

Teachers' informal learning in the workplace has three main antecedents and sources, and any attempt to gain a complete understanding of human learning should take into account these three levels. De Rick, and Valckenborg (2006) developed a model in which they convincingly argue that employee learning is organized into three main levels, which are the individual or *micro-level*, the learning activity or *meso-level*, and the social context and its actors or *macro-level*. These levels will be briefly discussed in the following sections. However, for the purposes of this study, much emphasis will be on the social context and its actors or the macro-level.

3.1 The individual or micro-level variable

It has been widely argued in the literature that individual characteristics (e.g., personality, attitude) and general characteristics (such as age, gender, tenure, educational discipline, background) influence the amount and quality of learning that takes place (Kyndt & Baert, 2013). For example, experienced teachers' participation in professional development opportunities tends to decline with age (Erraut, 2004; Kyndt & Baert, 2013; Richter et al., 2011). Additionally, gender and attitudes directly influence teachers' participation and engagement in the learning process (Erraut, 2004; Hoekstra, et al., 2008; Kyndt, et al., 2016).

Previous research on teachers' informal learning has shown that teachers' learning in the workplace is only partially determined and influenced by workplace conditions. Teachers' engagement in workplace learning is influenced by both context and individual variables (Hoekstra, et al., 2008). Workplace factors have a direct impact on teachers' informal learning. However, teachers are not always passively compliant with the workplace conditions which confirms Billett's (2004) argument that "[i]ndividuals are not passive in their participatory practices and learning" (p. 319). Additionally, personal attributes may also accelerate or constrain teachers' informal learning. Some teachers are reluctant to participate in cooperative learning with colleagues and jointly construct knowledge, which indicates that teachers' willingness to participate in the learning process plays a determinant role in the amount and quality of what is learned (Bakkenes et al., 2010; Rytivaara & Kershner, 2012).

Relatedly, Kwakman (2003) points out that teachers prefer individual learning activities over activities with their colleagues. She concludes that teachers' weak tendency and reluctance to participate in cooperative learning activities in schools may be related to their personal characteristics rather than other workplace-related factors. Teachers' willingness to learn and cooperatively construct knowledge in the workplace is another interesting personal factor that determines their professional knowledge construction and growth (Van Eekelen, Vermunt, & Boshuizen, 2006). Learning is also an inherently emotional and cognitive process, because the mental and emotional state of teachers directly impact the learning process and outcomes, which explains the significant differences in learning outcomes (Erraut, 2004; Hoekstra, et al., 2008; Kyndt, et al., 2016; McNally, et al, 2009; Meirink and Hoekstra, 2009).

3.2 The learning activity or meso-level variable

Baert et al. (2006) located all characteristics of the learning activity at the meso-level, including instructional design and expected benefits. It should be noted that the quality of the activities and the availability of learning opportunities may also affect what and how much teachers learn. According to Borko (2004), a huge amount of money is spent yearly on teachers' learning activities and training programs; however, these activities are academically superficial, fragmented and oftentimes do not respond to the teachers' expectations and needs.

In the same vein, Bouaissane, et al. (2022) conducted a study on Moroccan EFL teachers' attitudes and perceptions towards in-service continuous professional development activities in the Moroccan context. The findings of this study show that Moroccan EFL teachers hold negative attitudes towards the in-service training activities they engage in. They believe that these activities are oftentimes irrelevant, and superficial and rarely respond to their immediate needs, context and expectations. They also argue that these activities are fragmented and are often presented in a one-size-fits-all model. It should, therefore, be noted that the quality of the learning activity is also crucial to the learning process and learning outcomes.

3.3 The social context and its actors or macro-level variable

The macro-level, which includes characteristics of the organization, in this case, the school (e.g., culture, social support), and the broader context, directly impacts the level of teachers' engagement in learning (Kyndt, et al. 2016). Research on teachers' informal learning provides ample evidence that the social context and the workplace are inextricably linked to teachers' learning, and that learning outcomes are workplace-specific and closely related to the context (Eraut, 2004; Hoekstra, et al., 2008; Kyndt, Govaerts, Verbeek, & Dochy, 2014 ; Leat, Lofthouse, and Taverner, 2006; McNally, et al., 2009; Orasanu & Connelly, 1993; Rytivaara & Kershner, 2012).

4. Further situational/ contextual variables

4.1 Workplace

This article aims at exploring the relationship between teachers' informal workplace learning outcomes and their perception of workplace conditions. A large body of literature has been, and continues to be, carried out on teachers' formal learning. However, continuous professional development programmes have many problems because they fail to recognize that teacher learning is situated in particular contexts and is, therefore, social in nature (Putnam & Borko, 2000), and that it is not solely limited to particular classroom experiences. Interestingly, it has been widely argued that learning outcomes are workplace-specific and closely related to the context (Eraut, 2004; Kyndt, Govaerts, Verbeek, & Dochy, 2014). The social context in the school as workplace and the relationships that emerge from it are of central importance to teachers' learning and professional growth (McNally, et al., 2009) because knowledge, skills, and attitudes construction are inherently social (Kyndt, et al., 2016)

Professional engagement is central to the processes of education which can be understood and mapped as a dynamic socio-cultural system (Bronfenbrenner, 2005; Orasanu & Connelly, 1993). Learning is partially a social practice that is constructed jointly (Hoekstra, et al., 2008; Rytivaara & Kershner, 2012). Most workplace learning occurs on the job rather than off the job (Eraut, 2004). Eraut (2004) asserts that a constantly changing environment results in constant update and change of ideas, practices and behaviours, which further confirms the strong link and connection between workplace and learning.

Workplace climates and atmosphere affect the teachers' learning, retention and quality development; "workplace climates affect learning, retention and quality improvement in similar ways" (Eraut, 2004, p. 23). Teachers' professional growth and learning, therefore, depend largely on "whether they perceived their more significant working relationships as mutually supportive, generally critical, faction-ridden or even overtly hostile" (Eraut, 2004, p. 25).

Teachers' learning and professional knowledge building is a collaborative process in which knowledge is jointly constructed in their socio-cultural context and workplace (Rytivaara & Kershner, 2012). Rytivaara and Kershner's (2012) study focuses on teachers' contextualized and practical knowledge, and how this knowledge is jointly constructed in every day-to-day experiences. They convincingly argue that "co-teaching and jointly constructed knowledge in a mutually supportive environment allows teachers to grow professionally and meet their academic and pedagogical duties" (Rytivaara & Kershner, 2012, p.10). The workplace and the socio-cultural context of the institution plays a significant role in teachers' learning and professional growth. In other words, a lot of factors come into play in the teachers' co-teaching experience that may either accelerate or hinder their learning; "teachers' narratives of their practice and professional learning emerge within the sociocultural interplay of wider educational structures, cultures and politics. Pedagogical cultures and practices can differ significantly between countries as well as more locally" (Rytivaara & Kershner, 2012, p.10).

The workplace climate and teachers' perceptions of it can facilitate or constrain the amount of learning that takes place (Hoekstra, et al., 2008) because contextual factors directly impact teachers' willingness to participate in informal workplace learning activities (Doornbos et al., 2004; Kwakman and Van Woerkom, 2003). Additionally, "the 'macro' elements of social structures, research,

culture, politics and economics (.....) support and constrain educational thinking and practice over time" (Rytivaara & Kershner, 2012, p. 10). The assumption that teachers' informal learning is a collaborative process enhanced or constrained by the workplace climate is highlighted by Leat, et al., (2006), who find that supportive collaboration helps teachers to build confidence that further enhances positive risk-taking at work. They conclude that a climate for change in teachers' working contexts can have deep effects on many levels, including teachers' beliefs and professional interactions.

Workplace conditions may indeed influence teachers' informal learning. However, a number of studies are based on the assumption that the relationship between workplace conditions and teachers' informal learning and growth is not always evident and straight forward (Ellinger, 2005; Sambrook and Stewart, 2000), and that other personal and psychological factors come into play in teachers' learning such as their willingness and readiness to learn (Billett's, 2004; Richardson and Placier, 2001).

All the selected studies are scholarly as they reveal very interesting insights pertinent to teachers' informal learning, and the contextualised knowledge that is constructed jointly in the workplace. However, these studies are primarily qualitative in nature as they used solely life-history interviews to elicit data from very small-scaled sample sizes, which questions the generalizability and representativeness of the results attained.

4.2 Relationships with colleagues

The nature and quality of relationships with colleagues in the workplace play a critical role in teachers' workplace informal learning. Researchers generally agree that collegial relations are the most influential factors that may sustain or impede teachers' growth and learning (Collinson, 2004). To put it differently, the joint nonteaching time with colleagues, the relationships and interactions that the participants engage in their workplace play a decisive role in the accumulation and assimilation of knowledge (Kyndt, et al., 2016; Lohman, 2000). Therefore, social actors contribute to the construction of this knowledge through their actions and discourse (Eraut, 2004). Relatedly, Hinchliffe (2004) convincingly argues for the importance of workplace relationships. He believes that these relationships are important as they (1) improve the quality of work and, (2) promote and sustain human flourishing.

Relatedly, Eraut (2004) argues that the teachers' success and learning depend largely on the quality of the relationships they have and engage in. This indicates that relationships are a variable that directly impacts the quantity and quality of exchange teachers' learning and development. Teachers' "success also depends on the quality of relationships in the workplace" (p. 22). Teachers' professional growth and learning, therefore, depend largely on "whether they perceived their more significant working relationships as mutually supportive, generally critical, faction-ridden or even overtly hostile" (Eraut, 2004, p. 25). Positive social and collegial relationships are important as they accelerate teachers' informal learning (e.g., Jurasaitė-Harbison & Rex, 2010). However, There is a remarkable tension between collegiality and autonomy because teachers might perceive their colleagues as a threat to their autonomy (e.g., Collinson & Cook, 2004; Jurasaitė-Harbison & Rex, 2010). For this reason, the amount of learning and professional growth is significantly different among teachers, as every teacher's experience and relationships are unique and different.

Eraut also convincingly argues for the importance of having stable groups that are coherent with mutually supportive relationships. He believes that positive learning climates can serve as the basis for learning and growth; "few groups are sufficiently stable and coherent to develop a positive learning climate quickly and spontaneously" (2004, p. 23). Similarly, Collinson (2004) Rytivaara & Kershner (2012) believe that teachers' learning and professional knowledge building is a collaborative process, and a collaborative exchange of ideas in which knowledge is jointly constructed in their socio-cultural context. Working in a context that involves stable and coherent groups with mutually supportive relationships and which offers support, feedback and mutual understanding is likely to influence positively the quantity and quality of the learning and skills that teachers acquire, and help them meet their professional responsibilities effectively.

Shared knowledge is definitely constructed through collaborative dialogue, mutually supportive relationships, interactions and peer challenge; "systems which support collaborative dialogue, innovation, and peer challenge may be better placed to allow teachers to engage in deep forms of knowledge construction within their practice" (Rytivaara & Kershner, 2012, p. 01). The central idea that professional knowledge is collaboratively constructed by teachers through relationships and conversations is discussed by Rytivaara & Kershner (2012) who state that "there is (...) a significant new micro-system formed by the collaborating teachers themselves, comprising their continuing conversations, relationship and pedagogical practice within and beyond the classroom" (p. 03). Interestingly, this should draw our attention to the "dialogic aspects of the professional learning process that incorporates the whole teaching partnership as well as the team-teaching activity that is visible in class" (Rytivaara & Kershner, p.03).

Relationships in the workplace may facilitate or hinder teachers' professional learning because issues may arise due to the occasional inequality of experiences of the general and special education teachers involved in co-teaching, a conflict between teaching styles, and structural and practical problems in setting up useful planning and reflection meetings (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010; Gurgur & Uzuner, 2011). In their study on learning in the workplace, McNally, et al. (2009)

uncover variables that may influence teachers' learning in the workplace. They assert that teachers' learning in the workplace is "governed by relationships with colleagues" (p. 01). Learning is viewed as primarily informal and relational "with strong emotional and relational dimensions associated with identity formation" (McNally, et al., p. 03). Professional isolation, professional autonomy and lack of collegial relationships may impede teachers' informal learning (Collinson, 2004; Jurasaitė-Harbison, 2009), as there are few opportunities for collegial discussions and collaboration, informal encounters and knowledge sharing, which presents barriers for knowledge construction and professional growth (e.g., Collinson, 2004; Desimone et al., 2014; Lohman, 2000; Lohman & Woolf, 2001).

The literature is in disagreement about the impact of collegial relationships on teachers' informal learning in the workplace, because though research on teachers' informal learning in the workplace stresses the importance of collegial relations on teachers' informal learning (e.g., Eraut, 2004; Jurasaitė-Harbison & Rex, 2010; Kyndlt, et al., 2016; McNally, et al., 2009; Rytivaara & Kershner, 2012), many studies assert that relationships among colleagues are often identified as being unsupportive, superficial, negatively colored, and limited (Clement & Vandenberghe, 2000; Flores, 2005)

4.3 Reflection

Reflection refers to the mental processes and activities that aim at evaluating practices and behaviours during or after the practice (Kyndlt, 2016). Teachers oftentimes go through the process of reflection before desituating and resituating a single piece of knowledge. The transfer and application of the theoretical knowledge to the workplace is not always easy and straightforward as teachers reflect on the newly observed knowledge to see which skills and knowledge are relevant to which context and situation. This is best expressed by Eraut (2004) who asserts that "the transfer of knowledge from education to workplace settings is much more complex than commonly perceived" (p.11). Teachers constantly think and reflect on what they see and observe; "the deliberative/ analytic column is characterized by explicit thinking about one's actions in the past, present or future, possibly accompanied by consultation with others" (Eraut, p. 15).

Research on teachers' learning provides ample evidence that teachers learn from each other through reflection (Harrison et al., 2005; Park et al., 2007). Relatedly, Hoekstra et al. (n.d.) find that teachers, who reflect in a meaning-oriented way and receive new ideas from colleagues, have significantly changed in their attitudes and practices. Teachers' professional learning is based on active learning, reflective thinking, and collective participation (Darling-Hammond & Richardson, 2009; Desimone, 2009). However, despite the fact that several reviews in the literature address the importance of reflection on practice (Darling-Hammond & Richardson, 2009; Desimone, 2009; Ghaye, 2011; Tarrant, 2013), it should be noted that reflection on practice is not always a universal practice applied to and performed by everyone; "not everyone (...) takes the opportunity to adopt a more evaluative perspective on their practice" (Eraut, 2004, p.16).

4.4 Support

The quantity and quality of learning teachers accumulate differs significantly from one to another. This is due to many factors such as support. The amount of support they receive determines what they learn and how they learn it. Teachers in a mutually supportive workplace tend to learn more compared to other teachers working in environments that are less or not supportive; "co-teaching and jointly constructed knowledge in a mutually supportive environment allows teachers to grow professionally and meet their academic and pedagogical duties" (Rytivaara & Kershner, 2012, p.1). Mutually supportive environments, therefore, trigger teachers' informal learning and professional growth.

Teachers' professional growth and informal learning, therefore, depends largely on "whether they perceived their more significant working relationships as mutually supportive, generally critical, faction-ridden or even overtly hostile" (Eraut, 2004, p.25). Receiving support from colleagues, supervisors and the people surrounding teachers is a determinant factor, which influences their professional growth, informal learning, behavior and perceptions. Teachers' informal professional learning and knowledge are easily constructed through interactions between the parties involved in groups with supportive emotional atmosphere (Eteläpelto & Lahti, 2008). Meaning making and knowledge construction require feeling of equality, trust and support so that teachers are actively engaged in the collaborative process of professional growth. A workplace environment that is characterized by mutual trust and support promotes and sustains teachers' informal learning (Rytivaara & Kershner, 2012).

It should be acknowledged that teachers develop a will and desire to learn, take a full advantage and grow professionally in supportive environments and workplaces in which working colleagues support each others' learning (Rytivaara & Kershner, 2012). Relatedly, McNally, et al.'s (2009) study reveals that teachers, especially novice ones, "valued the feeling of support from colleagues" (p. 01). They also claim that having support needed in the workplace is more important than the acquisition of specified bits of professional learning; "It is a feeling of being supported (...) that seems to matter most" (p. 05). The informal support that teachers receive on the spot is considered to be more important to beginning teachers than help received formally from designated mentors (Eraut, 2004). However, research shows that teachers are not sufficiently supported or guided by their colleagues when confronted by challenges (Tickle, 1994).

Though the importance of collegial support and organizational climate in informal workplace learning have been addressed by a number of studies (Doornbos et al., 2004; Kwakman, 2003; Van Woerkom et al., 2002), some studies point out that teachers may still learn informally even when this support is lacking. In this regard, Hoekstra, Brekelmans, et al., (2009) argue that:

Though support received in the workplace is closely attached to teachers' informal learning, research has suggested that this lack or absence of collegial support does not mean that teachers do not learn in the workplace, as teachers learn informally even when specific support is missing. (p. 13)

4.5 Interactions

Social interactions play a central role in the construction of knowledge in the workplace. Teachers' informal learning and professional knowledge are jointly constructed by engaging in social activities and interacting with other colleagues, supervisors, professors and students; "much uncodified cultural knowledge is acquired informally through participation in social activities, and much is often so 'taken for granted' that people are unaware of its influence on their behaviour" (Eraut, 2004, p.18). Eraut (2004) further argues that working and interacting with other people gives rise to learning within our social context. This is done through listening to people, observing them and engaging in different social activities:

Working alongside others allows people to observe and listen to others at work and to participate in activities, and hence to learn some new practices and new perspectives, to become aware of different kinds of knowledge and expertise, and to gain some sense of other people's tacit knowledge. (p. 22)

The importance of supportive dialogues and interactions on promoting teachers' informal learning is further elaborated on by Rytivaara & Kershner (2012) who assert that "systems which support collaborative dialogue, innovation, and peer challenge may be better placed to allow teachers to engage in deep forms of knowledge construction within their practice" (p.01). Conversations and interactions among teachers play a significant role in knowledge construction. To put it differently, their engagement in conversations and interactions results in the accumulation of professional knowledge.

Interactions and discussions among teachers promotes teachers' informal learning and professional development and prevents difficult and unpleasant situations from happening in and out of classrooms (Cook and Friend, 1995). Cook and Friend (1995) recommend co-teachers to discuss their beliefs about teaching, classroom routines and discipline because "this, ideally, makes it possible to compromise and prevent difficult situations in and out of the classroom" (Rytivaara, Kershner, 2012, p. 03). Therefore, teachers use talk and interactions to explore and find out about different matters and to share their practical knowledge (Doecke, Brown, and Loughran, 2000).

Teachers' exchange of ideas and experiences can form the basis for their knowledge construction. Put differently, teachers' informal professional knowledge is collaboratively constructed in the workplace "through the interactions of those involved in a workplace organisation" (Rytivaara, Kershner, 2012, p. 03). Similarly, Williams and Prestage (2001) point out that informal discussions and interactions among teachers were the most highly valued induction activities that promote teachers' professional growth and knowledge. Meirink et al. (2009) argue that certain patterns of workplace learning activities such as interaction among colleagues can result in changes in beliefs, because when teachers informally engage in reflective dialogues and interactions, they engage in discussions about assumptions related to teaching and student learning (Louis et al., 1996).

4.6 Feedback

True sharing of ideas, knowledge and constructive feedback allows teachers to build confidence, and eventually their professional growth (McDuffie, Mastropieri, & Scruggs, 2009; Trent et al., 2003). Therefore, teachers' learning and growth are accelerated or hindered by the feedback they receive and the social climate of the workplace. Effective co-teaching and professional growth call for active involvement of teachers in the task of knowledge construction and feedback provision (Rytivaara, Kershner, 2012). Through communicating their feedback, teachers can prevent unpleasant situations from happening, bring about positive change both in and out of classroom, release teachers' positive energy and offer unique cooperative learning opportunities for them based on mutual understanding of the context and profession (Rytivaara, Kershner, 2012). Previous research acknowledges that teachers' informal learning outcomes in the workplace are directly connected to and influenced by the feedback they receive (Hoekstra, et al. 2008). Constructive feedback, therefore, enhances and promotes teachers' informal learning and triggers their willingness to participate actively in informal learning activities in the workplace.

5. Changing routines and old practices

Teachers operate in a learning environment characterized by changing conditions, which results in constant changes in their practices, beliefs and behaviors; "the input side is shown by placing the activities within a context characterized by changing conditions and a developing situation" (Eraut, 2004, p. 16). However, despite the fact that previous research acknowledges the

relation between changing environments and updating routines, old routines and practices are not always easy to change as it might seem to be because:

Routines are very difficult to change, not only because this would imply a negative evaluation of one's previous practice but also because such change involves a period of disorientation while old routines are gradually unlearned and new routines are gradually developed. (Eraut, 2004. p.16)

Changing old practices is also difficult because it involves changing teachers' attitudes towards their old routines and practices. Relatedly, Eraut (2004) argued that "change is partially a problem of 'attitude' " (p.16). Eraut's study also reveals that not all social contexts that teachers operate in equally enhance their professional growth and learning, as they differ in terms of learning opportunities available and support among the members of the group:

In some groups it [learning] flourishes, in others it stagnates or regresses. This depends on how much group members learn from each other, to what extent individuals of the whole group respond to the challenges of their work and support each other, and what additional learning opportunities for the group are located and developed. (2004, p. 23)

Indeed, it should be acknowledged that replacing old routines with new practices is not easy and straightforward because "learning from practice depends on "desituating" knowledge gained from particular situations and developing the capacity to generalise learning and act in new situations in a principled and informed way" (Korthagen, 2010, p.102). Furthermore, despite the fact that teachers informally learn and accumulate new practices and knowledge, it seems difficult to change one's classroom practice (Bakkenes et al., 2010).

6. Implications

It could be concluded that research on teachers' informal learning, though significantly limited, is primarily qualitative. It seems, therefore, reasonable to argue that:

- More research that employs mixed-methods design on teachers' informal learning is needed;
- Both formal and informal learning should be viewed as a continuum and be looked at as complementary rather than being dichotomized;
- Researchers and educationalists are invited to draw more attention on the informal aspect of learning in the workplace, so that teachers informal learning is promoted and sustained; and
- Researchers, supervisors and stakeholders are invited to encourage and promote teachers' informal learning in the workplace as a form of their continuous professional development.

7. Conclusion

It is common knowledge that a large body of research has been carried out on teachers' formal and structured learning, and that very little empirical research has been done on teachers' informal learning in the workplace. This study, therefore, intervenes to explore previous research on teachers' informal learning in the workplace, and to unveil the impact of different contextual factors on teachers' engagement in workplace-related learning activities. The present systematic review of the literature reveals that teachers' informal learning is inextricably linked to the workplace and that teachers' informal learning outcomes are context-related, which indicates that the workplace is profoundly complex. This study also aims to shift researchers, educationalists and stakeholders' attention from teachers' formal and structured learning to teachers' informal workplace learning. It should be noted, however, that formal and informal learning should not be viewed as dichotomized and mutually exclusive. They should instead be viewed as a continuum, equally important and complementary. The present study is highly significant as it highlights the complexity of the workplace as a site of learning. It also shows that research on teachers' informal learning, though remarkably limited, is primarily qualitative.

This study reveals interesting insights pertinent to teachers' informal learning in the workplace. However, it has a number of limitations. First, it focuses solely on the impact of contextual factors on teachers' engagement in informal learning activities, without reference to other factors that influence teachers' informal learning such as personal traits. Second, it is a systematic review of previous research on the influence of contextual factors on teachers' informal learning in the workplace. It is limited in the sense that it includes no empirical investigation of this influence supported by concrete findings. With that being said, it seems reasonable to argue that more quantitative research on informal learning in the workplace is needed. Quantitative research with larger sample sizes will definitely result in deeper understanding of the context-specific influence on teachers' informal learning. It is also hoped that further research will bring into light the complexities of workplace learning, so that teachers' workplace can be transformed from places of experience to rich learning environments.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

ORCID iD

Mohamed Bouaissane: <https://orcid.org/0000-0001-9017-8838>

Mustapha Mouchid: <https://orcid.org/0000-0002-3944-3015>

Hind Brigui: <https://orcid.org/0000-0002-1812-3426>

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.

References

- [1] Ainley, P. (1998). Towards a learning or a certified society? Contradictions in the New Labour modernization of lifelong learning, *Journal of Education Policy*, 4(13), 559-573.
- [2] Bakkenes, I., Vermunt, J. D., & Wubbels, T. (2010). Teacher learning in the context of educational innovation: Learning activities and learning outcomes of experienced teachers. *Learning and Instruction*, 20, 533-548. doi:10.1016/j.learninstruc.2009.09.001
- [3] Baert, H., De Rick, K., & Van Valckenborg, K. (2006). Towards the conceptualisation of learning climate. In R. Vieira de Castro, A. V. Sancho, & P. Guimaraes (Eds.), *Adult education: New routes in a new landscape* (87-111). Braga, Portugal : University of Minho.
- [4] Beinh Art, S. & Smith, P. (1998). *National Adult Learning Survey 1997* (Sudbury, DfEE Publications).
- [5] Billett, S. (2004). Workplace participatory practices : conceptualising workplaces as learning environments *Journal of Workplace Learning*, 16(6) 312-24.
- [6] Bouaissane, M., Mouchid, M., & Brigui, H. (2022). A Study of Moroccan EFL Teachers' Attitudes towards In-service Continuing Professional Development. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 27(10), 2022 59-71
- [7] Bronfenbrenner, U. (Ed.). (2005). *Making human beings human: Bioecological perspectives on human development*. London : SAGE.
- [8] Burns, J. Z. (2008). Informal learning and transfer of learning : How new trade and industrial teachers perceive their professional growth and development. *Career and Technical Education Research*, 33, 3-24. Doi :10.5328/CTER33.1.3
- [9] Cook, L., & Friend, M. (1995). Co-teaching : guidelines for creating effective practices. *Focus on Exceptional Children*, 28(3), 1-16.
- [10] Coffield, F. (Ed.). (2000). *The necessity of informal learning* (Vol. 4). Policy press.
- [11] Crouse, P., Doyle, W., & Young, J. D. (2011). Workplace learning strategies, barriers, facilitators and outcomes : A qualitative study among human resource management practitioners. *Human Resource Development International*, 14, 39-55. Doi :10.1080 /13678868.2011.542897
- [12] Davies, P. (1998). Formalising Learning: the role of accreditation, presentation at ESRC Learning Society informal learning seminar (Bristol).
- [13] Darling-Hammond, L., & Richardson, N. (2009). Teacher learning: what matters? *Educational Leadership*, 66(5), 46e53.
- [14] Desimone, L. M. (2009). Improving impact studies of teachers' professional development: toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181-200. Doi:10.3102/0013189X08331140.
- [15] Doecke, B., Brown, J., & Loughran, J. (2000). Teacher talk: the role of story and anecdote in constructing professional knowledge for beginning teachers. *Teaching and Teacher Education*, 16(3), 335-348. Doi:10.1016/S0742-051X (99)00065-7.
- [16] Doornbos, A. J., Bolhuis, S. and Simons, P.R.J. (2004). Modeling work-related learning on the basis of intentionality and developmental relatedness : a non-educational perspective, *Human Resource Development Review*, 3(3), 250-275.
- [17] Doyle, W., Reid, J. G., & Young, J. D. (2008). Barriers to and facilitators of managers' workplace learning in small and large knowledge-based firms. *Small Business Institute Research Review*, 35, 79-93.
- [18] Ellinger, A.D. (2005). Contextual factors influencing informal learning in workplace settings : the case of 'reinventing itself company', *Human Resource Development Quarterly*, 16(3). 389-415.
- [19] Eraut, M. (2004). Informal learning in the workplace. *Studies in Continuing Education*, 26, 247-273. doi:10.1080/158037042000225245
- [20] Eteläpelto, A., & Lahti, J. (2008). The resources and obstacles of creative collaboration in a long-term learning community. *Thinking Skills and Creativity*, 3(3), 226-240. doi:10.1016/j.tsc.2008.09.003.
- [21] Fraser, C. A. (2010). Continuing professional development and learning in primary science classrooms. *Teacher Development: An International Journal of Teachers' Professional Development*, 14, 85-106. doi:10.1080/13664531003696626
- [22] Ghaye, T. (2011). *Teaching and Learning Through Reflective Practice: A Practical Guide for Positive Action*. 2nd Edn. Oxford: Routledge.
- [23] Gorard, S., Fevre, R. and Rees, G. (1999), The apparent decline of informal learning *Oxford Review of Education*, 25(4), pp. 437-454.
- [24] Gurgur, H., & Uzuner, Y. (2011). Examining the implementation of two co-teaching models: team teaching and station teaching. *International Journal of Inclusive Education*, 15(1), 1-22. doi:10.1080/13603110903265032.
- [25] Hara, N. (2001). Formal and informal learning: Incorporating communities of practice into professional development. Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.
- [26] Harrison, J., Lawson, T., & Wortley, A. (2005). Facilitating the professional learning of new teachers through critical reflection on practice during mentoring meetings. *European Journal of Teacher Education*, 28(3), 267-292. doi:10.1080/ 02619760500269392.
- [27] Henze, I., Van Driel, J., & Verloop, N. (2009). Experienced science teachers' learning in the context of educational innovation. *Journal of Teacher Education*, 60, 184- 199. doi:10.1177/0022487108329275
- [28] Hinchliffe, G. (2004). Work and human flourishing, *Educational Philosophy and Theory*, 36(5). 535-47.
- [29] Hicks, E., Bagg, R., Doyle, W., & Young, J. D. (2007). Canadian accountants: Examining workplace learning. *Journal of Workplace Learning*, 19, 61-77. doi:10.1108/13665620710728457
- [30] Hoekstra, A., & Korthagen, F. (2011). Teacher learning in a context of educational change: Informal learning versus systematically supported learning. *Journal of Teacher Education*, 62, 76-92. doi:10.1177/0022487110382917

- [31] Hoekstra, A., Brekelmans, M., Beijaard, D. and Korthagen, F.A.J. (n.d.), Experienced teachers' informal learning: learning activities and changes in behavior and cognition, *Teaching and Teacher Education* (in press).
- [32] Hoekstra, A., Korthagen, F., Brekelmans, M., Beijaard, D. and Imants, J. (2009), Experienced teachers' informal workplace learning and perceptions of workplace conditions, *Journal of Workplace Learning*, 21(4) 276-298. <https://doi.org/10.1108/13665620910954193>
- [33] Hoekstra, A., Beijaard, D., Brekelmans, M., & Korthagen, F. (2007). Experienced teachers' informal learning from classroom teaching. *Teachers and Teaching: Theory and Practice*, 13, 191-208. doi:10.1080/13540600601152546
- [34] Hoekstra, A., Korthagen, F., Brekelmans, M., Beijaard, D., & Imants, J. (2009). Experienced teachers' informal workplace learning and perceptions of workplace conditions. *Journal of Workplace Learning*, 21, 276-298. doi:10.1108/13665620910954193
- [35] Illeris, K. (2002). *The Three Dimensions of Learning*. Niace Publications/Roskilde University Press, Leicester
- [36] Jurasaitė-Harbison, E. (2009). Teachers' workplace learning within informal contexts of school cultures in the United States and Lithuania. *Journal of Workplace Learning*, 21, 299-321. doi:10.1108/13665620910954201
- [37] Korthagen, F. A. J. (2010). Situated learning theory and the pedagogy of teacher education: towards an integrative view of teacher behavior and teacher learning. *Teaching and Teacher Education*, 26(1), 98-106. doi:10.1016/j.tate.2009.05.001.
- [38] Kyndt, E., Govaerts, N., Verbeek, E., & Dochy, F. (2014). Development and validation of a questionnaire on informal workplace learning outcomes: A study among socioeducational care workers. *British Journal of Social Work*, 44, 2391-2410. doi:10.1093/bjsw/bct056
- [39] Kyndt, E., Gijbels, D., Grosemans, I., & Donche, V. (2016). Teachers' everyday professional development: Mapping informal learning activities, antecedents, and learning outcomes. *Review of educational research*, 86(4), 1111-1150.
- [40] Kwakman, K. (2003). Factors affecting teachers' participation in professional learning activities. *Teaching and Teacher Education*, 19(2), 149-170. doi:10.1016/S0742-051X(02)00101-4.
- [41] Leat, D., Lofthouse, R., & Taverner, S. (2006). The road taken: professional pathways in innovative curriculum development. *Teachers and Teaching: Theory and Practice*, 12(6), 657e674. doi:10.1080/13540600601029686.
- [42] Leslie, B., Aring, M., & Brand, B. (1998). Informal learning: The new frontier of employee and organizational development. *Economic Development Review*, 15, 12-18.
- [43] Lewin, C., Scrimshaw, P., Somekh, B., & Haldane, M. (2009). The impact of formal and informal professional development opportunities on primary teachers' adoption of interactive whiteboards. *Technology, Pedagogy and Education*, 18, 173-185. doi:10.1080/14759390902992592
- [44] Lohman, M. C. (2000). Environmental inhibitors to informal learning in the workplace: A case study of public school teachers. *Adult Education Quarterly*, 50, 83-101. doi:10.1177/07417130022086928
- [45] Lohman, M.C. (2006), Factors influencing teachers' engagement in informal learning activities, *Journal of Workplace Learning*, 18(3), pp. 141-156. <https://doi.org/10.1108/13665620610654577>
- [46] Louis, K., Marks, H. and Kruse, S. (1996). Teachers' professional community in restructuring schools", *American Educational Research Journal*, 33(4), 757-798.
- [47] Marton, F., & Booth, S. (1997). *Learning and awareness*. Mahwah N.J: Lawrence Erlbaum Associates.
- [48] Matthews, P. (1999). Workplace learning: Developing a holistic model. *Learning Organization*, 6, 18-29.
- [49] McNally, J., Blake, A. and Reid, A. (2009), The informal learning of new teachers in school, *Journal of Workplace Learning*, 21(4) 322-333. <https://doi.org/10.1108/13665620910954210>
- [50] McDuffie, K. A., Mastropieri, M. A., & Scruggs, T. E. (2009). Differential Effects of Peer Tutoring in Co-Taught and Non-Co-Taught Classes: Results for Content Learning and Student-Teacher Interactions. *Exceptional Children*, 75(4), 493-510. <https://doi.org/10.1177/001440290907500406>
- [51] Meirink, J.A., Meijer, P.C., Verloop, N. and Bergen, T.C.M. (2009). Understanding teacher learning in secondary education: the relations of teacher activities to changed beliefs about teaching and learning, *Teaching and Teacher Education*, 25(1). 89-100.
- [52] Orasanu, J. & Connolly, T. (1993). The reinvention of decision-making, in: G. A. Klein, J. Orasanu, R. Calderwood & C. E. Zsombok (Eds) *Decision-making in action: models and methods* (Norwood, NJ, Ablex).
- [53] Park, S., Oliver, J. S., Johnson, T. S., Graham, P., & Oppong, N. K. (2007). Colleagues' roles in the professional development of teachers: results from a research study of national board certification. *Teaching and Teacher Education*, 23(4), 368-389. doi:10.1016/j.tate.2006.12.013.
- [54] Poulson, L., & Avramidis, E. (2003). Pathways and possibilities in professional development: Case studies of effective teachers of literacy. *British Educational Research Journal*, 29, 543-560. doi:10.1080/01411920301846
- [55] Putnam, R. T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher*, 29(1), 4-15. doi:10.3102/0013189X029001004
- [56] Richardson, V. and Placier, P. (2001), Teacher change", in Richardson, V. (Ed.), *Handbook of Research on Teaching*, American Educational Research Association, Washington, DC. 905-47.
- [57] Rytivaara, A., & Kershner, R. (2012). Co-teaching as a context for teachers' professional learning and joint knowledge construction. *Teaching and teacher education*, 28(7), 999-1008.
- [58] Sambrook, S. and Stewart, J. (2000), Factors influencing learning in European learning-oriented organizations: issues for management, *Journal of European Industrial Training*, 24(2) 209-219.
- [59] Sharma, P. and Pandher, J.S. (2018), Teachers' professional development through teachers' professional activities *Journal of Workplace Learning*, 30(8). 613-625. <https://doi.org/10.1108/JWL-02-2018-0029>
- [60] Tarrant, P. (2013). Reflective practice and professional development. *Reflective Practice and Professional Development*, 1-232.
- [61] Tickle, L. (1994). *The induction of new teachers*. London, England : Cassel. Tienken, C. H., & Stonaker, L. (2007). When every day is professional development day. *Journal of Staff Development*, 28(2), 24-29.
- [62] Trent, S. C., Driver, B. L., Wood, M. H., Parrott, P. S., Martin, T. F., & Smith, W. G. (2003). Creating and sustaining a special education/general education partnership: a story of change and uncertainty. *Teaching and Teacher Education*, 19(2), 203-219. doi:10.1016/S0742-051X(02)00104-X.
- [63] Van Woerkom, M., Nijhof, W.J. and Nieuwenhuis, L.F.M. (2002). Critical reflective working behavior: a survey research *Journal of European Industrial Training*, 26(8). 375-83.

- [64] Van Eekelen, I. M., Vermunt, J. D., & Boshuizen, H. P. A. (2006). Exploring teachers' will to learn. *Teaching and Teacher Education*, 22, 408–423. doi:10.1016/j.tate.2005.12.001
- [65] Wenger, E. (1998). *Communities of Practice: Learning, Meaning and Identity*, Cambridge University Press, Cambridge.
- [66] Williams, E. A. and Prestage, S. (2001). Individualism to collaboration – the significance of teacher culture to the induction of newly qualified teachers, *Journal of Education for Teaching*, 27(3). 253-267.